DUAL ENROLLMENT’S INFLUENCE ON THE SOCIALIZATION
OF STUDENTS AS FUTURE COLLEGE STUDENTS:
A GROUNDED THEORY STUDY

by

Leanne Hadley Frost

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DEDICATION

This dissertation is dedicated to my family and to the doctoral cohort at Great Falls College Montana State University. I would not have made it to this point without their support.
TABLE OF CONTENTS

1. INTRODUCTION TO THE STUDY ......................................................... 1
   Background for the Study ............................................................... 1
   Statement of Problem ..................................................................... 4
   Statement of Purpose .................................................................... 9
   Guiding Research Questions .......................................................... 10
   Significance of the Study ............................................................... 11
   Theoretical Framework .................................................................. 12
   Research Framework ..................................................................... 16
   Definition of Terms and Concepts .................................................. 21
   Assumptions ................................................................................. 23
   Limitations and Delimitations ......................................................... 24
   Summary ...................................................................................... 26

2. REVIEW OF RELATED LITERATURE ................................................. 28
   Introduction .................................................................................. 28
   Criteria for Selection of Literature .................................................. 28
   History of Dual Enrollment ............................................................ 30
   Types of Dual Enrollment Programs .............................................. 33
   Dual Enrollment Outcomes ............................................................. 38
      High School Graduation ............................................................... 39
         Critique .................................................................................. 41
      College Aspirations and Enrollment ............................................ 41
         Critique .................................................................................. 46
      Academic Performance: GPA ...................................................... 47
      Academic Performance: Credits Earned ...................................... 51
      College Persistence ...................................................................... 52
      Degree Completion ...................................................................... 55
         Critique .................................................................................. 57
      Self-Perceptions as Future College Students ................................. 59
         Critique .................................................................................. 59
   Dual Enrollment Student Inputs or Characteristics .......................... 60
      Demographics ............................................................................ 61
         Critique .................................................................................. 64
      Self-efficacy .............................................................................. 65
         Critique .................................................................................. 66
      Motivation .................................................................................. 67
         Critique .................................................................................. 67
      Socialization and Role Acquisition and Dual Enrollment ................ 68
      Transition .................................................................................. 69
### TABLE OF CONTENTS CONTINUED

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critique</td>
<td>71</td>
</tr>
<tr>
<td>Role Acquisition</td>
<td>72</td>
</tr>
<tr>
<td>Learning About the Role</td>
<td>72</td>
</tr>
<tr>
<td>Learning the Behaviors</td>
<td>73</td>
</tr>
<tr>
<td>Experiencing the Role</td>
<td>73</td>
</tr>
<tr>
<td>Critique</td>
<td>74</td>
</tr>
<tr>
<td>Summary</td>
<td>75</td>
</tr>
</tbody>
</table>

#### 3. METHODOLOGY ..................................................................77

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>77</td>
</tr>
<tr>
<td>Purpose</td>
<td>78</td>
</tr>
<tr>
<td>Research Questions</td>
<td>78</td>
</tr>
<tr>
<td>Research Design and Rationale</td>
<td>80</td>
</tr>
<tr>
<td>Researcher Positionality</td>
<td>84</td>
</tr>
<tr>
<td>Context of the Study</td>
<td>88</td>
</tr>
<tr>
<td>Site Selection</td>
<td>91</td>
</tr>
<tr>
<td>Population and Sample</td>
<td>92</td>
</tr>
<tr>
<td>Population</td>
<td>92</td>
</tr>
<tr>
<td>Sample</td>
<td>93</td>
</tr>
<tr>
<td>Sampling Procedures</td>
<td>101</td>
</tr>
<tr>
<td>Data Collection</td>
<td>104</td>
</tr>
<tr>
<td>Procedures</td>
<td>106</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>107</td>
</tr>
<tr>
<td>Constant Comparative Method</td>
<td>107</td>
</tr>
<tr>
<td>Coding</td>
<td>108</td>
</tr>
<tr>
<td>Memos</td>
<td>111</td>
</tr>
<tr>
<td>Document Analysis</td>
<td>113</td>
</tr>
<tr>
<td>Achieving Authenticity, Trustworthiness, Credibility, and Transferability</td>
<td>114</td>
</tr>
<tr>
<td>Summary</td>
<td>115</td>
</tr>
</tbody>
</table>

#### 4. RESULTS OF THE STUDY .....................................................117

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>117</td>
</tr>
<tr>
<td>Introduction to Analytical Approach</td>
<td>119</td>
</tr>
<tr>
<td>Findings for Research Question 1: How Does the DE Experience Influence</td>
<td>121</td>
</tr>
<tr>
<td>the Socialization of High School Students as Future College Students?</td>
<td></td>
</tr>
<tr>
<td>The Influences on and Motivations for Students Enrolling in DE..........</td>
<td>123</td>
</tr>
<tr>
<td>Summary Findings for the Sample as a Whole</td>
<td>126</td>
</tr>
<tr>
<td>Input Characteristics as a Factor of Perceptions and Behaviors</td>
<td>140</td>
</tr>
<tr>
<td>Concept of College Students in General: Before DE</td>
<td>145</td>
</tr>
</tbody>
</table>
TABLE OF CONTENTS CONTINUED

Concept of College Students in General: After DE ................................................................. 151
  Concept of College Students in General
  After DE: Positive .................................................................................................................. 151
  Concept of College Students in General
  After DE: Negative .................................................................................................................. 156
  Concept of College Students in General
  After DE: No Change .............................................................................................................. 158

A Comparison of Those with Positive, Negative, and No Changes in their Concepts of College Students in General After DE .............................. 161

Factors Affecting Changes in the Concept of College Students in General .................................................................................................. 164
  Effect of Coursework .............................................................................................................. 168
  Effect of Teachers .................................................................................................................. 171
    Concurrent Classes .............................................................................................................. 171
    Online Classes .................................................................................................................... 173
    On the College Campus ...................................................................................................... 174
  Effect of the Environment .................................................................................................... 175
  Effect of Classmates ............................................................................................................ 178
    Concurrent Classmates ....................................................................................................... 178
    College Campus Classmates ............................................................................................... 179

Students’ Perceptions of Themselves as Future College Students: Before DE ........................................................................................................... 181
  Students who Did Not Perceive Themselves as Future College Students Pre-DE ........................................................................................................... 183
  Students Unsure of Their Perceptions as Future College Students Pre-DE ........................................................................................................... 186
  Students who Perceived Themselves as Future College Students Pre-DE ........................................................................................................... 189

Perceptions of Themselves During DE .................................................................................. 192
  Perception of Self as High School Student During DE ....................................................... 193
  Perception of Self as Between a College and High School Student During DE .............. 198
  Perception of Self as a Current College Student During DE ............................................. 199

Students’ Perceptions of Themselves as Future College Students Post-DE .................................................................................................. 201
  Students who Perceived Themselves as Future College Students Post-DE ...................... 202
  Students who Experienced a Change in Their Self-perceptions as Future College Students .................................................................................................. 203
  Students who Did Not Perceive Themselves as Future College Students Post-DE .......... 205
    Case 1 .................................................................................................................................... 210
TABLE OF CONTENTS CONTINUED

Case 2........................................................................................................211
Case 3........................................................................................................212
Case 4........................................................................................................213
Case 5........................................................................................................214
Influence of Not Passing Their DE Classes on Students’ Self-perceptions......215
Emergent Themes from the Study Related to Socialization......................216
  Increased Self-efficacy through DE........................................................217
    Academic Preparedness ......................................................................218
    Feelings of Confidence .....................................................................219
    Feelings of Being Comfortable.........................................................220
  Specific Skills .......................................................................................221
  Social Preparedness ...........................................................................222
  Feelings of Autonomy Influenced Students’ Perceptions ......................223
  DE as a Transition to College...............................................................224
  DE as Preparation for the Military.........................................................227
Summary for RQ1: How Does the DE Experience Influence the Socialization of High School Students as Future College Students?.................................................................................229

Findings for Research Question 2: What Aspects of the DE Experience Influence the Socialization of High School Students as Future College Students?.................................................................................230

  Skills ......................................................................................................232
    Teachers as a Source of Learning Academic Skills...........................233
    Teachers as a Source of Learning Social Skills ..................................234
    Classmates/Other Students..............................................................234
  Behaviors .............................................................................................234
  Values ....................................................................................................236
  Motivations ...........................................................................................237

Perception of Self as a Future College Student as an Influencing Aspect of DE .................................................................................................................239

Summary for RQ2: What Aspects of the DE Experience Influence the Socialization of High School Students as Future College Students?.................................................................................240

Findings for Research Question 3: How Does the DE Delivery Mode
Shape Students’ Socialization as Future College Students?....................241

  Concept of College Students in General..............................................243
  Self-Perceptions During Their DE Coursework...................................246
  Students’ Perceptions of Themselves as Future College Students After Their DE Coursework .................................................................249
  Perceptions of Students in Multiple Delivery Modes...........................252
TABLE OF CONTENTS CONTINUED

Case 1: Online and On-campus ................................................................. 253
Case 2: Online and On-campus ................................................................. 254
Case 3: Concurrent and On-campus ......................................................... 255
Case 4: Concurrent, Online and On-campus ........................................... 257
Factors of the Delivery Mode Affecting Students’ Perceptions .................. 258
Coursework ............................................................................................. 259
Teachers’ Expectations ......................................................................... 260
Classmates ............................................................................................. 261
Physical Space ....................................................................................... 262
Summary of RQ3: How Does the Delivery Mode Shape Students’ Socialization as Future College Students? .................. 264
Summary of Chapter Four: Results of the Study ..................................... 266
5. DISCUSSION OF THE FINDINGS OF THE STUDY .................................. 269

Introduction ............................................................................................ 269
Overview of the Study ........................................................................... 270
Summary of the Methodology ................................................................. 272
Conclusions and Related Literature ....................................................... 275
DE is a Socializing Influence .................................................................. 276
Skills ......................................................................................................... 282
Behaviors ............................................................................................... 283
Values ...................................................................................................... 283
Motivations ............................................................................................. 284
Coursework, Teachers, Environment, and Classmates Influence Socialization .................................................. 286
Coursework ............................................................................................. 286
Teachers .................................................................................................. 288
Environment .......................................................................................... 291
Classmates ............................................................................................. 292
DE is a Transition to College ................................................................... 294
Students Build Self-Efficacy Through DE ............................................. 298
The Level of Perceived Autonomy Shapes Perceptions ......................... 300
Delivery Modes Shape Students’ Socialization ....................................... 301
A Proposed Theoretical Model ............................................................... 306
Recommendations for Future Research .................................................. 311
Explore Military Connections and Implications ....................................... 312
Study Those Who Did Not Pass Their DE Coursework ........................... 312
Focus Research on Comparing Delivery Modes .................................... 314
Study DE as a Transition to College ...................................................... 317
Implications for Practice ........................................................................ 318
Apply Student Development Theories to DE Students ........................................... 318
Explicitly Teach Skills Needed in College ............................................................. 319
Increase Autonomy in the Concurrent DE Classroom .......................................... 320
Recognize the Influencing Role of Teachers and Counselors ............................... 321
Consider Students’ Characteristics and Readiness for DE .................................... 322
Develop DE Programs to Purposefully Increase Equity ......................................... 323
Chapter Summary ................................................................................................. 324
Final Conclusion ................................................................................................... 326

REFERENCES CITED .............................................................................................. 328

APPENDICES .......................................................................................................... 337

APPENDIX A: Summary Table of Empirical Studies
Examining Dual Enrollment Student Outcomes ..................................................... 338

APPENDIX B: Summary Table of Empirical Studies
Examining Dual Enrollment Student Inputs or Possible Confounding Variables .... 346

APPENDIX C: Summary Table of Empirical Studies
Examining the Relationship Between DE and Socialization or Role Acquisition Theories .......................................................... 351

APPENDIX D: Interview Guide and Table of Specifications .................................. 353

APPENDIX E: Telephone Invitation Script ............................................................. 357

APPENDIX F: Consent Form .................................................................................. 359
**LIST OF TABLES**

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Interpretive Frameworks and Associated Philosophical Beliefs</td>
<td>84</td>
</tr>
<tr>
<td>2. Participant Characteristics – Pre-DE</td>
<td>94</td>
</tr>
<tr>
<td>3. Participant Characteristics – During and After DE</td>
<td>98</td>
</tr>
<tr>
<td>4. Students Per Number of DE Credits</td>
<td>101</td>
</tr>
<tr>
<td>5. Student DE Enrollment by Subject Matter</td>
<td>102</td>
</tr>
<tr>
<td>6. Number of Student References to People who Influenced Their Decision to Participate in DE Courses</td>
<td>124</td>
</tr>
<tr>
<td>7. Student Reasons for Enrolling in DE Coursework</td>
<td>124</td>
</tr>
<tr>
<td>8. Summary Results of Students’ Intentions to Attend College and Concepts of College Students in General</td>
<td>128</td>
</tr>
<tr>
<td>9. Summary Results of Students’ Perceptions of Self</td>
<td>133</td>
</tr>
<tr>
<td>10. Summary Results of Students’ Subsequent Behavior After High School Graduation and Future Plans</td>
<td>137</td>
</tr>
<tr>
<td>11. Factors Affecting Students’ Concepts of College Students</td>
<td>164</td>
</tr>
<tr>
<td>12. Number of Students Referring to Various Aspects of DE Coursework</td>
<td>169</td>
</tr>
<tr>
<td>13. Characteristics of Those Students who Did Not Perceive Themselves as Future College Students Before Taking a DE Course</td>
<td>184</td>
</tr>
<tr>
<td>14. Characteristics of Students Unsure if They Perceived Themselves as Future College Students Before Taking a DE Course</td>
<td>186</td>
</tr>
<tr>
<td>15. Characteristics of Students with Self-Perceptions as Future College Students Before Taking a DE Course</td>
<td>190</td>
</tr>
<tr>
<td>16. Characteristics of the Students Whose Perceptions of Themselves Changed to be Future College Students Post-DE</td>
<td>204</td>
</tr>
<tr>
<td>Table</td>
<td>Page</td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>17. Information About the Students who Did Not Perceive Themselves as Future College Students Post-DE</td>
<td>206</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Initial Theoretical Framework of the Influence Dual Enrollment may have on the Socialization of Future College Students</td>
<td>13</td>
</tr>
<tr>
<td>2</td>
<td>Research Framework of the Study of Dual Enrollment and the Socialization of Future College Students</td>
<td>17</td>
</tr>
<tr>
<td>3</td>
<td>Dual Enrollment Terminology and Relationships</td>
<td>22</td>
</tr>
<tr>
<td>4</td>
<td>Map of Areas of Literature Review</td>
<td>29</td>
</tr>
<tr>
<td>5</td>
<td>Graphical Representation of Empirical Studies on Dual Enrollment</td>
<td>76</td>
</tr>
<tr>
<td>6</td>
<td>Research Design</td>
<td>83</td>
</tr>
<tr>
<td>7</td>
<td>Interviewing in Grounded Theory Studies</td>
<td>105</td>
</tr>
<tr>
<td>8</td>
<td>Coding Categories</td>
<td>109</td>
</tr>
<tr>
<td>9</td>
<td>Connections Between Students’ Input Characteristics, Perceptions, and Behaviors</td>
<td>142</td>
</tr>
<tr>
<td>10</td>
<td>Students’ Concepts of College Students in General Pre-DE</td>
<td>147</td>
</tr>
<tr>
<td>11</td>
<td>Change in Students’ Concepts of College Students After Taking a DE Class</td>
<td>151</td>
</tr>
<tr>
<td>12</td>
<td>Behavior of Those who had Positive Changes in their Concepts of College Students</td>
<td>152</td>
</tr>
<tr>
<td>13</td>
<td>Future Planned Behavior of Those who had Positive Changes in their Concepts of College Students</td>
<td>153</td>
</tr>
<tr>
<td>14</td>
<td>The Subsequent Behavior of Those who Expressed No Change in their Concepts of College Students</td>
<td>158</td>
</tr>
<tr>
<td>15</td>
<td>Future Planned Behavior of Those who Stated No Change in their Concepts of College Students</td>
<td>159</td>
</tr>
<tr>
<td>Figure</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Comparison of Intentions, Perceptions and Behaviors of Students Based on Type of Change in their Concepts of College Students Post-DE</td>
<td>162</td>
</tr>
<tr>
<td>17.</td>
<td>Students’ Perceptions of Themselves as Future College Students Pre-DE</td>
<td>182</td>
</tr>
<tr>
<td>18.</td>
<td>Students’ Perceptions of Themselves During their DE Coursework</td>
<td>193</td>
</tr>
<tr>
<td>19.</td>
<td>Students’ Perceptions of Themselves as Future College Students Post-DE</td>
<td>202</td>
</tr>
<tr>
<td>20.</td>
<td>Comparison of Students Who Did and Did Not or were Unsure if They Perceived Themselves as Future College Students Post-DE</td>
<td>208</td>
</tr>
<tr>
<td>21.</td>
<td>Student Participation in DE by Delivery Mode</td>
<td>243</td>
</tr>
<tr>
<td>22.</td>
<td>Delivery Mode of the DE Courses for Students Whose Changes in their Concepts of College Students were Positive</td>
<td>244</td>
</tr>
<tr>
<td>23.</td>
<td>Comparison of Change in Concepts of College Students in General by Delivery Mode</td>
<td>245</td>
</tr>
<tr>
<td>24.</td>
<td>Comparison of Delivery Modes by Change in Concepts of College Students in General</td>
<td>246</td>
</tr>
<tr>
<td>25.</td>
<td>Comparison of Self-perceptions During DE by Delivery Mode</td>
<td>247</td>
</tr>
<tr>
<td>26.</td>
<td>Comparison of Delivery Modes by Self-perception During DE Courses</td>
<td>248</td>
</tr>
<tr>
<td>27.</td>
<td>Comparison of Self-perceptions as Future College Students After DE Coursework by Delivery Mode</td>
<td>250</td>
</tr>
<tr>
<td>28.</td>
<td>Comparison of Delivery Modes by Self-perception as Future College Students After DE Coursework</td>
<td>251</td>
</tr>
<tr>
<td>29.</td>
<td>The Expectancy-Value Model of Achievement Choices</td>
<td>281</td>
</tr>
</tbody>
</table>
LIST OF FIGURES CONTINUED

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>30. Eccles’ Model of Parents’ Influence on Children’s Achievement Related to Self-Perception, Values, and Behaviors</td>
<td>285</td>
</tr>
<tr>
<td>31. A Proposed Model for the Socializing Influence of DE on High School Students as Future College Students</td>
<td>308</td>
</tr>
</tbody>
</table>
ABSTRACT

This qualitative grounded theory study explored how the dual enrollment (DE) experience influenced the socialization of students to become future college students at a small, rural two-year college. The researcher interviewed 40 students within one year of completing DE courses through the college. The population included students who passed and did not pass their DE courses, enrolled in college and did not enroll in college, and who had completed their DE coursework in one or more of three delivery modes: concurrently in the high school, online from the college, and on the college campus. The study found the DE experience did affect participants’ socialization as future college students, largely due to their interactions with teachers, other students, and the environment. In addition, their ability to complete college-level coursework affected their self-efficacy. The students viewed DE as a “transition” to college and recognized it was not “the full college experience.” They also identified increased autonomy as part of becoming a college student. Differences among the three delivery modes existed, with the online format having the smallest effect on students’ socialization. This grounded theory study followed a constructivist approach; therefore, the resultant theory has been influenced by the interpretations of the researcher.
CHAPTER ONE

INTRODUCTION TO THE STUDY

Background for the Study

Education, economic prosperity, individual happiness, and societal health have long been woven together in the U.S. to create a strong fabric of national well-being. Education creates a more skilled workforce, industry thrives; the individual worker enjoys a higher standard of living, society prospers (Isaacs, Sawhill & Haskins, 2008). Since Harvard College’s founding in 1636, colleges and universities have changed to become more accessible to all people – often under governmental, societal, and economic pressure – in order to give more individuals the opportunity to participate in what has been called “The American Dream” (Thelin, 2004). As America’s workforce needs have become more technical, the demand for more post-secondary education has grown. In October 2016, the White House issued the following statement:

Earning a post-secondary degree or credential is no longer just a pathway to opportunity for a talented few; rather, it is a prerequisite for the growing jobs of the new economy. Over this decade, employment in jobs requiring education beyond a high school diploma will grow more rapidly than employment in jobs that do not; of the 30 fastest growing occupations, more than half require postsecondary education. With the average earnings of college graduates at a level that is twice as high as that of workers with only a high school diploma, higher education is now the clearest pathway into the middle class (The White House, n.d., para. 1).

Legislators and educators alike are searching for ways to increase college attendance and completion for students. Dual enrollment (DE), in which students are simultaneously enrolled in high school and in college, is seen by many as a way to give more people
access to a postsecondary education and as a way to increase the completion of college credentials.

DE has been called the “fastest growing movement in higher education in the 21st century” (Jones, 2014, p. 24) and has now been implemented in all 50 states (Zinth, 2015B). As part of a broader accelerated learning movement, DE is a collaboration between secondary and postsecondary institutions that enables students to be “dual enrolled” at both educational levels. Students may be earning credit simultaneously in the high school and in the college or not, depending on the purpose and design of the DE program or course. In general, three types of DE programs exist: singleton stand-alone courses, comprehensive or intensive programs in which students earn a high school and postsecondary credential at the same time, and enhanced programs that include student support services such as advising and tutoring. One specific form of DE is “dual credit” in which students can simultaneously earn high school and college credit for completing coursework (CCRC, 2012). The courses and grades are included on a transcript from the college, and the credits count towards credentials and degrees just like any other college credit. The dual credit classes can be offered in the high schools as “concurrent” courses, on the college campus, or online through a college or university. Concurrent courses taught in the high schools use the college syllabi, course outcomes, and expectations of the college.

DE falls in the credit-based transition programs (CBTPs) segment of accelerated learning options. The most common CBTPs are DE, Advanced Placement (AP), International Baccalaureate (IB), and Tech Prep. DE stands apart from the other CBTPs
though because it utilizes college courses, complete with syllabi, college assignments, and assessments (Bailey & Karp, 2003). For those reasons, DE has been called a more authentic college experience than other CBTPs (Hoffman, 2005).

Multiple studies have found that students who participated in DE courses have higher college aspirations, more postsecondary enrollments, increased retention, higher college GPAs, increased credit accumulation, and improved degree completion rates compared to their non-DE peers, regardless of their pre-college characteristics, such as gender, socio-economic status (SES), and ethnicity (CCRC, 2012; Jones, 2014). Initially, DE courses were implemented to provide rigorous courses for advanced high school students in college-prep tracks; however, DE programs have expanded to career and technical education (CTE) programs and have begun to include lower-performing students so that more students have access to the perceived benefits of DE participation (Karp and Hughes, 2008).

Because students who participate in DE tend to perform well in college, a growing number of high schools and institutions of higher education are increasingly offering more DE courses than in the past. Two contrasting philosophies push the movement to increase DE programs and participation: one is a belief that DE can provide advanced coursework for high-performing students; the other is that DE can provide a pathway to postsecondary education for students who might be at risk for not enrolling in college. Nationwide, the number of students participating in DE courses reached approximately 2 million in 2010-11, with 82% of high schools reporting that they provided DE courses (Thomas, Marken, Gray, & Lewis, 2013) and 53% of all
postsecondary institutions stating they offered such courses (Marken, Gray, & Lewis, 2013). No national policies exist regarding DE, however; therefore, each state is left to its own devices to implement a program based on its needs, structure, and objectives. In some cases, the states, in turn, leave the programmatic aspects of DE to the K-12 and higher education partners (Zinth, 2015B).

Statement of Problem

Although the benefits of gaining a postsecondary education are known, many Americans are still not pursuing or completing a college credential. The U.S. Department of Education’s The Condition of Education 2014 reported that although the percent of people ages 20 to 34 enrolling in postsecondary education increased between 1990 and 2013, 60% of those aged 20-34 are still not enrolled in higher education, and 66% do not have a bachelor’s degree or higher. Additionally, only 59% of Fall 2006 first-time, full-time students earned a bachelor’s degree within six years (U.S. Department of Education, 2014, p. 194). What is the effect of students not pursuing or attaining a bachelor’s degree? The report states that in 2012 those ages 25-34 with a bachelor’s degree earned 57% more than those with only a high school diploma ($46,900 versus $30,000) (p. 10). As stated by the White House:

In higher education, the U.S. has been outpaced internationally. In 1990, the U.S. ranked first in the world in four-year degree attainment among 25-34 year olds; today, the U.S. ranks 12th. We also suffer from a college attainment gap, as high school graduates from the wealthiest families in our nation are almost certain to continue on to higher education, while just over half of our high school graduates in the poorest quarter of families attend college. And while more than half of college students graduate within six
years, the completion rate for low-income students is around 25 percent (The White House, n.d., para. 2).

The economic advantage leads to benefits for the individual and for society, such as lower unemployment, less poverty, better health, and social mobility (Isaacs, Sawhill & Haskins, 2008). Therefore, it is important that high school students enter an institute of higher education and leave with a credential.

Dating back to 1971, multiple commissions and national reports have included DE as a mechanism to increase college attendance and completion – including 1983’s A Nation at Risk, 2001’s The Lost Opportunity of the Senior Year, 2005’s Pathways to College Access and Success, and the Spelling Commission’s 2006 A Test of Leadership, as well as recent recommendations by the Bill and Melinda Gates Foundation, Lumina Foundation, and James Irvine Foundation (Jones, 2014). The American Association of State Colleges and Universities (AASCU) recently listed DE in its “Top 10 Higher Education State Policy Issues for 2017” (AASCU, 2017). All of these reports discuss DE because research shows that students who participate in DE courses attend, retain, and complete college at higher rates than their non-DE counterparts (Jones, 2014). An assumption is made that because DE students perform better in college, then by putting more students through DE, more students will attend and graduate from college.

DE is seen as a way to increase what Renn and Reason (2013) call academic and social capital, thus increasing the odds that students who participate in DE will enroll in and complete college. Weidman (1989) discussed the socialization aspects of undergraduate students specifically and included academic and social areas as normative contexts of the college experience. Karp (2007) expanded on Weidman’s theory and
applied it to students who participated in DE by adding that role rehearsal, trial-and-error, and cognitive interpretation of individual experiences are part of the DE experience that could positively affect role acquisition and students’ self-perceptions of themselves as future college students. In addition to gaining academic and social capital, participating in DE programs is thought to ease the transition to college for students by reducing the amount of psychological stress felt by many first-year college students and to aid in social and academic integration. In “The First Year Experience: Are We Making It Any Better?” Barefoot (2000) wrote:

A more systemic issue relates to our spectacular lack of success in creating the kinds of alliances with high schools and middle schools that would yield more college-bound students who are better prepared for the academic and social demands of higher education…We simply must find a way, collectively, to address the issues of the transition from high school to college (p. 18).

DE proponents say that DE creates an alliance and eases the transition for students. Smith (2007) believed the transition to college is easier for DE students than their peers because they have completed college-level work already and know they can be successful in college. Many researchers have found that students give non-academic reasons for leaving college, including being overwhelmed by the institution, being unfocused or having unrealistic expectations (Bailey, Hughes & Karp, 2002; Jones, 2014). Therefore, psychologically transitioning to college is important. Jones (2014) and D’Amico, Morgan, Robertson and Rivers (2013) proposed that DE helps students transition psychologically to college by beginning the separation process from family and friends and starting the college integration process. Part of the psychology transition could also be what Ozmun (2013) calls self-efficacy, “the belief that one is able to
accomplish that which one endeavors to do” and states that it is domain specific (para. 4). Self-efficacy is similar to the “future orientation” discussed by Ben-Avie, Kennedy, Unson, Li, Riccardi and Mungo (2012), defined as “the ability to conceive of one’s own development and take actions in the here-and-now to achieve one’s hoped-for future” (p. 144).

In addition to theories about academic and social capital, transitions, and self-efficacy, DE proponents assume that more students will complete a college credential if it takes less time and costs less money. Although less philosophical and theoretical than the other assumptions, these practical reasons for promoting DE often appear in marketing materials. In fact, saving time and money through DE courses are often the most prominent reasons given by legislators to expand DE offerings as those reasons appeal to parents, students, and legislators. Saving time and money through DE is also tied to current concerns about time-to-degree and student debt levels (AASCU, 2017).

However, not everyone views DE as the best way to transition to college. Venezia and Jaeger (2013) list DE behind other options, such as TRiO, as an effective program to increase college success because DE does not always incorporate the student supports built into other programs, such as tutoring and advising. Others question the appropriateness of accelerating high school students, fearing that if the students fail in the DE courses, they will be less likely to pursue higher education (Speroni, 2012). Many question the rigor of DE courses and if the DE programs truly do create an “authentic” experience (Hughes & Edwards, 2012). Additionally, some question whether the public
funds used to pay for or subsidize DE programs are the most appropriate use of resources (Hofmann & Voloch, 2012).

Despite the debate, legislators and educators have implemented measures to increase DE enrollment. For example, some states have included DE in performance-based funding metrics; others have instituted lotteries to pay for DE courses so that there is no cost to the student (Zenith, 2015). In fact, in just 10 years, DE enrollment increased 75% from 1.2 million students in 2002-03 to 2 million in 2010-11 (Marken et al., 2013).

Yet, little research has been conducted on “why” students in DE programs perform better than non-DE students once they enter college.

One possible reason DE students enroll in and perform better in college than their non-DE peers could be an early socialization effect created by participating in DE. The DE experience could be influencing students’ socialization as future college students, including gaining skills, behaviors, values and motivations of college students that affect their perceptions of themselves as future college students. They could be moving through the stages of role acquisition as part of that socialization as well. Currently, DE initiatives are being implemented without an understanding of the underlying mechanisms that are related to the improved performance. Examining the socialization effects of DE could enable educators to create, and legislators to fund, DE programs that are more effective at encouraging students to adopt the role of a future college student by helping participants learn and experience the expectations associated with the role of being a college student; gain the skills, behaviors, values and motivations of a college student; and perceive themselves as a future college student. The socialization effects could be particularly
beneficial for students at-risk of not attending or completing college, thus bringing those students into an opportunity to gain a postsecondary education, improve their lives, and participate in the “American Dream.”

**Statement of Purpose**

Just as Weidman (1989) examined the socialization of undergraduate students, this study explores the socialization of DE students and the influence the DE experience may have on their perceptions of themselves as future college students. The word “experience” is used purposefully in this study because participating in DE courses involves more than just the coursework. Although a student in DE is completing college-level coursework, he or she may also be experiencing a different type of interaction with instructors and classmates; new expectations; a different environment – whether in a concurrent classroom, online, or on a college campus; additional pressures; a change in perceptions; increased or decreased self-efficacy; and other factors explored in this study. DE may act as a pre-socialization for students attending college. In creating a conceptual model of undergraduate socialization, Weidman (1989) commented that most of the existing research focused on student outcomes instead of on a conceptual theory for understanding the phenomenon, yet, he said, developing a theory would extend the body of research. The current state of DE research finds itself in an analogous situation – many studies on outcomes exist but little research on theory has been conducted. This grounded theory study will explore how the DE experience influences participants’ socialization as future college students in an effort to develop a theory that illustrates factors affecting the
students’ self-perceptions, skills, behaviors, values and motivations as future college students. A previous pilot study, described in Chapter 3, identified the delivery mode of the DE coursework (concurrently in the high school, online through the college, or on a college campus) as one possible influencing aspect of the DE experience; therefore, the research questions and research design include an opportunity to explore how the delivery mode might shape the experience and the resultant theoretical model.

**Guiding Research Questions**

Below are the three research questions that guided the design, data collection, analysis, and discussion of this study:

RQ 1. How does the DE experience influence the socialization of high school students as future college students?

RQ 2. What aspects of the DE experience influence the socialization of high school students as future college students?

RQ 3. How does the DE delivery mode shape students’ socialization as future college students?

To address these questions, I examined students’ understanding of college students in general, students’ perceptions of themselves as future college students, and students’ perceptions of themselves while in DE courses. Exploring students’ concepts of college students in general provided information related to role acquisition theory and created an opportunity to compare students’ understanding of what it meant to be a college student in general to their perceptions of themselves as future college students. Students’
perceptions of themselves as future college students was central to this study as components of role acquisition and socialization theories. Even though students had already completed their DE coursework when interviewed, asking students to discuss their recollections of their perceptions before, during and after DE coursework provided an opportunity to explore any shifts or changes in perceptions that could possibly be related to DE’s influence.

Significance of the Study

As stated previously, time, effort and money are being spent on increasing DE enrollment because of the purported benefits of participating in DE courses, such as increased college attendance and completion. However, possible reasons behind the increased success in DE students has not been widely explored. No theory currently exists to possibly explain the influence of DE on the socialization of participants as future college students, and few studies have actually gathered qualitative data from participants. Instead, most studies have examined institutional data. A qualitative study gives voice to participants and can illuminate beneficial elements of a phenomenon. An increased understanding of the socialization effects of the DE experience could help institutions and legislatures more effectively use their resources on better designed DE programs and apply effective components to other readiness and success initiatives, leading to a more educated population and citizenry, as well as a skilled workforce, through higher college attendance and completion. Of particular note is the potential benefit for underserved students as higher education has been shown to have positive
benefits for individuals, such as higher income, better health, and increased social mobility, and improved benefits for society, including reduced welfare and crime (Isaacs, Sawhill & Haskins, 2008).

**Theoretical Framework**

The following diagram, Figure 1.1, represents the initial theoretical framework that supports this study to explore how DE may influence participants’ socialization as future college students. Maccoby in the *Handbook of Socialization* (2015) defines socialization as “processes whereby naïve individuals are taught the skills, behavior patterns, values, and motivations needed for competent functioning in the culture in which the child is growing up” (p. 3). The concepts do not apply only to children, however, as socialization has been recognized to occur across a lifespan and in different settings. Smetana, Robinson and Rote (2015) stated that socialization occurring in adolescence, when students are taking DE courses, is particularly interesting because of the changing relationships adolescents have with their parents and the increased influence of peers. In addition, they noted that adolescence is a time in which individuals “try on” different identities. Through DE, one of these “identities” could be the role of future college student. DE could provide an experience for students to learn what Maccoby (2015) called “paramount” to socialization: “social skills, social understandings, and emotional maturity needed for interaction with other individuals to fit in” (p. 5). Renn and Reason (2013) would call this the “social capital” students bring with them to the college experience.
Figure 1.1. Initial Theoretical Framework of the Influence Dual Enrollment may have on the Socialization of Future College Students. This figure demonstrates the theoretical framework for this study, combining Astin’s I-E-O model, Thornton and Nardi’s role acquisition theory, and Weidman’s Conceptual Model of Undergraduate Socialization.

Socialization theory intersects with role acquisition theory as both recognize similar pressures on a person developing his or her identity. In fact, Thornton and Nardi (1975) stated that traditionally role acquisition was viewed as part of the socialization process, a point at which an individual assumed a new position in a social system. Thornton and Nardi, however, proposed that role acquisition was not a one-step event but rather a developmental process. In their model, people move through four stages: anticipatory, formal, informal, and personal. At each stage, individuals encounter expectations that vary in their content, source and form – all leading to a person accepting or rejecting a particular role. The DE experience could create what role acquisition theorists call “an authentic experience,” meaning the situation accurately mirrors or creates the same context in which a person will find himself or herself in the future in a particular role. The importance of an authentic experience and its usefulness in learning and acquiring a particular role underlies the reasoning behind students completing
internships in their future career fields. Actually being in the job setting helps students learn the formal and informal norms of an occupation and decide if that is a role they want to acquire. From a role acquisition theorist’s perspective, being in a realistic situation moves a student from the anticipatory socialization stage, in this case hearing about the expectations and behaviors of being a college student, to the formal stage of role acquisition in which students actually experience the role of a college student, learn the behaviors of a college student through trial and error, and cognitively interpret the experience. Karp (2007) proposed that role rehearsal, trial-and-error, and cognitive interpretation of individual experiences could occur as part of the DE process and result in students accepting the role of college student as part of their identity.

Weidman (1989) applied socialization and role acquisition theories to undergraduate student development and created a model to illustrate the effects of different forces on undergraduates, including academic and social contexts, which he called “A Conceptual Model of Undergraduate Socialization.” He specifically recognized the value of anticipatory socialization and three components of socialization that he called “salient for the study of college impact” (p. 297):

1. Individual, group, and organizational sources of socializing influences  
2. Social processes (both inter- and intrapersonal interaction, social integration) through which these sources of socializing influences are encountered and responded to by students  
3. Resultant socialization outcomes in various college settings (p. 297)

Weidman also discussed the need to consider both individual and organizational characteristics when studying socialization. Therefore, his model included students’ individual background characteristics, their interactions with reference groups, normative
academic and social contexts, and socialization processes that all lead to the socialization outcomes of career choice, lifestyle preference, aspirations, and values. The same parameters could be applied to examining the socialization of students in DE courses. Students bring with them their own background characteristics; encounter pre-DE normative pressure, during-DE normative pressure, and post-DE normative pressure from parents, peers, faculty and others who could be considered reference groups; experience academic and social contexts; undergo socialization processes – one of which is role acquisition; and leave the DE experience with socialization outcomes that may or may not go as far into the future as career choices, but may include more immediate decisions involving college enrollment and performance.

Like Weidman’s (1989) model, Astin’s (1993) I-E-O model creates a framework for examining how DE influences students’ socialization as future college students in that both recognize a linear progression through an environment and acknowledge students’ pre-existing characteristics that they bring with them to the experience. In Astin’s model, “I” stands for a student’s pre-college “input” characteristics (such as gender, race, academic ability, socio-economic status, interests, etc.); “E” is the college “environment;” and “O” represents the “outputs” or “outcomes” that result from attending college. In this study, students do already have their individual input characteristics, the “environment” is the DE experience, and the outcomes are the students’ subsequent perceptions of themselves as future college students and their choice to attend college or not. It is appropriate to use DE as an environment in the model as it mirrors Astin’s environmental variables of institutional characteristics (aspects of the
high school, online format, or the college campus), curricular measures (the DE coursework), the faculty (concurrent instructors or college instructors), and peer group (concurrent, online or college-only classmates). Thus, Astin’s I-E-O model can be adapted to become an “Inputs-Experience-Outcomes” model, in which DE becomes the experience that affects the outcomes (students’ self-perceptions as future college students and subsequent behavior to attend college or not), taking into consideration that students bring their own input characteristics to the experience. Astin’s I-E-O model emphasizes the student’s progression through the experience, while Weidman’s socialization theory provides a starting point for examining the socialization process within the DE experience. Combining these theoretical models creates a framework for this study within which to explore the influence of DE on participants’ socialization as future college students.

Research Framework

A theory about the influence of DE on the socialization of participants as future college students does not currently exist. This grounded theory study begins to explore the influences of DE as described by the students, including impactful aspects of the experience, in order to develop such a theory. The following conceptual map, Figure 1.2, illustrates not only how the theoretical framework discussed previously supports the design of the study, but also how the grounded theory research design will provide data gained from intensive interviews with students who have participated in DE courses in order to develop a possible theory to address the socialization of DE students as future
Figure 1.2. Research Framework of the Study of Dual Enrollment and the Socialization of Future College Students. This figure represents the research framework for this study.

**Problem:** Many people are not gaining a postsecondary education despite the economic and social benefits. Dual enrollment (DE) could increase degree completion because research shows students who participate in DE achieve higher college enrollment and completion rates than their non-DE peers regardless of student input factors. One reason for the improved rates could be that DE influences the socialization of participants as future college students; however, little research exists on this topic. Understanding the socializing aspects of DE could lead to better DE programs, particularly for students at-risk of not attending or completing college.

**Positionality:** Being a college administrator, my personal beliefs about equity and the role education plays in improving people’s lives, and the selection of grounded theory as the design for this study create an interpretive framework that combines pragmatism, social justice, and social constructivism.

**Purpose:** This grounded theory study explores how the DE experience influences participants’ socialization as future college students in an effort to develop a theory to illustrate factors shaping students’ skills, behaviors, values, motivation, and self-perceptions as future college students.

**Theoretical Framework:** Astin’s I-E-O Student Development Model, Role Acquisition Theory, and Weidman’s Theory of Undergraduate Socialization create a theoretical framework for the study.

**Research Questions:**
1. How does the DE experience influence the socialization of high school students as future college students?
2. What aspects of the DE experience influence the socialization of high school students as future college students?
3. How does the DE delivery mode shape students’ socialization as future college students?

**Data**

*Students’ descriptions of their DE experiences’ influences on their socialization as future college students*

**Data Analysis**

- Initial, focused, and theoretical coding
- Constantly compare data and literature to inform a possible theory
college students. This early socialization could affect students’ future college attendance and performance by influencing students’ self-perceptions as future college students, aiding students in acquiring the role of a future college student, and providing opportunities to gain skills, behaviors, values and motivations of college students.

Because little is known about what actually happens to a student during the DE experience in terms of student development, socialization, and role acquisition, this study uses the theoretical framework already discussed to explore how students describe the influence of the DE experience on their socialization as future college students, noting any specific aspects of the experience that they say influenced their self-perceptions, skills, behaviors, values and motivations, including the delivery mode by which they took the classes. As seen in Figure 1.2 above, the circles for the delivery modes overlap because students may take classes in more than one modality. For example, one student in this study actually took DE coursework in all three formats: concurrently in the high school, online from the college, and on the college campus.

As explained previously, the theoretical framework overlays Weidman’s (1989) Conceptual Model of Undergraduate Socialization, Thornton and Nardi’s (1975) Role Acquisition Theory, and Astin’s (1993) I-E-O model. Astin’s I-E-O model provides a linear approach for examining a student’s experience that recognizes the influence students’ pre-existing characteristics have on the student’s experience, in addition to the influence of the environment – in this case, the DE experience. The input characteristics include student motivation, SES, academic capital, social capital, academic ability, race, and gender. In this study, the “environment” of the I-E-O model is defined as the DE
experience. As discussed earlier in this chapter, this study purposely used the word “experience” because participating in DE involves coursework, teacher and classmate interactions, the environment, expectations, perceptions, self-perceptions, the delivery mode, and other factors that could influence the students’ socialization as part of the DE experience, not just DE coursework or classes. Existing research shows that regardless of student input characteristics, students who have participated in DE achieve the following outputs as compared to their non-DE peers: increased college enrollment, higher college GPAs, more college credits, higher college retention rates, and better college completion rates than their non-DE counterparts. This study defines the outcomes as the student’s self-perception and subsequent behavior of enrolling in college or not following their DE experience.

One hypothesis for the improved college performance of former DE students could be the early socialization of the student as a future college student. Part of that socialization could be students acquiring the role of a college student. Therefore, the research framework includes Thornton and Nardi’s (1975) role acquisition theory as it provides steps that may correspond to the students’ DE experiences, such as learning about the role through anticipatory socialization and then entering the more formal stage of seeing one’s self as a college student through role rehearsal. Specifically, dual enrollment may provide an experience that facilitates a person acquiring the role of a college student by creating an authentic experience in which students enroll and complete college coursework, meet college expectations, interact with instructors and classmates, develop a self-efficacy as a future college student, and move from the anticipatory
socialization stage of role acquisition theory, in which students learn the expectations and behaviors of a role, to the formal stage of role acquisition in which students actually experience the role, learn the behaviors through trial and error, and cognitively interpret the experience. By experiencing the role of college student in the formal stage of role acquisition, students could perceive themselves as college students, which could be part of the socialization process and lead to improved college performance.

Furthermore, if students are becoming socialized to view themselves as college students through the DE experience, then Weidman’s (1989) undergraduate socialization model could apply, particularly its recognition of academic and social normative contexts. Students in DE courses could be influenced socially by their classmates, faculty and others as well as the social structure of the classes and institutions. In addition, they are influenced academically by the structure and expectations of academic departments and faculty, and their own academic performance.

In order to find out how students describe the influence of the DE experience, 40 students who enrolled in DE courses in AY 2015-2016 and graduated from high school during that academic year were invited via phone to participate in the study, beginning with hour-long intensive interviews that occurred both face-to-face and over the telephone. Follow-up questions were asked via email and the telephone. The data gleaned from the intensive interviews with former DE students was coded and analyzed using the constant comparative method outlined by Charmaz (2014). The data was initially coded line-by-line and then again through focused coding until themes emerged. Students’ concepts of college students; perceptions of themselves as future college students;
influencing factors; and college-related skills, behaviors, values, and motivations acted as initial “bins” in which to examine the data. Running throughout the data analysis process was an awareness of the possible influence the various DE delivery modes may have on the experience. Thus, Figure 1.2 of the research framework shows the delivery mode as running underneath the initial bins and across the various factors. Then, in an iterative process, the coded data and literature were compared and used to develop a theory to describe the socialization influences of DE on participants as future college students.

**Definition of Terms and Concepts**

Although I have exclusively chosen the term “dual enrollment” so far in describing the study, the name is often used interchangeably with other related terms, which should be defined more precisely. In addition to “dual enrollment,” DE is also sometimes referred to as “dual credit,” “concurrent enrollment,” “college in the high school” and “joint enrollment” (Hoffman, Vargas & Santos, 2009). Distinctions in the labels do exist, however. The differences are important when comparing programs or discussing effective outcomes because the different types of DE programs have different missions, design elements, and organizational structures. In all forms of DE, students are dually enrolled in a high school and in a college, but they may not be earning credits in all cases. “Dual credit” means students are simultaneously receiving high school and college credit with the credit appearing on both the high school and a college transcript versus “articulated credit” through which the students complete the coursework but then must apply to receive the college credit from the granting institution. “Concurrent
enrollment” usually specifies courses taken in the high school and taught by either high school faculty with college-level teaching credentials or by college faculty. “Early college” can refer to intensive programs in which students take college courses their 11th and 12th grade years to earn their high school diplomas and an associate degree simultaneously, courses taken for college credit only, or an emerging model in which the last two years of high school are taught autonomously in a separate school on a college campus. In both “early colleges” and “middle college high schools,” the goal is for students to earn the high school and college credential at the same time. “Dual-enrollment pathways” describe a sequence of predetermined courses that lead students into college work and tend to have career and technical education components, as well as possible college success skills courses (Allen, 2010). The diagram below, Figure 1.3, illustrates how the different terms surrounding DE fit together.

Figure 1.3. Dual Enrollment Terminology and Relationships. This diagram shows the relationship between different terms used in regards to dual enrollment (DE).
For the purpose of this study, DE is defined as any course in which students were dually enrolled in a high school and in the college. DE in this study includes classes taken both for dual credit and as early college credit. No distinction is made in the definition for courses taught concurrently in the high school, online through the college, or on the college campus; however, these different delivery modes are discussed as they pertain to the findings of the study.

**Assumptions**

As discussed previously in this chapter, beneath the structure of DE programs lies a belief that postsecondary education is important for the individual and society. A corresponding philosophy is that students who are better prepared academically and socially for college will do better in college. This assumption arises from various student development theories. Most models, like Astin’s I-E-O Model, Tinto’s Model of Voluntary Student Departure, Bean and Eaton’s Psychological Model of Student Departure, and Terenzini and Reason’s Parsing the First Year of College Model, recognize that the “inputs” or existing characteristics a student brings with him or her to the college experience affect how well the student will persist and complete (Renn & Reason, 2013).

An assumption of this study in particular was that the DE experience influenced students. An additional assumption was that the impacts on DE students were similar to those experienced by college students in that college student development theories and undergraduate socialization premises were applied to the DE students. The study also
assumed students were able to articulate the influences of that experience and to recognize its effect on their skills, behaviors, values, motivations, and perceptions of themselves as future college students.

**Limitations and Delimitations**

As noted in Maxwell (2013), the purpose of qualitative research is not to externally generalize results, especially since random sampling of a population is not used. Instead, qualitative research focuses on “the development of a theory of the processes operating in the case studied, ones that may operate in other cases, but that may produce different outcomes in different circumstances” (p. 138). However, qualitative studies may have “face generalizability,” meaning there is no reason to believe findings could not be generalizable, especially if given a “similarity of dynamics and constraints to other situations, the presumed depth or universality of the phenomenon studied, and corroboration from other studies” (p. 138). The findings of this study are limited to the experiences of students taking DE classes at GFC MSU in AY 2015-2016. However, the findings may be applied to help further understanding of the DE experience on students in similar contexts.

As noted by Charmaz (2014), theorizing, including grounded theory, “occurs under particular historical, social, and situational conditions” (p. 238). Therefore, this study is grounded in time to represent the experiences of those who completed DE courses in AY 2015-2016, in place by being students who took the courses through GFC MSU, and by the situation of taking DE classes from a small, rural two-year college. The
study is also grounded by the type of DE courses offered. GFC MSU offers singleton or stand-alone DE courses, meaning the courses are not part of a comprehensive program with built-in support measures, such as advising and tutoring; although, those services are available to DE students. GFC MSU delivers the courses in three modes: concurrently in the high school, online through the college, and on the college campus. Thus, the study is further limited by the mode in which the students participated in the courses. Even though all of the delivery formats are available, most students only experienced one delivery mode. Four of the 40 students did enroll in more than one mode of delivery though, as discussed in Chapter 3 and Chapter 4.

Additionally, this study recognizes that the constructivist approach and interpretive work needed to generate a theory limit the study. My ability as a researcher to develop an interview protocol and interview questions that elicit authentic, insightful, reflective, and pertinent responses from the participants also limits the study, as well as the participants’ willingness and ability to recognize and articulate responses that will lead to a theory about DE’s influence on the socialization of participants as future college students. This study has an additional limitation in that students were asked to recall information about their experiences. The students were interviewed not at the time of the occurrence but rather within a year after the completion of their DE coursework. However, gathering data after the completion of the coursework and after their high school graduation did enable me to capture and compare the students’ college-going behavior with their reported intentions and perceptions.
My ability to then interpret the responses accurately and present the information in an understandable format also limits the study. As stated by Charmaz, “The theory depends on the researcher’s view; it does not and cannot stand outside of it” (2014, p. 239). Another limit to the study is the ability of myself as the researcher and the participants to successfully navigate the mutual power dilemmas, as described by Day (2012), that exist in a research and interview context, so that the heterogeneity of the participants is recognized yet their responses combine into overarching themes that lead to the development of a theory.

**Summary**

In order to understand the background and context of this study, Chapter 1 presented important introductory information and concepts. First, DE has become a fast-growing movement in higher education with the potential to improve student success in college. Second, DE is basically a partnership between K-12 institutions and institutions of higher education in which students are co-enrolled at both educational levels. Several forms of DE courses exist, and the types vary depending on their purposes. In one format, students can simultaneously receive college and high school credit. Currently, students can take DE courses concurrently in a high school, online through the college, and on a college campus. Third, because of the apparent improvement in college attendance and performance of former DE students compared to their non-DE peers, pressure exists to increase the number of DE courses available and enrollments in those classes. The gains could be especially significant for underserved and underrepresented students. However,
fourth, little research has explored why or how the DE experience influences the socialization of participants as future college students. If more understanding and information were available regarding this phenomenon, then DE programs and other college readiness and success initiatives could be better designed to benefit all students. Fifth, therefore, the purpose of this qualitative grounded theory study is to explore how DE influences the socialization of participants as future college students, particularly to identify any aspects of the DE experience that shape students’ skills, behaviors, values, motivations, and perceptions of themselves as future college students.

Lastly, this study combines Weidman’s (1989) Conceptual Model of Undergraduate Socialization, Thornton and Nardi’s (1975) role acquisition theory, and Astin’s (1993) I-E-O Model to create a framework within which to explore the socialization aspect of the DE experience. The research framework illustrates how the theoretical framework supports the study and the use of grounded theory. Mainly via intensive interviews with students who completed their DE courses through GFC MSU, data was collected, coded, and compared in an iterative process that used the data and the literature to develop a theory that could possibly demonstrate DE’s influence on the socialization of participants as future college students.
CHAPTER TWO

REVIEW OF RELATED LITERATURE

Introduction

Ravitch and Riggan (2017) provided many reasons for conducting a literature review— to honor a tradition, to serve as a rite of passage, to add rigor to the research process, to demonstrate expertise and command of a subject, to situate a study within a larger framework, and to discover gaps in the research and literature. They also referred to a literature review as a “conversation” (p. 28). The purpose of this literature review is to bring the reader into the conversation surrounding DE, with the benefit of being able to listen in to and include historical and current discourses.

Criteria for Selection of Literature

In order to satisfy both “coverage” and “significance” as proposed by Boote and Beile (2005) as essential components of a literature review, this literature review draws from a variety of sources: peer-reviewed journal articles, unpublished dissertations, government reports, organizational publications, and handbooks on conducting grounded theory studies. The topics researched arose from the theoretical framework of the study: characteristics/inputs of DE students, outcomes of DE students, socialization theory, and role acquisition theory, as well as DE itself. In particular, the review strove to find research where the theories intersected with DE and overlapped, as demonstrated by the Venn diagram in Figure 2.1 below. As the lowest circle of the diagram illustrates, the
literature review recognized that other topics could emerge through the course of the study, as is consistent with grounded theory and the constructivist approach promoted by Charmaz (2014).

Figure 2.1. Map of Areas of Literature Review. This Venn diagram represents the overlap between the main categories included in the literature review for this study.

Allen’s (2010) *Dual Enrollment: A Comprehensive Literature Review & Bibliography* provided an excellent starting point for the research. Several publications were also gleaned from the Community College Research Center (CCRC). Although a variety of search engines and databases were used to gather possible publications for inclusion in this literature review, the most effective research method became following the chain of references from one study to another.
At its most basic definition, dual enrollment (DE) is a collaboration between secondary and postsecondary schools in which students are simultaneously enrolled in both institutions. However, to understand DE it is helpful to situate the concept in a broader conversation. DE is one of several movements that fall under the comprehensive umbrella of accelerated learning, which has been discussed since the 1950s and 1960s when Advanced Placement (AP) exams were intended to help college-bound high school students get a jump on earning college credits (Andrews, 2004).

The purpose and programs of accelerated learning began to expand in the 1970s, and DE was born out of a reform effort to improve higher education. As early as 1971, the Carnegie Commission called for changes in the educational system, better integration of secondary and postsecondary schools systems, and recommended awarding college credit as a way to smooth the transition between high school and college, increase the rigor of the high school year, and increase college completion (Jones, 2014). The next year, the first recognized DE program opened; Syracuse University’s Project Advance (SUPA) targeted high academic achievers. Then, in 1974, the Middle High School program at LaGuardia Community College in New York launched, designed to reach students thought to be at risk of dropping out of high school – a complete contrast to the purpose of SUPA, thus creating a philosophically dichotomous mission for DE which still exists today (Kim, Kirby & Bragg, 2006).

The reform movement, which included a paradigm shift in thinking about the rigid boundaries between high school and college, received a boost in 1983 when A
Nation at Risk: The Imperative for Educational Reform reported the results of The National Commission of Excellence in Education. Among many other issues, the report recognized the transition from high school to college as crucial in students’ success (The National Commission, 1983). As a result, more DE programs were created as a way to ease that matriculation.

Then, in 2001, another national report, The Lost Opportunity of Senior Year: Finding a Better Way, basically stated the senior year was a waste of time for students because college choice and preparation was based on work completed through the 11th grade and a seamless transition between stages of education was needed (National Commission on the High School Senior Year, 2001). At the time, many DE programs were still focused on students who were high achieving and academically prepared, but in the early 2000s the discussion shifted to include how DE might benefit lower-performing students and those traditionally underserved and underrepresented (Bailey, Hughes & Karp, 2002). Between 2001 and 2006, non-profit foundations, government agencies, and college and university organizations published a flurry of reports listing DE as a promising model of educational reform (Allen, 2010). In 2002, the Office of Vocational and Adult Education contributed a study that looked at DE as an option specifically for career and technical education students. Its report, published in 2005 and titled Pathways to College Access and Success, recognized DE courses as an important credit-based transition program (Hughes, Karp, Fermin & Bailey, 2005).

In addition to these larger reports, more articles about DE began appearing in journals. Respected experts like Cliff Adelman discussed DE in his 2005 publication The
Toolbox Revisited: Paths to Degree Completion from High School through College, excerpts of which were re-printed in other journals. Individual states began requesting reports on their DE programs. Non-profit advocates like the Bill and Melinda Gates Foundation, Lumina Foundation, and James Irvine Foundation began to provide funding and support for efforts that furthered the DE agenda (Allen, 2010).

In the 2000s, researchers also began to explore the results or outcomes of DE programs. They wanted to know if the programs were effective in preparing students for college so they focused on former DE students’ subsequent performance in college. Conducting such studies proved difficult though because DE programs varied by state and even by school district. Once a sufficient number of studies proved that students who participate in DE perform better than their non-DE peers in college, researchers turned to examining possible confounding factors, such as gender, ethnicity, SES, first-generation status, parental expectations, and previous academic performance. The research showed that controlling even after controlling for a variety of variables, former DE students outperformed their non-DE peers in college (Jones, 2014).

Recent conversations surrounding DE have centered on legislative and policy issues aimed at expanding DE offerings, funding DE programs, providing more access to middle- and low-performing students or at-risk students (as defined in a variety of ways), reducing developmental education at the postsecondary level, and credentialing DE instructors (Zinth, 2016). Efforts to expand the availability of DE courses through concurrent and online delivery modes sometimes arrives at odds with calls to ensure quality instruction by increasing the credentials of DE instructors and making sure the
delivery mode is effective (Zinth, 2015A). DE programs are also being scrutinized for inequities within and between programs as achievement gaps are becoming evident for underserved students in the programs when compared to other groups of students in DE (Haskel, 2016). Policies regarding who can enroll in the courses, who pays for the classes, and where and how the classes are taught are being examined for inequalities as well (Taylor, 2015).

Understanding the history and different types of DE programs is important for this study because it provides background and context to compare and contrast the findings of past research. Because the structure and format of DE programs varies based on their intended purposes and audiences – to accelerate college credits for high performing students or to create opportunities for underserved students to gain access to a postsecondary education – discussing the different types of programs speaks to the pragmatic and social justice lenses used in this study as discussed in Chapter 3.

Types of Dual Enrollment Programs

According to the Education Commission of the States (ECS), currently all 50 states have some form of DE (ECS, 2016). Programs typically vary by entrance criteria, financing, location, instructors, student mix, credit earning, and intensity (Karp, Bailey, Hughes & Fermin, 2004). The differences come back to mission – is the program’s purpose to accelerate advanced students or to provide access for all students? Programs aimed to accelerate advanced students, for example, have minimum GPA and coursework eligibility requirements and charge tuition, usually less than for college students.
Programs designed to increase access do not have entrance criteria and are funded by outside sources such as state budgets, a lottery, or grants so there is no cost to the student. DE programs geared for underrepresented students often contain a career and technical education component as well. Students in this study had to be 16 or of junior status in order to enroll in DE courses. Some of the DE courses in this study, such as writing, math, and some of the sciences, have additional entrance criteria – students must meet the same placement exam standards and prerequisites as college-only students. The students pay half of the in-state college tuition and any associated course fees, but not the other college-related fees. One of the large school districts in the area has a foundation that does pay for some students’ tuition costs. In addition, some school districts provide the textbooks while other districts require the students to purchase the textbooks used in DE courses. These types of variances among DE courses and programs are typical, even within the same school district, college’s service region, or state university system, let alone across states or nationally. Thus, comparing different studies and programs becomes problematic (Zinth, 2015B).

Bailey and Karp (2003) defined three categories of DE programs: singleton, comprehensive/intensive, and enhanced comprehensive. Singleton programs are cafeteria-style, stand-alone courses in which students can take a variety of courses for dual credit. Examples would be Washington’s Running Start program or Michigan’s Postsecondary Education Options. Comprehensive or intensive programs are more structured and constitute most of a student’s educational coursework in their last two years of high school. Comprehensive or sequence programs are often designated as
“pathways” and lead students through increasingly more advanced material and may include Tech Prep or career and technical education courses, such as New York City’s College Now program or Project Lead the Way in St. Louis. Enhanced comprehensive programs include support structures, such as advising, college visits, and academic skills-building workshops, like the national Gateway to College program or Maine’s Early College for ME (Barnett & Stamm, 2010).

One of the most notable DE programs in the country is New York City’s College Now program. Run by the City University of New York (CUNY), College Now started in 1984 at Kingsborough Community College as a way to increase high school graduation and improve college readiness. In 1999, the CUNY governing board voted to eliminate remediation at CUNY’s senior colleges, so College Now was expanded and designed to specifically meet the needs of students who might not be able to participate in postsecondary education. It now serves as a model for an integrated K-16 system and is the largest DE program in the country (Hoffman, Vargas & Santos, 2009). Because of its size and time in existence, the CUNY program is included in many empirical studies examining the effectiveness of DE.

In addition to New York, Florida is recognized for its accelerated learning options, including DE. Florida legislation mandates that all 28 community colleges and specific four-year universities offer dual-credit courses. Approximately 80% of all of Florida’s dual-credit courses are taught at community colleges. Like College Now, the focus in Florida has been on the middle academic performers or those pursuing technical education (Hoffman, Vargas & Santos, 2009). Because of Florida’s comprehensive K-20
data collection system, the state has also been included in several empirical studies about the effectiveness of DE programs.

An exemplar model for early colleges would be North Carolina’s Learn and Earn schools. In 1986, legislation called the Huskins Bill first made DE possible in the state. Then, in 2003, the state created the Innovative Education Initiatives Act which enabled Learn and Earn early colleges to develop on several community college campuses. The Learn and Earn early colleges tie education to workforce development, with the goal of students completing a high school diploma and associate degree or an applied associate degree seamlessly in five years (Hoffman, Vargas & Santos, 2009).

Another program of note because of its early beginnings and longevity is Washington’s Running Start program. Running Start began in 1993 and currently provides two years’ of free tuition to high school juniors meeting the entrance qualifications for a community college. Running Start is now one of more than 12 DE programs in Washington. The 2011 Launch Year Act requires all public high schools in the state to increase their dual credit courses, and legislature in 2015 provided funds to be used for Running Start students’ transportation, books and fees (Washington Student Achievement Council, n.d.).

Different programs in other states follow a variety of models. The Concurrent Courses Initiative (CCI) in California and the Cooperative Alliance Program (CAP) in Oklahoma focus on career and technical education courses, while DE programs in Minnesota and Michigan target advanced or high-performing students. Utah has focused on intensive programs enabling students to earn an associate degree and their high school
diploma simultaneously. Virginia has traditionally had two tracks in its Senior Year Plus program: one for career and technical education students and one for traditional college-bound students. North Carolina and Florida are moving forward with early college models, joining earlier efforts in California, Georgia, New York, Ohio, Texas, Utah and Washington (ECS, 2016).

As mentioned previously, DE courses may be taught concurrently in a high school, online through the college, and at a college campus. Researchers are just beginning to examine how these different delivery modes affect students and the programs’ effectiveness. Some believe teaching the DE courses in the high school gives students additional supports to be successful; others state that the DE courses should be taught on a college campus because the experience is more authentic to what students will experience once they leave high school and enroll as college-only students and, therefore, aids in a student’s transition to college. Although some question the efficacy of teaching DE online, online delivery increases options for many rural students. All agree that the effect of the delivery mode on student outcomes needs further study (Barnett & Stamm, 2010; Hofmann & Voloch, 2012).

Concerned about creating an authentic experience, in 2008, The James Irvine Foundation launched the CCI in California to examine eight secondary-postsecondary DE partnerships in the state. Managed by the CCRC, the project found the most effective programs were those that were “authentic,” meaning they were “perceived by students as an authentic college experience where they can ‘try on’ the college student role and view themselves capable of doing college work” (Edwards, Hughes & Weisberg, 2011, p. 4).
Their findings support enhanced models that integrate student supports into the classroom. Specifically, the report stated the most effective programs were those taught on college campuses, by college instructors, with courses tied to the students’ goals, in a mix of DE and college students, for dual credit, and during the regular school day (Edwards, Hughes & Weisberg, 2011). Because of findings like these, acknowledging the delivery mode of the various DE courses students in this study have experienced is recognized in one research question of this study: “How does the delivery mode shape students’ socialization as future college students?”

**Dual Enrollment Outcomes**

Understanding the history of and types of DE courses and programs prepares one to examine the research on the subject. Empirical research did not begin until the early 2000s because data on students participating in DE was not collected previously (Karp, Calcagno, Hughes, Jeong, and Bailey, 2008). The studies are also difficult to compare because of the differences in programs. Despite the variety of DE programs and the inability to conduct nationwide research on the outcomes of DE because of the inconsistencies in state-by-state and district-by-district DE policies and practices, most of the empirical research on DE students’ subsequent performance in college found former DE students have higher high school graduation rates, college attendance rates and stronger college performance than their non-DE counterparts (Jones, 2014). With few exceptions, researchers have found students who participate in DE courses or programs enroll and perform better in college than students who do not participate in DE. A
summary table of empirical studies examining the outcomes of DE students is provided in Appendix A. The following section discusses the research’s findings on specific outcomes: high school graduation, college aspirations and enrollment, academic performance, retention and completion, and DE students’ self-perceptions as future college students.

High School Graduation

Before students can pursue a postsecondary education, they must graduate from high school. So, although this literature review focuses on students’ behavior and performance post-high school graduation, several studies discovered students who participated in DE had higher high school graduation rates than students who did not take DE courses. In 2007, Karp, Calcgano, Hughes, Jeong and Bailey reviewed records for students in the Florida public school system who graduated in 2001 and 2002. They found students who participated in DE were 4.3% more likely to graduate from high school than their non-DE peers (Karp, Calcgano, Hughes, Jeong & Bailey, 2007).

Similar results were found by Hughes, Rodriguez, Edwards and Belfield (2012) when they explored data from the California Partnership for Achieving Student Success (Cal-PASS), a voluntary, statewide data collection system, for three academic years starting with 2008-2009. Their study focused on career and technical education students as part of the California Concurrent Courses Initiative (CCI) and found that DE students did have higher high school graduation rates than non-DE students. However, the researchers noted that students in study were already in 12th grade and enrolled in a DE
program, thus they were already more likely to graduate from high school than their non-DE peers even though they controlled for academic performance through test scores.

More recently, Haskell (2016) examined the Utah Data Alliance longitudinal public education dataset for the 2008 and 2009 high school graduating cohorts to determine the extent of any positive outcomes. Haskell employed a Propensity Score Matching method to control for self-selection bias, academic performance based on standardized test scores, gender, race, income, and English Language Learner status. Controlling for those variables, DE students were 20.9% more likely to graduate than non-DE students. Haskell found the greatest benefit for low income and minority males, 32.8% for minority males and 30.9% for low-income minority males. Low-income females in DE were also significantly more likely to graduate, 29.1%, than their peers (p. 153).

Unlike the three studies discussed, Speroni (2012) did not find significant differences between the high school graduation rates for DE and non-DE students after she used the regression discontinuity design to control for self-selection bias in students taking DE courses. She proposed that students in DE courses differed from other students in their academic ability, motivation, and expected gains from participation. Like Karp et al. (2007), Speroni used data from the Florida Department of Education. She examined students in the 2000-01 and 2001-02 high school senior cohorts and found no significance difference between high school graduation rates for DE and non-DE students. However, like Hughes et al. (2012), Speroni admitted the results should be viewed with caution as the students in the study were already seniors, thus close to
graduation regardless of DE status. Speroni did find that students taking College Algebra specifically as a DE course did display a small increase in graduation rates over their non-DE peers, but the difference ranged from 4% to 7% depending on the discontinuity sample and the difference was not always statistically significant.

Critique. As demonstrated by the studies above, gauging the effect of DE on high school graduation rates presents difficulties for several reasons. Although Haskell and Speroni attempted to control for a self-selection bias in the students who opted to enroll in DE courses, so many variables and possible differences between DE students and non-DE students exist that it would be challenging to account for them all. In addition, many DE programs have age or grade level restrictions that already remove many students from the comparisons, such as needing to be 16 or a junior in order to participate in DE courses. Therefore, students who would drop out before that time or soon after would no longer be a part of the population. Hughes’ and Speroni’s studies are particularly problematic in this area as they included only seniors in their studies who are already close to graduating anyway.

College Aspirations and Enrollment

Following high school graduation, college enrollment presents the next step towards degree completion. Most of studies in the literature review concluded that DE students are more likely than their non-DE peers to enroll in college. Although national studies are not available, several state studies have been conducted. In 2005, Smith surveyed 304 seniors in the Allen County Community College service area in Kansas to
determine the college aspirations of DE and non-DE students. She controlled for parent’s education level, average grades, perception of courses, parents’ educational expectations, personal level of importance attributed to education and homework, and extracurricular reading. Accounting for those variables, Smith found 83.3% of DE students aspired to complete a four-year degree compared to 39.1% of non-DE students (Smith, 2007).

Smith also conducted correlational analyses to determine the relationships between the variables and their significant effect on college aspiration. Participation in DE was the fourth highest in significance (.482), following grades (.527), parent’s highest level of education (.504), and perception of parental expectations (.504).

Aspirations lead to enrollments. Again, as with high school graduation, most studies found increased rates of college enrollment by former DE students when compared to non-DE students; although, some discrepancies exist. In a rare national study, Swanson (2008) used logistical regression to examine data from the U.S. Department of Education’s National Education Longitudinal Survey of 1988 (NELS: 88/2000) in order to discover any correlations between DE participation and college outcomes. She found DE students were 12% more likely to enroll in college within seven months of high school graduation when compared to their non-DE peers.

In 2007, Karp et al. used ordinary least squares and logistic regression to examine college enrollment patterns of DE students in Florida and New York City. In both locations, DE students were more likely to enroll in college than their non-DE peers. However, the results for each locale need to be discussed separately because the New York City dataset of 2,303 included records only for students enrolled in career and
technical education programs who subsequently attended CUNY in 2001 and 2002. On the other hand, the Florida dataset contained 299,685 records for all students enrolled in the state’s public high schools. Data for students who graduated in 2001 and 2002 in Florida were used in the study (Karp et al., 2008). In New York, students who were part of the College Now DE program were 3.5% more likely to enroll in college and 9.7% more likely to pursue a bachelor’s degree than their non-DE peers. In Florida, DE students were 7.7% more likely to enroll in college than their non-DE peers. The researchers conducted a second analysis on only students in career and technical education programs in Florida in order to match the type of student in the New York City program. The career and technical education students in Florida were 8.6% more likely to enroll in college than their non-DE peers (Karp et al., 2008).

Both the Florida and New York City studies controlled for differences in gender. No differences were found between males and females in New York City, but males in Florida experienced greater gains in college enrollment than females in the study. The Florida study also controlled for high school achievement and SES. Like males in the study, low-income and lower-achieving students displayed greater gains than other subgroups.

In 2012, the CCRC added research from the Hughes et al. study in California to the findings from Florida and New York City in a report entitled What We Know About Dual Enrollment. The report presented college enrollment to be 50% for non-DE students compared to 67% enrollment for DE students, a difference of 17%. The number pursuing a bachelor’s degree in particular was higher for DE students at 35% compared to 27% for
non-DE students (2012, p. 2). In discussing California in particular, details about the methodology of the study were not included in the report; the CCRC stated that California had results similar to Florida and New York City and presented a graphic showing rates for students who participated in DE and enrolled in college as 5% higher than for non-DE students (CCRC, 2012, p. 3). However, a discrepancy exists between the CCRC publication and Hughes et al.’s report through the James Irvine Foundation. In *Broadening the Benefits of Dual Enrollment* (2012), Hughes et al. stated they found no significant difference between DE and non-DE students’ college enrollment until they separated out four-year university attendance. Then, they did find a significant difference in attendance at four-year universities as opposed to college attendance in general. The study included 691 students from five career and technical education DE programs, and regression analyses were used to control for student characteristics, but the report does not say which characteristics were accounted for (Hughes et al., 2012). In an article for the National Center for Postsecondary Research, the researchers again stated they found no significant difference among DE students’ subsequent college attendance when compared to non-DE students until they isolated four-year university attendance. For four-year university attendance, the DE students did enroll at a rate of 2% above their non-DE peers (Rodriguez, Hughes & Belfield, 2012). Thus, it appears that the study found significant differences only for enrollment in four-year universities, not two-year colleges.

Allen (2010) included a study in Ohio in the list of studies examining DE students’ college enrollment rates. In 2007, the state had a college-going rate of 59% for
all of the graduating seniors in its public schools, yet 71% of the state’s DE students enrolled in college after graduation, a significant increase. The study did not examine student-specific information, however, so it did not control for student characteristics that may have been confounding variables, such as academic ability, gender, race, GPA, college intentions, parental education, parental expectations, etc.

In Texas, Struhl and Vargas (2012) found that DE students were 2.2 times more likely to enroll in college than their non-DE peers (p. vi). Unlike the Ohio study, Struhl and Vargas utilized propensity score modeling (PSM) to match the characteristics of the DE and non-DE groups of students in order to control for characteristics such as race, gender, income, and academic ability as demonstrated by scores on state tests. The PSM technique resulted in 16,454 matched pairs of DE and non-DE students. Logistic regression was then used to compare the subsequent enrollment, persistence and completion of the participants. The probability of DE students enrolling in college compared to non-DE students remained statistically significant for each subgroup examined – race, gender, income, performance on state tests, and for both two-year college and four-year universities. However, the increased likelihood of attending college after DE was greater for White and Latino students than for African-American students. In addition, the increase in attending a four-year university was greater for economically disadvantaged students than for those who were not economically disadvantaged. The study also compared results for different types of DE courses and found an increased likelihood to enroll in college for students taking any DE course or English Language Arts, vocational, or foreign language DE courses in particular. No effect was found for
math, however. The researchers speculate that enrollment for students in DE math classes may not have been significant because of a high variance in course quality or because of the small number of students taking DE math.

Like Hughes et al. (2012), Speroni (2012) found no significant difference in college enrollment in general for DE students when compared to non-DE students. However, unlike Struhl and Vargas (2012), she did find the completion of DE College Algebra to be significant in DE students’ likelihood to enroll in college. Speroni used a regression discontinuity design to control for student characteristics. She contended that students who have completed College Algebra gained self-esteem and confidence in their ability to obtain a degree and, therefore, were more likely to enroll in college than their peers.

Critique. As stated previously, it is difficult to compare programs, especially between states, because the programs can vary in so many ways. The CCRC made a valiant attempt to compare results from several states, but a discrepancy in data from other published works by the researchers of the Hughes et al. (2012) California study called into question the report’s findings. The studies have also only examined outcomes in the states that have the most readily accessible institutional data. The data and the quantitative studies may have shown “what” is happening after students participate in DE, but little research has been conducted as to “why” the outcomes have been positive or why the results vary among states. Adding qualitative information and considering other variables, particularly examining the specific components of the different DE
programs and their individual impact, could sharpen the research DE students’ subsequent college enrollment.

**Academic Performance: GPA**

Once students enroll in college, researchers are interested in how former DE students perform in comparison to non-DE students. In order to gauge performance, studies have focused on GPA as a measure of college accomplishment. The CCRC (2012) in its review of DE programs in Florida, New York, and California reported DE students on average had a higher first year GPA (2.62) compared to non-DE students (2.40). The difference in GPA continued as the students progressed to the end of their third year: 2.60 for DE students to 2.40 for non-DE students. In Florida specifically, DE students’ college GPAs were .21 higher than their non-DE peers. The difference increased to .26 for career and technical education students (Karp et al., 2008). In New York City, taking only one DE class did not correlate to a higher college GPA; however, taking two or more DE classes did with an increase of .133. Students who completed two or more DE classes had statistically significant higher college GPAs for four semesters into college (Karp et al., 2008). The study did control for student characteristics and found that the largest increase in GPA between DE and non-DE students occurred for low-income students and students with lower high school GPAs.

Allen and Dadgar (2012) also examined data from New York City’s College Now program, but included students from 2009, seven to eight years after the Karp et al. study. Allen and Dadgar accounted for more independent variables than Karp et al. as well, including race; gender; age; family income; language status; state exam scores for
English Language Arts, mathematics, and global history; SAT scores; and institutional differences amongst high schools, by using the difference in differences analysis. The regression model accounting for all of those factors found DE students earned first semester GPAs .16 higher than non-DE students’ GPAs.

Similar to the results presented for Florida, New York City, and California, Jones (2014) found DE students earned statistically significant higher GPAs in their first year of college at both a large community college and a research university in Texas. Jones used a multivariate analysis of variances to address the topic and included a random sample from 2,880 students between Fall 2002 and Fall 2005. The study controlled for high school GPA and high school class rank. For students at the community college, the DE GPA was 2.91 compared to the non-DE GPA of 2.65. At the research university, the DE GPA was 3.10 compared to the non-DE GPA of 2.91. Both differences were found to be statistically significant.

Like the other studies, Spurling and Gabriner (2002) found DE students at City College of San Francisco earned higher GPAs than their non-DE peers between Fall 1998 and Fall 2000. The overall GPA difference between DE students and non-DE students was 2.33 to 2.10. When controlling for prior academic performance by holding college placement categories steady, the DE students had even higher cumulative GPAs than non-DE students at 2.61 compared to 2.34.

Not all studies demonstrate such clear-cut results though. Crouse and Allen (2014) separated former DE students in Iowa into two groups: those who went to a two-year community college and those who went to a four-year university. They found no
significant difference in GPAs between the DE and non-DE peers at the community colleges, only between those at the four-year universities. DE students did have higher GPAs at the university than their non-DE peers, 2.93 to 2.82. The data included grades for 186,823 students from 2002-03 through 2006-07. Regression analyses computed the differences in means between grades for DE students and non-DE students controlling for ACT test scores, high school GPA, family income, and gender. On average, for a variety of courses, DE students did earn grades .17 to .60 grade points higher than non-DE students. The difference was slightly larger for students attending four-year universities when compared to two-year colleges but not in any specific courses.

The comparison of GPAs and grades between DE and non-DE students for one of the largest DE programs in the country, Washington’s Running Start program, mirror the results of other studies. The Washington State Board for Community and Technical Colleges reported that for the 2006-07 academic year, 90% of the DE students earned a C grade or higher in their first-year courses as opposed to 83% of the non-DE students (Allen, 2010).

Allen (2010) added other state studies to the list of reports citing higher GPAs for DE students when compared to non-DE students. The Kentucky Council on Postsecondary Education stated it used multivariate analyses to control for ACT scores and found DE students’ GPAs were one-third of a letter grade higher than non-DE students for students entering four-year public universities in Fall 2002. Similarly, Allen (2010) cited an unpublished dissertation on students in Texas’s public four-year universities that found higher GPAs for the first two years in the universities for DE
students when compared to non-DE students. He also included a study of the Minnesota State College and University System for Fall 2001 first-year students that used a matched sample based on gender, ethnicity, and high school GPA to track students’ GPAs for three years. After three years, the DE students had an average cumulative GPA of 2.92 compared to 2.53 for non-DE students (Allen, 2010).

Even though many studies reported higher postsecondary GPAs for DE students, Eimers and Mullen (2003) contended that the improved performance may not be due to the DE program itself. They reviewed data from the University of Missouri System and compared three groups of students: those with DE credits, those with AP experience, and those with neither DE nor AP. Using linear and logistic regression analyses, the researchers held academic ability constant as defined by ACT score and high school rank and found that students with AP experience and students with AP and DE credits both earned higher GPAs than students with neither AP nor DE at the end of the first college year. Students with AP only had the highest GPA (3.18), followed by students with both AP and DE (3.14), DE only (2.92), and then neither (2.70).

Most of the studies, like those presented, examined data across a university system. Some studies, however, focused on specific programs. For example, Foster (2010) conducted a study of the Cooperative Alliance Program (CAP) in Oklahoma. The DE program aimed to create a pipeline for technical students to move from high school to a technical college in the state. Similar to the results of the system-wide studies, Foster found CAP students from Fall 2007 earned higher GPAs at the Oklahoma State University Institute of Technology than their non-DE counterparts, 2.89 to 1.94.
However, the sample size of 50 was small, and the study very limited to a specific program at one technical college. Yet, the study shows how DE programs should evaluate their effectiveness and perform research based on their intended purposes.

**Academic Performance: Credits Earned**

In addition to GPA, researchers have used the number of credits earned to measure academic performance. This measure of performance is presented with caution because DE students already enter college with college credits. Thus, they are steps ahead of non-DE students from the start. Many of the studies that reported increases in GPA for DE students also reported increased credits for DE students. Spurling and Gabriner (2002), Karp et al. (2008), Allen (2010), Foster (2010), Allen and Dadgar (2012), Hughes et al. (2012), and Rodriguez et al. (2012) all reported more college credits earned for DE students when compared to non-DE students, even when controlling for a variety of variables as discussed in the previous section on GPAs. For example, DE students in Florida earned 15.1 more credits than their non-DE counterparts three years after high school graduation, and DE students in New York City earned 10.6 more credits than their non-DE peers (Allen, 2010). The accumulation of credits deserves separate mention though because of the tie between earning credits and persisting in college. The number of credits a student earns has also been linked to time-to-degree, which ultimately leads to degree completion. Adelman (2005) reported that students who earned 20 or more credits in their first year of college are 28% more likely to persist through the second year of college. Swanson (2008) called this combination of credit accumulation and persistence “academic momentum” towards earning a degree.
College Persistence

As noted by Adelman (2005) and Swanson (2008), persistence in college is essential to degree completion. Many researchers have compared persistence rates for DE students to persistence rates for non-DE students. Using the national NELS: 88/2000 data set and the Post-secondary Education Transcript Study (PETS: 2000), Swanson (2008) found DE students were 11% more likely to persist through the second year of college than non-DE students. Swanson did control for gender, race, first generation and SES status, high school class rank, high school GPA, standardized test scores, and course rigor. The only statistically significant difference was that males were less likely to succeed than females and Hispanic students were less likely to succeed than White students.

When examining persistence rates of DE students by state, the CCRC (2012) report stated that DE students in Florida were more likely to be enrolled at the end of the second year of college at a rate of 76% to 71% when compared to non-DE students. They were 4% more likely to still be enrolled in college one year after high school and 5% more likely to be enrolled after two years. However, there was no significant difference in persistence for students in New York City, which only compared career and technical education DE students with non-DE career and technical education students.

Other studies focused on career and technical education students have found significant increases in persistence, however. Foster (2010) did find a significant increase in persistence for career and technical education DE students when compared to career and technical education non-DE students. Her study involved students in the CAP
program in Oklahoma. Seventy percent of the DE students returned for the second year compared to 42% of non-DE students. Likewise, Hughes et al. (2012) discovered increased retention rates for career and technical education DE students in California when compared to their non-DE counterparts.

Increased persistence rates for DE students may not be universal though. Jones (2014) did not find a significant difference in persistence rates between DE and non-DE students at a community college in Texas, only at a research university in Texas. The percentage of students returning to the community college for a second year was higher for DE students than non-DE students, but not significantly so. The difference in persistence rates between groups of students at the research university was statistically significant. Jones suggested that the difference in persistence rates for DE students between the research university and the community college could be due to other factors in college choice that are not related to participation in DE.

Contradictory to Jones (2014), Struhl and Vargas (2012) did find significant improvements in persistence rates for DE students when compared to non-DE students at both two-year and four-year institutions in Texas. Struhl and Vargas acknowledged that the open access nature of two-year colleges opens the door for a wide variation in student characteristics that could be confounding variables when assessing measurements of performance. However, they found DE students were 2.00 times more likely to persist in either a two-year college or a four-year university than their non-DE counterparts, 1.46 times more likely to persist at a four-year college, and 1.54 times more likely to persist at a two-year college.
Like Jones (2014), Eimers and Mullen (2003) also compared persistence rates between groups of students. Instead of looking at two-year or four-year college attendance though, Eimers and Mullen scrutinized AP and DE persistence rates. They studied four groups of students returning to the University of Missouri system for a second year of college: those with AP credits, AP and DE credits, DE credits only, and no AP or DE credits. Controlling for academic ability as measured by ACT score and high school rank, the difference in return rates of 87% for AP students, 90% for AP and DE credits, 89% for DE credits, and 76% for students without AP or DE was found to be significant.

D’Amico, Morgan, Robertson and Rivers (2013) dug a little deeper into persistence and found that DE course type and delivery mode affected DE students’ persistence rates. Like the other studies, D’Amico et al. found DE students in South Carolina’s technical college system persisted at a higher rate from their first year to their second year than non-DE students, 32% to 30%. The sample in the study consisted of 2,607 students dually enrolled in academic years 2005-06 through 2007-08. Logistic regression examined course type (career or transfer), delivery mode (concurrent or on a college campus), gender, ethnicity, and county of residence as predictors of persistence. Only ethnicity, course type and delivery mode were found to be significant predictors of persistence. The odds of an African-American student persisting was 0.53 times the odds of the other students. DE students in career courses were 0.70 more likely to persist than DE students in transfer classes, and DE students taking courses on the college campus
were 1.32 times more likely to persist than DE students taking classes concurrently in the high school.

**Degree Completion**

Beyond enrollment, GPAs, credits earned, and persistence in college lies degree completion – earning a credential is the ultimate measure of college success. Using the national NELS: 88/2000 data set, Swanson (2008) divided credential attainment into three categories: Certificate or Associate of Arts degrees, Bachelor’s degrees, and Graduate Hours or Advanced Degrees. Students were divided into one of the three categories by their highest educational level as of 2000. The study found DE students who enrolled in college within seven months of their high school graduation increased the likelihood of their obtaining a bachelor’s degree by 4% when compared to non-DE students. If they completed 20 credits in their first year, DE students increased the likelihood of their obtaining a graduate level degree by 14% as compared to their non-DE peers. In addition, DE students who had not anticipated earning a bachelor’s degree were 12% more likely to attain a bachelor’s degree than their non-DE counterparts who had originally planned on earning a bachelor’s degree.

An (2013) used the same dataset as Swanson (2008), the NELS: 88/2000. He used propensity score matching models to examine the impact of DE on college degree attainment, particularly a bachelor’s degree. An controlled for race, gender, parental education, parental occupation, family income, family structure, and number of siblings. He also included other factors in his model, including teacher and counselor aspirations, parental involvement, friends’ influence, the students’ college aspirations and
expectations, student preparedness and absences, 10th grade test scores, students’ course histories, and contextual school factors. Accounting for all of these factors, An found that DE participation increased the probability of a student earning any postsecondary credential by 8% and a bachelor’s degree specifically by 7%.

Turning to state-level studies, Haskell (2016) found degree attainment for DE students in Utah for the 2008 and 2009 high school graduates to improve 6.7% when compared to non-DE students, which is fairly consistent with An’s findings. The CCRC (2012) found 5% more DE students in Florida earned a bachelor’s degree than non-DE students. In addition, in Florida, DE students who took College Algebra specifically as a DE course were 23% more likely to attain an associate’s or bachelor’s degree than their non-DE peers. In Texas, Struhl and Vargas (2012) reported DE students were 1.75 times more likely to earn a college credential within six years of high school graduation, controlling for demographics and state test scores. Of their study’s population, DE students did earn more credentials than non-DE students: 8.9% to 6.8% for associate’s degrees, 47.2% to 30.2% for bachelor’s degrees, and 54.2% to 36.9% for any degree.


Instead of examining overall degree completion rates like the other studies, O’Keefe, Hayes, Easton-Brooks, and Johnson (2010) focused on comparing AP and DE completion rates at a large public four-year university in Texas. Four-year graduation rates for the Fall 2004 first-year cohort were used in the study. A three-way between-
ANOVA test was used to explore four-year graduation rates by program participation (AP and/or DE), gender, and race. The results showed a significant difference between programs, with AP students having the highest graduation rate, followed by DE, students with AP and DE, and then students with neither. Graduation rates for students with both AP and DE credits were only significant when compared to students in neither program. Therefore, participation in AP had the greatest effect on the institution’s graduation rate, followed by DE or both AP and DE.

**Critique.** Some question the implied causal relationship between the DE experience and academic performance, whether measured by GPA, credit accumulation, persistence or degree completion. Speroni (2012) urged caution when focusing on the increased success rates of former DE students because of the self-selection bias inherent in DE participation. She proposed that students engage in DE because of their academic ability, motivation, and expected jumpstart into college, and those student characteristics contribute more to the outcomes than the DE experience. For example, some programs require certain GPAs or placement scores in order for students to enroll in DE courses. In addition, some states charge tuition, creating an obstacle for lower-SES students, but others do not (Jones, 2014).

Other studies compared the effects of DE to other accelerated learning options, particularly AP courses. Eimers and Mullen (2003) claimed that improved outcomes were not related to the nature of the DE experience specifically because they found that students in AP courses demonstrate the same increases in performance in college as former DE students. In addition, O’Keefe et al. (2010) found that AP students have
statistically significant higher college completion rates than DE students. DE students, however, complete at higher rates than students who do not participate in AP or DE. As a counterpoint, Karp and Hughes (2008) noted that a major difference between AP and DE is that AP is only available to students who perform well academically; DE is available to a wider range of students, especially as more career and technical education pathways are created. Bragg, Kim and Barnett (2006) also point out that DE is more prevalent than AP courses as it is available in all 50 states and spans urban, rural, small, medium and large schools. However, they conceded that access does depend on demographic, geographic and economic variables because not all schools offer the same DE opportunities with schools located in more disadvantaged areas offering fewer options.

Although the earliest research studies did not control for confounding variables, later studies did include models of covariance and account for possible confounding variables through regression analyses. Even controlling for various student input characteristics, the more recent studies found significant increased college performance for former DE students when compared to their non-DE peers. Comparing different accelerated options, such as AP and DE, was beneficial from a pragmatic perspective because schools and legislatures could then expend their resources on the most effective strategy. However, from a social justice perspective, the comparison was flawed because of the barriers preventing many students from participating in AP classes, including economic factors, academic ability, parental knowledge and expectations, student aspirations, and placement into different tracks based on counselor or teacher perceptions of students. Therefore, comparisons between AP and DE are flawed as a way to measure
the effectiveness of the program itself, but rather a reflection of the students in the programs. In any case, all of the researchers agreed that more research is needed to explore what happens within the DE experience and possible reasons for DE students’ improved performance in college.

Self-Perceptions as Future College Students

Few studies have taken a theoretical look at DE. I was unable to find any quantitative studies on socialization or role acquisition as an outcome of participating in DE courses, even though DE’s socialization effect could be considered a possible outcome of the experience or at least an influencing factor in the students’ DE experience and subsequent college choices and performance. However, a few qualitative studies have explored the socializing effect of DE on the students. These were largely unpublished dissertations. Lewis (2009) and Philpott-Skilton (2013) both recorded a theme among students of feeling better prepared and more confident in their ability to succeed in college after participating in DE. Based on her dissertation that involved conducting interviews with 26 students throughout the time of a DE course, in a published study, Karp (2012) reported that DE students said they learned more about the role of being a college student by being able to practice college expectations. She proposed that learning more about the role could positively affect the students’ future college performances.

Critique. The lack of theoretical research, particularly regarding the possible socializing influence of the DE experience, points to a need for further study, both quantitative and qualitative. Qualitative studies enable the students’ voices to be heard,
which leads itself to a social justice perspective on the research. In the existing studies on self-perception and role acquisition though, a longitudinal approach that tracked the students into college and included information on their subsequent performance would help connect the DE experience, students’ self-perceptions of themselves as future college students, and the improved outcomes for DE students. The available studies on self-perceptions or role acquisition related to taking DE courses are limited to snapshot studies of small samples at one specific locale. They also include data gathered from students before the students have an ability to look back and reflect on the experience and compare their perceptions before, during, and after their DE experience, including its influences on their subsequent decision about whether or not to enroll in college. Shifting the data collection timeframe to after students have completed DE and after they have decided whether to enroll in college or not would add perspective and insight into the student’s self-perceptions and behaviors concerning college attendance.

**Dual Enrollment Student Inputs or Characteristics**

Although some student characteristics have been discussed as confounding variables and controlled for in studies examining student outcomes, several studies have focused on the student characteristics themselves and their influence on DE students’ college enrollment and performance. Fewer studies have been conducted on the student characteristics (inputs) of DE students than on student outcomes, yet the effect of these input factors on outcomes must be recognized (Renn & Reason, 2013). Some researchers hypothesized that DE students performed better in college than their non-DE peers
because they were better academically prepared or high achieving before enrolling in DE courses. Others argued that the higher aspirations and subsequent college enrollment rates were the result of other influences, such as parent involvement and the socioeconomic status of students enrolled in DE classes. More recently, researchers have been concerned that inequities in DE programs may be preventing underserved students from reaping the full benefits of DE participation. The following section will examine specific studies and their results. A summary table of empirical studies examining dual enrollment student input characteristics can be found in Appendix B.

Demographics

Although national data is not available, an examination of DE students’ demographics from various states show similar patterns: the majority of students enrolled in DE programs tend to be female, Caucasian or Asian, and middle class (Jones, 2014; Museus, Lutovsky & Colbeck, 2007; Ozmun, 2013; Welsh, Brake & Choi, 2005; Young, Slate, Moore, & Barnes, 2013). Students underrepresented in higher education by gender, race or economic status also appear to be underrepresented in DE programs and participation. Museus, Lutovsky and Colbeck (2007) conducted a study of DE students in academic year 2003-04 in Pennsylvania. They found that although White students comprised 78% of the state’s high school enrollment, they accounted for 90% of the state’s DE enrollment. In contrast, African-American students made up 15% of the state’s high school population, but only 5% of its DE students. Such disparities also occurred by family income level with the majority of the DE students coming from high schools with the highest income levels. The researchers stated, “…dual enrollment programs can
disproportionately serve students who are already most privileged with academic resources” (pp. 11-12). Museus et al. called for policies that would include measures and efforts to end the disparity by providing funding for items such as transportation and textbooks, more articulation agreements to increase transferability, and assessment measures specifically addressing equity.

In Kentucky, policymakers had already implemented such measures when Welsh, Brake and Choi (2005) conducted their research. They were purposefully looking to see if policy changes had improved equity in DE programs. They found for DE students in the Kentucky Community and Technical College System in Fall 2000 and Fall 2001, significant gains in enrollment occurred for females, African-Americans, rural students, and those with low SES. Yet, those most likely to succeed in DE courses in Kentucky community colleges remained White, middle-class, rural females with high ACT scores.

Like Welsh et al. (2005), Young, Slate, Moore and Barnes (2013) found females to be the dominant group in DE programs in Texas from 2005-06 through 2011-12. However, Asian students instead of White students comprised the largest ethnic group, with participation rates of 33.1% and 25.3% respectively. At 17.4%, Hispanic students came next, followed by 7.5% for African-American students. Gender differences were found in White and Hispanic subgroups, with more females than males participating in each group, but no gender difference existed in the Asian and African-American subgroups.

To close the participation gaps between males and females, and amongst different ethnic and income level groups, certain DE programs have been created specifically to
increase college attainment for lower SES groups and underserved ethnic populations. For example, the CCI in California purposely targeted low-income, academically struggling, and underrepresented populations to increase both their high school and college graduation rates (Rodriguez, Hughes, and Belfield, 2012). Researchers found that controlling for other variables, the students in the program improved their academic and nonacademic skills, and exhibited higher college aspirations than their non-DE peers. The researchers speculated the increase in students planning to pursue a bachelor’s degree was due to improving students’ understanding of what would be required of them in college as well as showing them they were capable of performing college-level work.

Even though the majority of students in DE are female and White, An (2013) found DE had a more significant effect on students from lower SES backgrounds. He reported that, holding other factors constant for lower SES students, participating in DE increased the probability of those students attaining a postsecondary degree by 8%. DE also had a stronger positive effect on first-generation college students than on those with a college-educated parent. Among parental education, parental occupation, and family income, parental education exerted the largest influence on college enrollment and completion. He found an 8% increase in the outcomes specifically for first-generation students. Similar to An, Smith (2007) found participation in DE courses to be the fourth strongest influence on students’ college aspirations, after grades, parents’ educational level, and students’ perception of their parents’ expectations.

An’s findings were also supported by Taylor (2015) in that students underrepresented in higher education by income and color who participated in DE
enrolled in and completed college at significantly higher rates than their non-DE peers. However, Taylor contended that the increase for these sub-populations is less than the overall effect, thus demonstrating an inequality for underserved students. Taylor attributed the disparity to faulty policies. Haskell (2016) found similar results in Utah and summed up the situation as follows:

The gains available through Dual-Credit Enrollment are consistently lower for low income and minority student groups than they are for their general student population counterparts, though these gains clearly separate program participants from their peers and increase the likelihood of post-secondary higher education enrollment and higher education degree attainment (p. 158).

Critique. As Taylor (2015) and Haskell (2016) pointed out, policies such as charging tuition for DE classes, not providing the same DE classes in all high schools, or not providing transportation from the high schools to the college affect lower SES students’ ability to participate in DE. The students these studies were most concerned about also tended to have lower college readiness, thus the type of DE program provided could have an equalizing effect if designed to do so. For example, students in stand-alone courses would have different experiences than those in comprehensive programs that provide support services such as tutoring, study skills workshops, and college preparation information. Variances amongst those programs and their effects on students have yet to be parsed out.

Like in other DE areas, the studies examining student background characteristics have also been solely quantitative, relying on institutional data. Researchers have not explored the socialization of the students despite the plethora of student development
theories that include aspects of socialization nor talked with students about how the DE experience shaped their skills, behaviors, values, motivations or self-perceptions. From both a social justice and a pragmatic lens, finding out more about how the policies and structures underlying DE programs influence students would be beneficial in that the information could be used to create more effective programs and programs designed to bring postsecondary education to all students, including those currently underserved.

From a constructivist viewpoint, interviewing the students instead of relying only on institutional data would also acknowledge the importance of how the students construct meaning from the experience and different aspects of DE.

**Self-efficacy**

In addition to demographic characteristics such as gender, race, and income, researchers have examined other specific factors that could affect the college outcomes of DE students, such as self-efficacy and motivation. Self-efficacy has been shown to be a strong predictor of college success; however, Gore (2006) found the relationship between a student’s self-efficacy and college outcomes depends on when efficacy is measured, the types of efficacy measured, and the nature of the criteria used. Ozmun (2013) initially thought that DE students might have a higher self-efficacy for academic achievement before they ever enrolled in DE courses. However, through his research, he found that prior to taking DE courses, DE students did not have stronger academic self-efficacy than their peers. That difference did not appear until after they completed their DE courses. DE students transitioned from what Ozmun called “college-naïve” to “college-
experienced” because their personal accomplishments increased their self-efficacy.

Ozmun stated:

Academic self-efficacy has been shown to correlate positively to consequential learning and an explicit tendency for a student to identify more strongly with academics. Students who relate more positively to their educational experiences or who are already confident in their academic abilities might be accurately predicted to engage in more meaningful learning (para. 6).

Critique. Self-efficacy could shape one’s self-perception as a future college student. However, it is difficult to untangle self-efficacy from simply building what Renn and Reason (2013) call “capital.” Completing a college course as a DE student exposes the student to registering for a college class, reading a syllabus, and being subject to college expectations as far as rigor and deadlines. These actions could build self-efficacy as well as capital, which could lead to improved college outcomes. Conversely, as Speroni (2012) warned, a danger exists in putting students in a situation in which they could fail, thus reducing their self-efficacy. If they were not sure before taking a DE class that they would be able to meet the requirements of college-level work and they fail to do so in a DE course, then their perceptions that they are not “college material” or capable of completing college-level work could be confirmed and strengthened through the experience. Research into the effect of DE on students who do not pass the classes and fail to enroll in postsecondary education is lacking. Yet, approaching the issue with pragmatic and social justice lenses, such information could serve to create a better understanding of who should be enrolled in DE courses, support measures that should be included in DE, and interventions that should target students who do not successfully
complete DE courses so that more harm than good is not done to some students participating in DE.

Motivation

An (2015) examined students’ academic motivation prior to enrolling in DE courses as another possible factor in DE students’ increased performance in college. He found that students who participated in DE did have higher levels of motivation than their peers; however, when holding other factors constant, motivation accounted for only 20% of the overall effect on academic performance in college.

However, as discussed previously, detractors of DE programs express fears that DE might actually reduce college aspirations for students who fail to meet the demands of the DE classes (Speroni, 2012). Most of the research, however, shows DE students gain in confidence and ability, thus increasing their college aspirations (Smith, 2007). DE students who responded to a survey administered in Texas stated they felt they were better prepared to enter college because they had taken DE classes (Young et al., 2013). Speroni (2012) and D’Amico et al. (2013) contended that DE is not a blanket solution to increasing student preparedness or college outcomes though. They argued that the course type and delivery mode make a significant difference in student performance. Speroni specifically pointed to the completion of a dual credit College Algebra course as being beneficial to students while other types of courses were not.

Critique. Speroni’s (2012) argument confirmed the influence motivation has on students’ behaviors and subsequent college success as it is likely that only motivated
students will take College Algebra for dual credit. In addition, even though An (2015) discounted the finding that motivation accounts for 20% of the overall effect of DE on subsequent college performance, that is still 20% or one-fifth, demonstrating that motivation as an input characteristic should not be ignored. If a social justice stance were employed as a reason to create DE opportunities, then the DE instructors and administrators should take into account how to increase the motivation of underserved students. This is just one example why more quantitative and qualitative research is still needed on the influences of DE students’ input characteristics on their choices and performance – a better understanding of which factors affect student success could be used to create better programs.

**Socialization and Role Acquisition and Dual Enrollment**

Although more information exists about DE and its outcomes than on the student input characteristics, even less research has examined socialization and role acquisition as theoretical models to explain the influence of DE on students. Some literature available presents theoretical arguments that situate DE as a mechanism for developing aspects of student retention, such as furthering the transition from high school student to college student. A few dissertations go further to discuss a possible connection between DE and role acquisition theory as part of socialization. A summary table of empirical studies examining the relationship between DE and socialization or role acquisition theories can be found in Appendix C.
Transition

In 1975, Thornton and Nardi proposed that people move through four stages of psychological and social development in assuming a particular role: anticipatory, formal, informal, and personal. Weidman (1989) acknowledged these roles in “Undergraduate Socialization: A Conceptual Approach.” During anticipatory socialization, individuals begin to learn the expectations and behaviors associated with a role. It is important, however, that the experience be as authentic as possible to the actual situation in which the person will fulfill a particular role:

…anticipation helps only to the extent it is accurate, and that if it is not accurate it may actually impede adjustment, for performing the acquired role will necessitate unlearning as well as further learning. Thus the degree of congruity between what individuals learn to anticipate and what they subsequently experience will likely determine how quick and smooth the process of adjustment will be (p. 875).

The idea that DE could provide an authentic college experience is supported by Adelman (2005): “…there is no better way to enhance articulation and preparedness than to display what students can expect” (p. 26). He purported that DE courses represent what is expected at the college level and can help students begin the transition process to postsecondary success. Smith (2007) agreed and stated that DE students have already completed college-level coursework and know what they need to do to be successful in college, thus easing the transition to college.

In addition to academic preparation, some researchers have proposed that DE can help students transition psychologically to the new situation (Bailey, Hughes, & Karp, 2002; Crouse & Allen, 2014; Museus, Lutovsky & Colbeck, 2007). Although Tinto’s Theory of Student Departure has been criticized for ignoring cultural differences, other
researchers have found empirical evidence to support his incorporation of academic and social integration as being important to student retention (Renn & Reason, 2013). Tinto believed students move through three stages to become a part of an institution: separation, transition, and incorporation (Tinto, 1993). DE may help students move through those stages. Jones (2014) wrote:

> Participation in dual enrollment may help students progress through the separation stage, separating the individual from past associations and transitioning to the second stage, transition. This separation and beginning transition from the high school environment to the college could occur during the time spent in the dual enrollment process (p. 27).

She credited the DE experience for increasing DE students’ persistence rates during the first year of college:

> Though not specifically measured, it could be assumed that participating in college-level academic work – as well as navigating the processes of college admissions…accomplished through participating in dual enrollment programs – can help ease the transitional issues cited by Tinto (1988) of separation, transition, and incorporation…perhaps they are able to develop more resiliencies to traditional issues that lead to student attrition during their first semester and year of college (p. 35).

Hoffman (2005) stated that DE may be especially beneficial in easing the transition for first-generation students: “The college try out can allay the fears of first-generation college goers and their families that colleges will be too difficult or the environment unwelcoming” (p. 5). She believed DE students had the opportunity to try on the role of college student and found it fit them. Such assumptions are supported by student interviews conducted by Lewis (2009) and Philpott-Skilton (2013). In both studies, students reported a smoother transition to college because of their experiences in DE. Although students in Lewis’s study said DE did not necessarily influence their
decision to attend college because postsecondary education was already in their plans, the majority said they did feel more prepared after DE. One student said, “I was always planning on attending college and dual-enrollment just helped me prepare for the transition” (p. 72). Of the 21 students interviewed, three did not feel DE affected their transition, however. As one student said, “Dual enrollment did not really prepare me for coming to a university. It only prepared me with staying organized and learning how to budget my time with college courses” (p. 73). Although that is the student’s perspective, Edmunds (2012) would argue those behaviors are paramount to being a successful college student. Similarly, in Philpott-Skiton’s (2013) study, students identified time management and study skills as specific behaviors they attributed to being college students as well as knowing how to register for classes. As one student responded, “You really had to do stuff on your own (during the DE course). You had one reminder and then it was due the next week…you really had to organize your time to do it yourself” (p. 106).

**Critique.** Although much of the researchers’ arguments were based on sound theories, only a few actual empirical studies were conducted to validate the theoretical connection to DE, and those were mainly unpublished qualitative dissertations. Research in the theoretical and socialization influences of DE is ready to take the next step, and researchers should conduct quantitative and qualitative studies to further the theoretical understanding and to probe the legitimacy of applying such theories to the students’ experiences in DE.
Role Acquisition

Of the socialization studies conducted, Karp’s (2007) dissertation and subsequent publication (2012) went one step beyond socialization in general and tied the students’ DE experiences to role acquisition, a part of Weidman’s (1989) conceptual model of undergraduate socialization. She discussed anticipatory socialization but added role rehearsal, trial and error, and the cognitive interpretation of individual experiences as part of the DE process that influenced students’ self-perceptions of themselves as college students.

Learning About the Role. Karp (2012) found that through DE, students began to separate from high school as they became more familiar with the role of a college student. Karp interviewed 26 first-time DE students and asked them to define what it meant to be a college student. At the beginning of the semester, only one of the students could articulate what Karp described as “college student norms and expectations” (p. 24). One student answered, “I don’t know, I’ve never been to college!” (p. 24). Karp used that student’s response to represent how 25 of the students felt in trying to describe a college student. At the end of the semester, the same student wrote a page describing what it meant to be a college student and included several strategies for success. The student included the need to seek assistance and take responsibility as two specific college behaviors. Karp reported that by the end of the semester, 17 of the 26 students were able to more clearly define the expected behaviors and attitudes of a college student.
Learning the Behaviors. Thornton and Nardi (1975) would place the DE student in the “formal” stage of role acquisition: “In the second phase of role acquisition the individual, now in a social position, experiences the role as an incumbent and shifts from viewing it from an outside perspective to viewing it from inside” (p. 876). Because the DE student is considered a college student from an institutional level, the “dual” enrollment part of being a student in two educational levels, he or she is accountable to act as a college student. Part of the formal stage of role acquisition involves learning the behaviors associated with a role. Behaviorally, Edmunds (2012) listed study skills, time management and the ability to self-monitor as important academic behaviors for transitioning to college, as well as the ability to interact well with faculty and peers as important non-academic behaviors. She added logistical behaviors as well, such as being able to apply to and enroll in college. She also gave the example of being able to read and understand a syllabus; DE programs address these behaviors because the classes are taught as college classes, complete with registration and syllabi. As reported by Karp (2012):

Many students did not only learn about college expectations in their dual enrollment course; they actively practiced behaviors that helped them adhere to these expectations. Engaging in role rehearsal was strongly related to an increased understanding of what it means to be a college student and how to be successful in postsecondary education (p. 25).

Experiencing the Role. Karp (2012) believed the DE experience helped students learn the role of becoming a college student by enabling them to experience it. Thornton and Nardi’s (1975) role acquisition theory supported her findings as the students would have moved from anticipatory socialization to role rehearsal in the formal stage because
As DE students, students are expected to be college students in those courses. As part of her study, Karp observed several different DE classes. All were taught concurrently in the high school, yet varied in what she called “content and pedagogical structures” (p. 25). For example, in some classes students were given the notes and in others students were required to take their own notes. Karp deemed the classes in which students took their own notes to be more authentic to a college class. She found 80% of the students in the more authentic classes were better able to articulate the role of a college student compared to 45% in the less authentic classes (p. 25). Her findings match the supposition of Adelman (2005) and others that DE provides an opportunity for students to experience the role of college student. Smith (2007) agreed in that DE students have already completed college-level coursework and know what they need to do to be successful in college.

**Critique.** Karp (2012) acknowledged the major limitation of her study – all of the students were taking DE classes concurrently in the high school. As she stated, “Given the program’s location on a high school campus, some students in the study did not grasp this difference [between being a high school student and a college student]; their role-related learning was muted as a result” (p. 27). My study gathered data from students in all three delivery modes – concurrently in the high school, online from the college, and on a college campus – and can therefore compare the socialization effects and role acquisition of DE students in different modes. In addition, my study differed from the few previous studies on socialization because, while it acknowledged role acquisition as part of the socialization process, the emphasis was on the broader socialization of the DE
student as a future college student, leaving room for additional themes to emerge to create a theoretical model of DE’s influence on the socialization of participants as future college students. Also, this study interviewed former DE students who have become college students or not instead of those currently in DE classes so the participants have the benefit of comparing their previous skills, behaviors, values, motivations, and perceptions to their choice to become a college student or not. Of course, the validity of the data is dependent on the accuracy of the students’ recollections and perceptions, but from a constructivist standpoint, the participants’ meaning-making of their experiences is valid because it is their construction, which is their reality.

**Summary**

DE courses and programs have existed for more than 40 years. Having stemmed from higher education reform efforts, the quantitative research supports the assertion that DE is a method for increasing student enrollment and performance in college, even controlling for student input characteristics such as demographics, socioeconomic status, academic performance, self-efficacy, and motivation. As graphically represented in Figure 2.2 below, most research about DE has examined the student outcomes, measured as college enrollment, GPA, credits earned, persistence, and degree completion. However, little qualitative research has been conducted, especially pertaining to the influence DE might have on students’ socialization as future college students. Only a few have pursued the hypothesis that there may be a connection between the DE experience, socialization, and role acquisition. Therefore, it is appropriate for me to build upon the
work of others and aim to further understanding by conducting a qualitative grounded theory study that could propose a theory as to the influence of DE on students within a theoretical framework that combines student development, socialization, and role acquisition theories and models.

Figure 2.2. Graphical Representation of Empirical Studies on Dual Enrollment. More studies have been conducted on DE student outcomes than on other aspects of DE. This study is situated in the less researched area of socialization and DE.
CHAPTER THREE

METHODOLOGY

Introduction

Multiple studies have found that students who participate in DE courses enroll in college and perform better in college than their non-DE peers, yet the socialization influence of the DE experience has largely been ignored. Research has focused on college-related outcomes. Quantitative research has found that DE students have higher college GPAs, earn more credits, have higher persistence rates, and complete credentials at higher rates than students who did not take DE courses (CCRC, 2012; Jones, 2014). Because of those improved college outcomes for DE students, legislators, action groups, and educational administrators have been implementing measures to increase DE opportunities for students without examining any underlying causes for the increased college performance. DE marketing materials push the opportunity to earn credits at a lower tuition rate as if accumulating cheap credits leads to college success. As demonstrated in Chapter 2, little research has explored the DE phenomena itself, specifically the experience’s influence on students’ socialization and self-perceptions as future college students. Perhaps DE does more than enable students to earn college credits while in high school; perhaps DE has a socializing affect that changes and shifts students’ perceptions of themselves and aids students in acquiring the role of a future college student, which in turn influences their college performance. In general, a lack of qualitative research on DE exists – few researchers have actually talked with the students
themselves. Instead, all but a few studies have focused on high school and college transcripts, institutional demographic data, and institutional reports on enrollment, retention and completion. Therefore, a gap in the research on DE exists, both qualitative and theoretical.

**Purpose**

This grounded theory study will explore how the DE experience influences participants’ socialization as future college students in an effort to develop a theory to illustrate factors affecting the students’ skills, behaviors, values, motivations and perceptions of themselves as future college students.

**Research Questions**

In addition to the existing quantitative research, it is important to conduct qualitative research on the DE phenomena because qualitative research is designed to explore situations in order to gain meaning of the experience, understand the effects of particular contexts on the participants, understand processes, identify influences that can lead to new theories, and develop causal explanations (Maxwell, 2013) – all dimensions of the discussion about DE that are currently missing. Without such understanding and considerations, decisions may be made that are not the most beneficial to students, particularly underserved students who could benefit the most from well-designed DE programs (An, 2013; Karp & Hughes, 2008). A better understanding of the phenomena would lead to better designs. Maxwell’s (2013) general formula for qualitative research is
“how x plays a role in causing y, what the process is that connects x and y” (p. 31). Thus, the research questions for this study are as follows:

1. How does the DE experience influence the socialization of high school students as future college students?
2. What aspects of the DE experience influence the socialization of high school students as future college students?
3. How does the DE delivery mode shape students’ socialization as future college students?

The third question in particular stems from a pilot case study conducted in Spring 2016 consisting of five students who had completed DE courses at GFC MSU. A recurring theme from all five students was that the environment of the courses had an effect on their ability to see themselves as future college students. The environment included the building, the classroom, and the interactions with other students who were college students already. Two of the five students completed DE classes online as well as on campus, and both said taking the courses online did not have the same effect on their self-perceptions as future college students as taking the classes on campus. None of the five students had taken classes concurrently in the high school, but that is a third delivery mode: concurrently in the high school, online through the college, or on the college campus. Therefore, based on the findings of the pilot case study, the delivery mode was identified as an aspect of the socialization process to explore.
This grounded theory study began with a small exploratory pilot case study conducted Spring 2016 with five former DE students at GFC MSU. As explained by Maxwell (2013), such a preliminary study is important “to inductively develop grounded theory” (p. 66) and “to develop an understanding of the concepts and theories held by the people you are studying – a potential source of theory” (p. 67). The initial literature review from that study and the expanded literature review of this study confirmed the lack of theoretical research related to the DE experience as well as research on any socializing processes or influencing factors of DE that affect students. DE has been viewed as a way to improve college-related outcomes; its socializing influence has been largely ignored. The pilot case study and lack of theoretical research on the DE experience revealed the need for a grounded theory study on the topic. The lack of an available theory is one reason to conduct a grounded theory study according to Creswell (2013). A theoretical examination of the DE experience also builds on existing research and furthers the conversation by providing qualitative data to expand researchers’ understanding of the DE phenomenon. Moving beyond college-related outcomes and viewing DE as a socialization process could lead to improved DE programs, especially benefiting students at-risk of not attending college. If DE aids in role acquisition and affects the socialization of students as future college students by influencing students’ perceptions, behaviors, values and motivations, and teaches skills needed to be a successful college student, then DE becomes more than a credit-accumulation tool and moves into the realm of transitional and socialization processes which are tied to student
development theories. Discussing DE in this new light, for example, shifts the focus from concentrating on the number of credits earned or the number of students taking DE courses to more attention on support measures and which students should be engaging in DE. This new perspective creates an opportunity to increase equity by intentionally targeting students who may not initially perceive themselves as future college students.

Maxwell (2013) emphasized that the research design should stem from the research questions and support the purpose of the study. As stated previously, the purpose of this study is to explore how the DE experience influences the socialization of students as future college students and to identify impactful aspects of DE. This purpose aligns with the purpose of grounded theory research, which “explains the studied process in new theoretical terms, explicates the properties of the theoretical categories, and often demonstrates the causes and conditions under which the process emerges and varies, and delineates its consequences” (Charmaz, 2014, p. 10). Charmaz added, “Grounded theory provides both a way of analyzing situated action and of moving beyond it” (p. 228). The results of this study could move the conversation surrounding DE beyond its utility as a credit-based transition program aimed at improving college outcomes to its value as a transitional socializing process for students to move towards perceiving themselves as future college students.

To address the research questions, three different types of I asked students about their concept of college students in general, their perceptions of themselves as future college students, and their perceptions of themselves while taking their DE courses. Students were interviewed after they had completed their DE courses, but they were
asked to recall their concepts of college students in general and of themselves as future college students before they engaged in DE classes and after they completed their DE courses so that comparisons could be made to see if any changes occurred. Then, if there were differences pre- and post-DE, those shifts in concepts and perceptions could be explored to determine if the DE experience had an influence on the changes.

Within grounded theory design, several approaches to grounded theory studies exist. Originally, Glaser and Strauss purported a more structured design with an established a priori coding system, even though their systems for creating categories differed as time progressed (Kelle, 2007). Charmaz (2014), on the other hand, preferred a less-structured, more constructivist approach to establishing grounded theory. Creswell (2012) identified three types of grounded theory designs: the systematic design used initially by Glaser and Strauss, the emerging design supported more recently by Glaser, and the constructivist approach written about by Charmaz. In determining which approach to use, Creswell recommended considering how strongly procedures will be emphasized, if predetermined categories will be used, the researcher’s position in the study, and whether the end results are tentative questions or a more specific hypothesis. Given those considerations, this study began with the more structured coding paradigm initially espoused by Glaser and Strauss, specifically the analytical process of initial coding with some a priori codes. The a priori codes or categories initially included in the data analysis originated from Maccoby’s (2015) definition of socialization: skills, behaviors, values and motivations. Those areas became the initial codes. However, I recognized the validity of Glaser’s assertion that the theory should be grounded in the
data and not forced to fit into categories, so those four codes were only a starting point; the data analysis allowed for variations. I also drew from Charmaz in three important ways: 1.) recognizing the importance of emphasizing the meaning given the DE experience and its components by the students themselves, 2.) allowing the open coding categories to emerge from the data, and 3.) acknowledging the role of the researcher in the process. Thus, I used a mixed approach to grounded theory. Miles, Huberman and Saldana (2014) support a mixed approach and call their own style “‘a little bit of this and a little bit of that,’ used on an ‘as-needed basis’” but with the understanding that the choices have been “deliberate and diligent” which they have been in this study (p. 9). The following diagram, Figure 3.1, shows the methodology of this grounded theory study, including the integration of the above mentioned approaches. It is adapted from Charmaz (2014, p. 18). Parts of the design will be discussed in further detail in other sections of this chapter.

Figure 3.1. Research Design. This figure illustrates the research design of this study (adapted from Charmaz, 2014, p. 18).
Researcher Positionality

Because of the interpretive nature of grounded theory research, the role of the researcher is key and should be made evident in the study (Charmaz, 2014). My professional role as a college administrator, my personal beliefs about equity and the role education plays in improving people’s lives, and the selection of grounded theory as the design for this study created an interpretive framework that combined pragmatism, social justice, and constructivism. Based on Maxwell (2013), Table 3.1 below shows the matrix of ontological, epistemological, axiological, and methodological beliefs underlying this study. Because of my duties as Director of General Education, Business, Technology &

Table 3.1. Interpretive Frameworks and Associated Philosophical Beliefs (adapted from Maxwell, 2013, p.p. 36-37). I combined pragmatism, social justice, and constructivism frameworks in this study. These frameworks affected my ontological, epistemological, axiological, and methodological beliefs.

<table>
<thead>
<tr>
<th>Interpretive Framework</th>
<th>Ontological Beliefs</th>
<th>Epistemological Beliefs</th>
<th>Axiological Beliefs</th>
<th>Methodological Beliefs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pragmatism</td>
<td>Reality is what is useful, practical, and “works” – Some aspects of DE are influencing students; knowledge gained from exploring this phenomenon can be used to improve DE programs</td>
<td>Reality is known through using many tools of research that reflect both deductive (objective) evidence and inductive (subjective) evidence – Talking to previous DE students about their experiences will provide information and create more knowledge on the topic</td>
<td>Values are discussed because of the way that knowledge reflects both the researchers’ and the participants’ views – Data from students about their DE experience will include their values, and how I interpret the data will include my values.</td>
<td>The research process involves both quantitative and qualitative approaches to data collection and analysis – This study use qualitative interviewing to gather useful information to creating a theory about DE’s influence on student socialization.</td>
</tr>
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</table>
Table 3.1 Continued

<table>
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<tr>
<th>Interpretive Framework</th>
<th>Ontological Beliefs</th>
<th>Epistemological Beliefs</th>
<th>Axiological Beliefs</th>
<th>Methodological Beliefs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Justice</td>
<td>Reality is based on power and identity struggles. Privilege or oppression based on race or ethnicity, class, gender, mental abilities, sexual preference – Underserved students in education exist, including those in DE programs.</td>
<td>Reality is known through the study of social structures, freedom and oppression, power, and control. Reality can be changed through research – Knowing more about how DE benefits students can lead to effective programs that target underserved students and increase their college attendance and success rates.</td>
<td>Diversity of values is emphasized within the standpoint of various communities – Within higher education, a greater diversity of students entering college, including through DE pathways, will benefit higher education and society.</td>
<td>Start with assumptions of power and identity struggles, document them, and call for action and change – Although this study does not directly examine underserved students, the understanding gained about how DE influences students can be used in the future to call for action and change in how DE programs are designed.</td>
</tr>
<tr>
<td>Constructivism</td>
<td>Multiple realities are constructed through our lived experiences and interactions with others – Students realities and perceptions of themselves as college students may be constructed through the DE experience.</td>
<td>Reality is co-constructed between the researcher and the researched and shaped by individual experiences – Data from at least 30 previous DE students' will be gathered with the recognition that each student has constructed his or her own reality about the experience, and the coding and interpretation of those realities will be influenced by the researcher.</td>
<td>Individual values are honored and are negotiated among individuals – Each of the participants as well as the researcher has a distinct set of values that will be reflected as authentically as possible in the data.</td>
<td>More of a literary style of writing used. Use of an inductive method of emergent ideas obtained through methods such as interviewing, observing, and analysis of texts – This grounded theory study uses data that emerges from intensive interviews of participants and key informants, as well as document review, to develop a theory about how the DE experience influences the socialization of students.</td>
</tr>
</tbody>
</table>
Transfer at GFC MSU, I come to this study with a pragmatic lens. I oversee many DE classes because all of GFC MSU’s general education courses are offered as DE courses, as well as some career and technical education courses, for example, in accounting and computer programming. I also oversee DE classes in all three available modalities: concurrently in the high schools, on the college campus, and online. I have also been charged with increasing the number of DE students, creating more DE opportunities with the high schools, and increasing persistence and completion of the college students in general education, business, and technology programs. Therefore, I want to use the findings from this study to improve the DE courses and programs for all students.

Having spent years working with students considered “at-risk” for a variety of reasons – first-generation, placed into developmental or remedial courses, low-income, minority race, etc. – I also brought a social justice interpretive framework with me to this study because I wanted to find ways to increase the success of underserved students. Although the population of this study is broader than just such students, I wanted to find specific aspects of the DE experience that influence students’ socialization as future college students and apply those to programs that target underserved students. Understanding the theoretical underpinnings of DE could help create more effective programs. I have talked with previous DE students who said they did not think they were “college material” before they took DE courses. Through the DE experience, they began to see themselves as future college students and changed their plans to include higher education. This study does not focus specifically on these types of students, but they are definitely on my mind and coloring my lens.
Lastly, the nature of a grounded theory study lent itself to constructivism because theory is “constructed” from the data (Charmaz, 2014). In this study, students constructed meaning from their DE experience based on their perceptions which were influenced by their classmates, instructors, counselors, friends and family, as well as the delivery mode through which they participated in DE courses. As a researcher, I find myself more philosophically aligned with Charmaz’s constructivist grounded theory (CGT) as opposed to an objectivist grounded theory (OGT) in that I recognize “diverse local worlds and multiple realities” (p. 557) exist and that people’s actions and perceptions are part of local and larger social worlds, that a specific process or theory that can be verified does not necessarily exist (Bryant & Charmaz, 2007). In addition, research requires reflexivity because the researcher is not separate from an objective reality but rather influences the participants as the participants likewise affect the researcher (Day, 2012). The social exchanges that occurred between myself as the researcher and the students as participants during the intensive interviews could have influenced the students’ responses. Additionally, those social exchanges could have influenced my follow-up questions and my interpretation of their responses. These influences would filter through the data collection, the data analysis, and the reporting of results in the study. Efforts to limit the influences of these social exchanges will be presented in the “Achieving Authenticity, Trustworthiness, Credibility, and Transferability” section of this chapter.

Furthermore, reflexivity was demonstrated in this study as I was aware of my biases and my position at the college. To address possible power imbalances, I presented myself not in my formal role at the college but as a student researcher at MSU. The
interviews were held in a classroom rather than in my office and over the telephone if a face-to-face meeting was not possible. Follow-up interviews were conducted over the telephone or via email. The consent form also made clear that participation and answers would not affect a student’s grade or class standing and that all information was confidential (see Appendix F). Students were able to review and revise my analysis of their comments to ensure that I had not misinterpreted the meaning they had constructed from the DE experience.

Context of the Study

This study was situated amidst a national conversation, a statewide movement, and local interests. Each level provided a layer of context that added meaning and significance to the research problem, questions and design of this study. Holstein and Gubrium (2004) stated that both distal and proximal factors contribute to the overall context of qualitative inquiry. Distally, the phenomenon of dual enrollment is part of a national dialogue centered on increasing college attendance and completion which involves such global concepts as social justice and democratic ideals. As discussed in the previous chapters, not all socioeconomic classes are represented equally in higher education nor in DE, yet postsecondary education has been shown to be critical in creating upward mobility, reducing poverty, and improving the quality of life (Isaacs, Sawhill & Haskins, 2008). Arguments have been made that higher education is key to producing an educated citizenry and qualified workforce, pulling in social and economic factors (The Executive Office of the President, 2014). As a credit-based transition
program, DE has been touted in multiple national reports as a pathway to higher education for all students, including those who are currently underserved; therefore, this study was affected by these distal contexts.

Similar factors, especially economic goals, were operating at the state level. For example, when the Montana legislature implemented performance-based funding, one metric for two-year colleges included increasing DE participation (Montana University System, n.d.). At the March 2016 Montana Board of Regents meeting, the Dual Credit and Big Sky Pathways Program Manager presented a report from the Office of the Commissioner of Higher Education (OCHE) that called for an increase of 1,000 DE students in the state during the next three years, an ambitious goal considering there were only 2,186 DE students in the state at the time (MUS, 2016). Therefore, legislative, financial, social and political pressures surrounded and acted upon DE and this study in the state.

Montana currently offers a smattering of different DE options. Most would be categorized as singleton courses, but the Big Sky Pathway coordinators have been working to create more career and technical education related pathways. Most students take courses for dual credit, but “Running Start” early college options exist. DE courses in the state and at GFC MSU are currently taught concurrently in the high schools, online through colleges, and on college campuses. DE instructors must meet the minimum qualifications to teach at a two-year college and also have a teaching credential through the Office of Public Instruction. Students currently pay half the tuition price per credit but no fees, unless there are course-specific fees. Students must either be 16 years of age, or a
junior or senior in high school to participate and must meet the placement requirements for a course. DE courses are restricted to 100- or 200-level college courses. In Montana, the number of students in DE courses increased from 1,055 in Spring 2012 to 2,186 in Spring 2016 (MUS, 2016).

Locally, at Great Falls College Montana State University (GFC MSU), 201 students participated in DE courses Fall 2015, increasing to 304 in Fall 2016. The DE students were enrolled in concurrent classes in the high schools in Great Falls and surrounding areas, and in a variety of classes online through the college and face-to-face on the college campus – from a plethora of general education courses to specific career and technical education courses, such as welding and accounting (MUS, 2016).

Neither the state nor GFC MSU has defined the purpose of its DE programs – to accelerate credit accumulation for high performing students already college bound or to create a bridge to higher education for students at-risk of not attending college. GFC MSU’s DE courses serve both sets of students. For example, some of the AP courses in the high schools are offered concurrently for dual credit, such as AP English for college credit as WRIT 101 College Composition I. That course serves high performing students. On the other hand, students can register for dual credit welding courses, which reach students who may not have previously planned on attending college. Some of the welding students have continued to a university to study degrees such as electrical engineering and construction technology.

The interactions between GFC MSU staff, faculty, and students, and the high school staff, faculty and students – both separately at the individual locations and with
each other across campuses – created proximal factors affecting the study as well. For example, GFC MSU and the Great Falls Public School District share the cost of a staff member who acts as quasi-counselor at the two largest high schools in Great Falls while representing GFC MSU. She has split her workdays between the two high schools and the college campus. Specifically, she has presented information to students about dual enrollment opportunities, helped register students for dual enrollment classes, administered placement tests, and acted as a liaison between the high schools and the college. In addition, there is a monthly meeting in which counselors and administrators from the Great Falls Public School District, Adult Education, the private high school, community organizations, GFC MSU, and the local private university gather to share information and discuss issues which jointly affect students. Thus, the organizational structure of the college, the high schools, other local institutions and organizations, and the liminal space that is DE added another layer to the context within which the influence of DE on the socialization of future college students was explored.

**Site Selection**

GFC MSU was selected as the site for this grounded theory study because in Spring 2015, it had one of the largest number of DE students (313) in the state, led only by Flathead Valley Community College (417) (A. Williams, personal communication, January 28, 2016). Also, all of GFC MSU’s general education courses were offered for dual credit, as well as some specific career and technical education courses in the allied health, accounting, computer programming, and trades programs. Dual credit cohort programs had been offered in carpentry and welding through which high school students
completed their senior year of high school and one-year college certificate simultaneously, so that their math and English requirements were embedded in the program in addition to their trades classes (Great Falls College, n.d.). DE classes were offered concurrently in the high school, online through the college, and on the college campus – all of the delivery modes considered as possible influencing factors in this study. The concurrent classes in the high school are taught by high school instructors with the credentials to teach at a two-year college in Montana: a master’s degree with at least nine graduate credits in the discipline (MUS, n.d.). The percentage of credit hours earned by DE students at GFC MSU in AY 2015-16 by modality were 43% concurrently in the high school, 30% online through the college, and 27% on the college campus (Great Falls College, 2016). Thus, participants with a variety of DE experiences were available at GFC MSU to create more diversity in the experiences of the participants studied. In addition, my position at the college provided access to DE-related documents, such as syllabi, policies, and promotional material.

**Population and Sample**

**Population**

In AY 2015-16, the GFC MSU student population was largely White (80.7%) and mostly female (71.1%) (Great Falls College, 2016). Thirty-nine percent of the students were first-generation attendees, a group of particular and growing interest when studying DE (Hoffman, 2005). Approximately 14.1% of its students were 17 and under, 41.1% 18-24, and 44.8% 25 years and older. In Fall 2016, there were 304 DE students out of a total
of 1,673 students, meaning DE students comprised 18% of the college’s student population (Great Falls College MSU, 2016).

**Sample**

Different researchers and authors recommend varying sample sizes for grounded theory. In 2012, Creswell stated that 20 to 30 interviews were needed during data collection for grounded theory but gave a larger figure of 20 to 60 in 2013. In Bryant and Charmaz (2007), Stern echoed the 20 to 30 figure. Charmaz (2014), however, wrote that the sample size depends on the initial and emergent research questions, how the study was conducted, and the manner of analysis. All concurred that the sample size should strive to reach theoretical saturation, the point at which more data collection would not yield more insights into the categories or the phenomenon (Bryant & Charmaz, 2007; Charmaz, 2014; Creswell, 2013).

This study included 40 former DE students who took DE classes from GFC MSU in AY 2015-16 and graduated that same year. They were interviewed in spring and summer 2017. Table 3.2 below lists the participants’ characteristics before they enrolled in a DE class. Most reported being Caucasian (83%) and middle income (75%). The sample was split almost in half by gender: female (53%) and male (47%). The students were also all either 18 or 19 years old. Some students were first-generation college students; some were not. Following the lead of the National Center for Education Statistics, first-generation status in this study was divided into three categories: no or “none” parental postsecondary enrollment (13%), no parental degree (18%), and parental degree from any postsecondary institution (68%) (Renn & Reason, 2013). Students
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<th>Gender</th>
<th>Ethnicity</th>
<th>Family Income Level</th>
<th>Parents' College Ed.</th>
<th>Parents' Expectation for College</th>
<th>Intended to go to College</th>
<th>Type of High School</th>
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<td>Rural</td>
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<td>Yes</td>
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attended larger public high schools (70%), an alternative high school (10%), small rural
schools (5%), and a small private high school (5%), and were homeschooled (10%). The
DE experience was the one common characteristic across the sample.

Interviewing students after they had completed their DE coursework provided an
opportunity for the participants to reflect on the experience’s influence on their
socialization as future college students and to compare its influence to their behavior after
high school graduation, specifically whether or not they enrolled in college. The study’s
sample included students in four different situations:

1. Passed DE and enrolled in college (25)
2. Passed DE but did not enroll in college (12)
3. Did not pass DE and enrolled in college, but withdrew (1)
4. Did not pass DE and did not enroll in college (2)

This study also included students who participated in DE concurrently in the high school
(23), online through the college (4), on the college campus (9), and in a mix of more than
one mode (4). Table 3.3 below provides more information about the students during and
after taking DE courses. Maxwell (2013) supported including multiple groups in
qualitative studies in order to further comparison between groups in order to “contribute
to the interpretability of the results” (p. 129). He also discussed the opportunity for using
different groups to provide “counterfactual” information by broadening the participants
being studied (p. 129). In this study, including students who did not complete their DE
courses and students who did not enroll in college after their high school graduation
expanded the breadth of the study and provided opportunities for the data to dispel certain
Table 3.3. Participant Characteristics – During and After DE

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<td>Yes</td>
<td>College</td>
<td>3.5-3.9</td>
<td>Yes</td>
<td>College</td>
</tr>
<tr>
<td>39</td>
<td>Concurrent</td>
<td>1</td>
<td>History</td>
<td>Yes</td>
<td>College</td>
<td>3.5-3.9</td>
<td>Yes</td>
<td>College</td>
</tr>
<tr>
<td>40</td>
<td>Concurrent</td>
<td>1</td>
<td>History</td>
<td>Yes</td>
<td>College</td>
<td>2.0-2.4</td>
<td>Yes</td>
<td>College</td>
</tr>
</tbody>
</table>
assumptions, such as that DE students plan to attend college pre-DE and will attend college post-DE.

**Sampling Procedures**

Purposeful sampling was used to select participants. GFC MSU’s data analyst provided a list of students who had enrolled in at least three credits of DE courses in AY 2015-16 and then graduated by summer 2016. Ideally limiting the number of credits to six through nine would have helped reduce variance in the sample and acknowledged research that shows six credits is the threshold at which DE has an effect (Adelman, 2005), and nine is the number beyond which no further gains has been found to occur (An, 2013). However, restricting the sample by the number of credits would have resulted in too small of a pool to gain enough participants who would respond for the study. I decided it was more important that the credits were completed within the previous year so that the participants would be able to recall the experience than to impose a credit limit. Therefore, the students completed a range of credits from three to 27, with the majority (17) attempting three credits. The average number of credits was six. Table 3.4 below shows the student counts per number of credits.

<table>
<thead>
<tr>
<th># Credits</th>
<th># Students</th>
<th># Credits</th>
<th># Students</th>
<th># Credits</th>
<th># Students</th>
<th># Credits</th>
<th># Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>17</td>
<td>8</td>
<td>1</td>
<td>12</td>
<td>1</td>
<td>27</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>9</td>
<td>2</td>
<td>13</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>10</td>
<td>1</td>
<td>15</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>5</td>
<td>11</td>
<td>1</td>
<td>17</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Students in the sample also completed a wide variety of DE courses. As shown in Table 3.5 below, students enrolled in more DE math courses than other subject areas, followed by biology and history. A smattering of other classes each had one student enrolled as a DE student.

Table 3.5 Student DE Enrollment by Subject Matter

<table>
<thead>
<tr>
<th>Course</th>
<th># of Students</th>
<th>Course</th>
<th># of Students</th>
<th>Course</th>
<th># of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math</td>
<td>24</td>
<td>College Prep</td>
<td>4</td>
<td>Economics</td>
<td>1</td>
</tr>
<tr>
<td>Biology</td>
<td>13</td>
<td>Communication</td>
<td>4</td>
<td>Sign Language</td>
<td>1</td>
</tr>
<tr>
<td>History</td>
<td>9</td>
<td>Government</td>
<td>3</td>
<td>Drawing</td>
<td>1</td>
</tr>
<tr>
<td>Psychology</td>
<td>7</td>
<td>Engineering</td>
<td>2</td>
<td>Anthropology</td>
<td>1</td>
</tr>
<tr>
<td>Chemistry</td>
<td>7</td>
<td>EMT</td>
<td>2</td>
<td>Women's Studies</td>
<td>1</td>
</tr>
<tr>
<td>Music</td>
<td>7</td>
<td>Med. Terms</td>
<td>2</td>
<td>Literature</td>
<td>1</td>
</tr>
<tr>
<td>Writing</td>
<td>6</td>
<td>Criminal Justice</td>
<td>2</td>
<td>Nursing</td>
<td>1</td>
</tr>
<tr>
<td>Computers</td>
<td>4</td>
<td>Physics</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I also elected to not restrict the sample to students who had successfully passed their DE classes, enrolled in college after high school graduation, or participated in a specific delivery mode. In order to reach theoretical saturation, I was looking for what Morse (2007) called “variation of meaning” (p. 234). Morse explained that purposeful sampling for a grounded theory study is appropriate because it increases that variation and enables the researcher to explore a phenomenon. In addition, Miles et al. (2014) pointed out the following:

Choices of participants, episodes, and interactions should be driven by a conceptual question, not by a concern for representativeness. To get to the construct...we need to see different instances of it, at different moments, in different places, with different people. The prime concern is with the conditions under which the construct or theory operates, not with the generalization of the findings to other settings (p. 33).
For a grounded theory study such as this one, the purposeful sampling added to the rich data necessary to explore and analyze the phenomenon and its influence on students. Ninety-seven students fit the parameters. Of the 97 students, 40 responded and agreed to participate in the study, a participation rate of 41%. I contacted each of the 97 students first by telephone and then by email to invite them to participate in the study. Multiple attempts were made to reach each student. I did know one of the students prior to the study as she was a participant in the previous exploratory case study related to this study.

One limit to the sampling method was the self-selection of students who agreed to participate in the study. Pertinent data and insight might have been gleaned from those who chose not to participate, but 40 participants meets or exceeds the recommended number of participants for grounded theory as established by Creswell (2012) and Bryant and Charmaz (2007). I feel theoretical saturation was achieved for the two groups of students who passed DE and then either enrolled in college or did not. I am not as confident that theoretical saturation was reached for students who did not pass all of their DE courses and then either enrolled in college or did not. Those students were more difficult to reach and were less willing to speak with me. For that reason, I interviewed an administrator with the local school district as a key informant to gain more insight into those students’ skills, behaviors, values, motivations, and perceptions. He had access to the conversations counselors, teachers, and administrators have with students who do not pass their DE courses and experience working with that group of students himself. His comments are included in the discussion section of this study but not in the results section.
In order to capture rich data and provide thick description, hour-long intensive interviews were initially used to collect data for the study, as is appropriate for grounded theory (Bryant & Charmaz, 2007; Charmaz, 2014; Creswell, 2013). Figure 3.2 below illustrates the relationship between interviewing and theory development (Charmaz, 2014, p. 88). The initial interview questions were developed for the exploratory case study conducted Spring 2016 as a pilot for this study. An interview guide with the questions can be found in Appendix D, including a Table of Specifications to align the questions in the interview guide with the research questions. The questions were open-ended to allow the respondents to provide their interpretations, definitions and meaning of the DE experience instead of reflecting the preconceived notions of the researcher. However, as reflective of the research questions and in alignment with the research design of this study, the questions did address possible changes in skills, behaviors, values, motivations and self-perceptions of the participants as future college students. The questions were also designed to explore possible influencing aspects of the DE experience. In each interview, however, the questions were used as a guide, letting the student discuss salient aspects of the experience in a constructivist approach to creating a theory, as espoused by Charmaz (2014).

The interviews were recorded and transcribed in order to capture detail, record and use words verbatim, and allow for the researcher to return to the interviews in the iterative process of constructing theory. Notes were also taken. Follow-up interviews via telephone and email were conducted as categories emerged from the data.
In addition to intensive interviews, a few documents related to DE were reviewed. Specifically I reviewed the Montana Board of Regents’ policies on DE to understand the
criteria for participation in DE in the state; syllabi for several DE courses taught concurrently in the high schools and corresponding college syllabi for the same courses to compare outcomes, materials, and expectations; and promotional materials distributed to high school counselors, students, and their families to see which reasons for participating in DE were being used. I also reviewed the DE webpages from the Office of the Commissioner of Higher Education and from GFC MSU to gain information about the practices of the state and college in regards to DE and marketing messages that were being distributed.

**Procedures**

Participants were initially contacted via telephone to explain the study and solicit their participation. A telephone script is included as Appendix E. If I was unable to reach the person by telephone, I sent an email explaining the study and asking the person to contact me. If possible, I met with each participant in person and conducted an hour-long intensive interview using the Interview Guide found in Appendix D. If it was not possible to meet in person, I conducted the interview via telephone. In one instance, I was only able to communicate with a person via email. The interviews were recorded and transcribed. I also took notes during the interviews. The interview transcripts were then coded and categorized as discussed in the data analysis section. As themes began to emerge from the data, I contacted previously interviewed participants via phone, email, and texting with specific follow-up questions to explore the developing categories and possible theories and added questions based on the themes to the semi-structured questions to be asked of future interviewees. I then coded the additional data. I conducted
all interviews and follow-up interviews between January and June 2017. I wrote memos throughout the process, and those memos served as another source of data used to look for patterns and categories to create the final theory (Charmaz, 2014; Maxwell, 2013).

Data Analysis

Constant Comparative Method

The data was analyzed using the Constant Comparative Method, beginning with four a priori codes based on Maccoby’s (2015) definition of socialization – skills, behaviors, values and motivation. The analysis allowed for codes to emerge, however, and included initial open coding, then focused coding to direct continued analysis, and finally theoretical coding to develop a possible model (Bryant & Charmaz, 2007). The constant comparative method enabled me to compare data to data and data to theory to find similarities and differences. The comparisons started to generate theoretical properties of different categories. Data was constantly compared at each level of analysis (Charmaz, 2014).

As part of the constant comparative method, “incident with incident” comparisons were made, with the “incidents” being the different delivery modes. Comparing incidents or delivery modes provided a mechanism for further examining the context of the experiences (Charmaz, 2014). Tables and charts comparing the students’ responses, behaviors and perceptions were created, including charts demonstrating the influence of the different delivery modes, highlighting similarities and differences. Miles et al. (2014) espouse using descriptive numerical information, such as counts and averages, and
presenting that information in tables and charts as a way to illuminate patterns and support conclusions drawn from the text gathered in qualitative studies. In addition, some cases were presented as vignettes to capture the essence and context of a student’s particular experience. Quotes from students were also used throughout the analysis to add to the triangulation of data, and to give voice to the participants in-line with Charmaz’s (2014) process for developing theory and in-line with my constructivist approach.

Coding

As is standard in grounded theory, the data collection and data analysis occurred simultaneously in an iterative process (Charmaz, 2014). Initially, line-by-line coding was conducted on the transcribed interviews, looking for data that fit the four a priori codes related to Maccoby’s (2015) definition of socialization – skills, behaviors, values, and motivations. However, codes were allowed to emerge from the data and occur in vivo as well. Initial and open coding provided direction for focused coding (Charmaz, 2014). Focused coding was then used to “separate, sort, and synthesize” (Charmaz, 2014, p. 19) the data to determine which categories should be further pursued and which categories needed to be revisited to obtain theoretical saturation. Finally, theoretical coding was used to create a proposed model of the socialization influence of DE on students as future college students. I used the software program NVivo Starter 11 to store the transcripts, create codes, and record the coding. However, I re-coded the transcripts by hand when examining the data on perceptions to verify the NVivo coding. Figure 3.3 below details the coding categories of this study.
Figure 3.3. Coding Categories. This grounded theory study used a mix of coding approaches to create categories that led to themes and then to a theory.

<table>
<thead>
<tr>
<th>A Priori Skills Behaviors</th>
<th>Emergent Transition (In Vivo)</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Withdrawn</td>
<td>HS to DE</td>
</tr>
<tr>
<td>Persisted</td>
<td>Classmates</td>
</tr>
<tr>
<td>No College Military</td>
<td>Deadlines</td>
</tr>
<tr>
<td>Work</td>
<td>Format</td>
</tr>
<tr>
<td>Other</td>
<td>Homework</td>
</tr>
<tr>
<td>Internship</td>
<td>Independence</td>
</tr>
<tr>
<td>Gap Year</td>
<td>Maturity</td>
</tr>
<tr>
<td>Other Interests</td>
<td>Pace</td>
</tr>
<tr>
<td>Values</td>
<td>Paying for It</td>
</tr>
<tr>
<td>Advice</td>
<td>Rigor</td>
</tr>
<tr>
<td>Motivations</td>
<td>Teachers</td>
</tr>
<tr>
<td>Prepared Academic Content Pre</td>
<td>Pre After Positive Neutral</td>
</tr>
<tr>
<td>Confident Theoretical Perceptions College Students</td>
<td>Yes No</td>
</tr>
<tr>
<td>Prepared Prep for Life</td>
<td>Yes No</td>
</tr>
<tr>
<td>Social</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes No</td>
</tr>
<tr>
<td>Prepared Other</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes No</td>
</tr>
<tr>
<td>Emergent</td>
<td>Reasons Enrolled in DE</td>
</tr>
<tr>
<td></td>
<td>Augment HS</td>
</tr>
<tr>
<td></td>
<td>Bored/Wanted a Challenge</td>
</tr>
<tr>
<td></td>
<td>Format (Self-paced)</td>
</tr>
<tr>
<td></td>
<td>Interested in Subject</td>
</tr>
<tr>
<td></td>
<td>Jumpstart on College</td>
</tr>
<tr>
<td></td>
<td>Liked the Teacher</td>
</tr>
<tr>
<td></td>
<td>Looks Good</td>
</tr>
<tr>
<td></td>
<td>Save Money</td>
</tr>
<tr>
<td></td>
<td>Try College</td>
</tr>
<tr>
<td></td>
<td>Influencers</td>
</tr>
<tr>
<td></td>
<td>Plans to Attend College Pre-DE</td>
</tr>
<tr>
<td></td>
<td>After Positive Negative Neutral</td>
</tr>
<tr>
<td></td>
<td>Pre</td>
</tr>
<tr>
<td></td>
<td>Self</td>
</tr>
<tr>
<td></td>
<td>During High School</td>
</tr>
<tr>
<td></td>
<td>Sources of Perceptions</td>
</tr>
<tr>
<td></td>
<td>Parents</td>
</tr>
<tr>
<td></td>
<td>Older Siblings</td>
</tr>
<tr>
<td></td>
<td>Grandparents</td>
</tr>
<tr>
<td></td>
<td>Teachers</td>
</tr>
<tr>
<td></td>
<td>Counselors</td>
</tr>
<tr>
<td></td>
<td>Friends</td>
</tr>
<tr>
<td></td>
<td>Movies</td>
</tr>
<tr>
<td></td>
<td>Influencing Aspects</td>
</tr>
<tr>
<td></td>
<td>Classmates</td>
</tr>
<tr>
<td></td>
<td>College Environment</td>
</tr>
<tr>
<td></td>
<td>Counselors</td>
</tr>
<tr>
<td></td>
<td>Instructors</td>
</tr>
<tr>
<td></td>
<td>Expectations</td>
</tr>
<tr>
<td></td>
<td>Behaviors</td>
</tr>
<tr>
<td></td>
<td>Comments</td>
</tr>
</tbody>
</table>
Although Charmaz (2014) pointed out that theoretical saturation is the goal of grounded theory, such saturation is limited by the researcher’s ability to code and interpret the data, and the time constraints of a study. I recognize that “sampling adequacy” and “theoretical sufficiency” may be more appropriate terms (Charmaz, 2014, p.p. 214-215). The terms sampling adequacy and theoretical sufficiency leave the door open for further refinements and adjustments to be made to a theory instead of claiming that the sampling and analysis have resulted in a definitive or absolute theory. I also recognize that actual theoretical saturation should increase in proportion to the size and impact of the claim of saturation. As cautioned by Charmaz, “Researchers who make hefty claims should be circumspect about the thoroughness of their data and the rigor of their analyses” (2014, p. 214). Therefore, I recognize an increased number of students in the sample from more schools in multiple states across a longer time span could increase the theoretical saturation of a study exploring the socialization influence of DE on students as future college students. In addition, I asked students to recall information about their DE experience after they had completed the coursework, thus the accuracy of their recollections limits this study. More on the limitations of this study can be found in the section on delimitations and limitations.

In an attempt to reach theoretical saturation or at least sufficiency, I moved from initial, open coding to focused coding. As stated by Charmaz, focused coding “means concentrating on what your initial codes say and the comparisons you make with and between them” (2014, p. 140). Although both focused coding and axial coding link and examine relationships between categories and subcategories, focused coding differs from
axial coding in that axial coding forces data into preconceived categories while focused coding allows the categories or themes to emerge from the data (Charmaz, 2014). I used Charmaz’s list of questions below when creating focused codes:

- What do you find when you compare your initial codes with data?
- In which ways might your initial codes reveal patterns?
- Which of these codes best account for the data?
- Have you raised these codes to focused codes?
- What do your comparisons between codes indicate?
- Do your focused codes reveal gaps in the data? (2014, p.p. 140-141)

The codes helped create categories for analysis. The categories and their interactions formed the basis of the theory generated through this grounded theory study. For example, when I asked students how they perceived themselves while in their DE classes, as a high school student or as a college student, many students responded that they felt like something “in-between” or “both.” These responses combined with students talking about the transition from high school to DE and then from DE to college led to the emergent theme of DE being a transition for students. I could then employ focused coding and look for data related to DE as being a transition. More about this theme and findings can be found in Chapter 4.

**Memos**

Writing memos was also used as a form of data analysis and is key to the constant comparative method. Writing memos helped organize data, make connections, identify
areas for further research, and draft findings (Maxwell, 2013). Charmaz called memo-writing the “core of your analysis” (2014, p. 19) and stated the following:

Memo-writing constitutes a crucial method in grounded theory because it prompts you to analyze your data and codes early in the research process. Writing successive memos throughout the research process keeps you involved in the analysis and helps you to increase the level of abstraction of your ideas…Memos catch your thoughts, capture the comparisons and connections you make, and crystallize questions and directions for you to pursue (2014, p. 19).

I followed Charmaz’s process for integrating memos into the analysis (2014, p. 218):

1. Sort memos by the title of each category
2. Compare categories
3. Use your categories carefully
4. Consider how their order reflects the studied experience
5. Now think how their order fits the logic of the categories
6. Create the best possible balance between the studied experience, your categories, and your theoretical statements about them.

For example, it was through memoing that the idea of DE being a transition was explored more fully. The word “transition” emerged in vivo from the data, and responses to several questions elevated the concept to a categorical theme as more data supported the idea of DE as a transition. Memoing enabled me to ponder the impact of the students’ use of this word and explore the ramifications of viewing DE as a transition in relation to its purported purpose of helping students be successful by providing an opportunity for them to accumulate college credits early and cheaply. This memo caused me to return to the literature and examine transition theory more closely. The data from the study fell into
place within transition theory and resulted in concepts from transition theory being included in the theoretical model presented in Chapter 5.

**Document Analysis**

Documents related to DE, state and college policies, DE and college syllabi, promotional materials, and informational web pages, were analyzed to give context to participants’ responses. I used the following questions put forward by Savin-Baden and Major (2013, p. 409):

1. Who created the document?
2. How was the document presented?
3. What illustrations and examples did the creator use?
4. What was the general format of the document?
5. For what purpose was it created?
6. Who was the intended recipient?
7. How was the document used?
8. On which occasions was the document used?
9. In what places was the document used?
10. Who used it?
11. What behaviors or rituals accompanied its use?
12. What do members of the community say about it?
13. How do individuals and groups judge it?

One example of using document analysis in this study was the review of concurrent DE and college class syllabi. The course outcomes were the same for both types of courses,
and usually the textbooks and course materials were the same as well. This congruence in concurrent and college course outcomes and teaching materials reinforced and supported the students’ perceptions that they were doing college-level work, which resulted in increased confidence in their academic abilities and an increased level of self-efficacy for the students. As presented in Chapter 4, this increased self-efficacy influenced the students’ perceptions of themselves as future college students. In fact, students identified coursework as the greatest influencer in their self-perceptions of themselves as future college students.

Achieving Authenticity, Trustworthiness, Credibility, and Transferability

Because my data collection relied heavily on interviews, I used member-checking to increase credibility by having the interviewees review the written transcripts and analyses of their interview data to provide input and to create an opportunity for revision (Charmaz, 2014; Creswell, 2013; Shenton, 2004). Numerical data tables and charts, vignettes of certain cases, and quotes from participants created triangulation of the analyses and increased credibility and confirmability as well as provided rich description for transferability (Maxwell, 2013; Shanton, 2004).

To increase internal validity or credibility, I had a colleague review the findings of the study (Shanton, 2004). In addition, throughout the study, I looked for cases that could provide discrepant data to reduce researcher bias. During the constant comparison method, I consistently looked for disconfirming evidence (Creswell, 2013; Maxwell, 2013).
Because it is not possible for the researcher to be completely removed from the study, Savin-Baden and Major (2013) recommended acknowledging efforts to be reflexive and list specific types of reflexivity that can occur. Specifically for this study, I used memoing to engage in reflexivity as introspection to gain insights into the research. Reflexivity as intersubjective reflection and reflexivity as mutual collaboration were also used and are key components of grounded theory as the data is gained through intensive interviews which require collaborative meaning making between the researcher and participants. In addition, member-checking was used to actively include the participants researched in the analysis and interpretation of data. Collaboratively making meaning also aligned with the constructivist approach of this study.

**Summary**

In summary, in order to explore how the DE experience influences the socialization of participants as future college students, identify any influencing factors of DE, and examine how the delivery mode may shape the experience, I conducted a grounded theory study using intensive interviews to gather data and the constant comparative method to analyze the data. Hour-long intensive interviews with 40 former GFC MSU DE students provided the majority of data. One additional interview with a school district administrator as a key informant was conducted to add insight into a group of participants that was lacking theoretical saturation. A review of DE-related documents provided context for the participants’ responses. Iterative data collection and analysis used initial open coding followed by focused coding and then theoretical coding to create
categories that were analyzed in an attempt to generate a theory about the processes and interactions that occur in DE and influence participants’ socialization as future college students. Skills, behaviors, values, motivations, and perceptions acted as initial bins to help organize the data and provided structure for the initial interviews and subsequent analyses. Several key measures, such as member-checking and triangulation, were included to increase trustworthiness. Reflexivity was recognized as inherent in the study and addressed through memoing and member-checking, acknowledging that meaning making occurred in a shared relationship between the researcher and the participants.
CHAPTER FOUR

RESULTS OF THE STUDY

Introduction

The purpose of this grounded theory study was to examine the influence DE might have on the socialization of high school students as future college students. The study was limited to students who took a dual enrollment class from GFC MSU in AY 2015-16 and subsequently graduated from high school the same year, thus ensuring that the experience would still be relatively fresh in the students’ minds when they were interviewed spring and summer of 2017. Interviewing students after they had completed their DE coursework rather than while they were in their DE classes gave the students an opportunity to gain perspective on the experience and me an opportunity to compare their perceptions with their behaviors after they graduated from high school.

I interviewed 40 students who met the criteria. The participants included students who had successfully completed their dual enrollment classes and those who had not, and students who subsequently went to college and those who did not. The participants also had varied educational backgrounds, including students who attended larger public high schools, an alternative high school, small rural schools, and a small private high school, as well as students who were homeschooled. Including a variety of student situations added breadth to the study. Maxwell (2013) supported including multiple groups in qualitative studies in order to further comparison between groups in order to “contribute
to the interpretability of the results” (p. 129). For more details on the participants, see Chapter 3.

This chapter presents the findings of this study and discusses the results in terms of the participants as a whole and by subgroup where applicable. The study’s sample of students included four different student situations:

1. Passed DE and enrolled in college (25)
2. Passed DE but did not enroll in college (12)
3. Did not pass DE and enrolled in college, but withdrew (1)
4. Did not pass DE and did not enroll in college (2)

This study also included students who participated in DE in several delivery modes: concurrently in the high school (23), online through the college (4), on the college campus (9), and in a mix of more than one mode (4). The concurrent classes were taught by high school instructors with the credentials to teach at a two-year college in Montana: a master’s degree in the discipline or a master’s degree plus at least nine graduate credits in the discipline. Where applicable, student responses and data were compared by delivery mode to examine similarities and differences in the influences these modes may have on the socialization of students. Differences in experiences by delivery mode emerged from the initial pilot for this study, as discussed in Chapter 3. The different delivery modes were also an area of interest brought forward in other studies (Barnett & Stamm, 2010; Edwards et al., 2011; Hofmann & Voloch, 2012; Zinth, 2015A); although, studies explicitly comparing the modes are lacking.
The findings of this study are organized around three main research questions:

1. How does the DE experience influence the socialization of high school students as future college students?

2. What aspects of the DE experience influence the socialization of high school students as future college students?

3. How does the DE delivery mode shape students' socialization as future college students?

In addressing these three research questions, I asked students about their concept of college students in general, their perceptions of themselves as future college students, and their perceptions of themselves while in their DE classes. Although the students had completed their DE coursework when interviewed, they were asked to recall their understanding of college students in general and their perceptions of themselves as future college students before and after their DE coursework to determine if any changes occurred. If differences appeared, those shifts were then analyzed to determine if they could have been influenced by DE and then further analyzed to see if any specific aspects of DE influenced the changes.

**Introduction to Analytical Approach**

Using a constructivist approach to grounded theory, as promoted by Charmaz (2014), I focused on the participants’ interpretations and the meaning the students gave to the dual enrollment experience more than on established theories of socialization or role acquisition; although, those theories did serve as a framework for the research design and
initial coding. Thus, I have made a conscious effort to use direct quotes from the participants to report the findings of this study so that the participants speak for themselves. I concur with Charmaz’s stance that the participants’ interpretation of the phenomenon is central to grounded theory studies. Because I was following Charmaz’s (2014) methodology by using less structured interview questions, not all participants addressed every issue presented in the results. Students discussed the aspects of the experience salient to them.

In addition, I incorporated the use of numeric tables and charts to triangulate the data pulled from the students’ quotations. Using numbers to analyze the data brought in some of Glaser and Strauss’ systematic approach to grounded theory (Creswell, 2012). Instead of viewing Glaser and Strauss, and Charmaz as presenting opposing grounded theory designs, I chose to mix the approaches as complementary. Glaser and Strauss provided structure for the beginning stages of the analysis while Charmaz added a constructivist perspective to the analysis and allowed for more flexible, varied and emergent codes to develop through the constant-comparative method I used. Using data tables and charts to triangulate the data helped describe and support the patterns found in the extended text created through the interviews. Because of this descriptive purpose and in-line with qualitative research, no tests for statistical significance were performed on the data; however, the inclusion of descriptive data tables and charts helped to avoid “hasty, partial, and unfounded conclusions” (Miles et al., 2014, p. 13). Miles et al. (2014) warned against researchers’ tendencies to oversimplify patterns or focus on “exciting” events while ignoring pages of more mundane data. They advocated using multiple types
of displays, including matrices, graphs and charts: “All are designed to assemble organized information into an immediately accessible, compact form so that the analyst can see what is happening and either draw justified conclusions or move on to the next step of analysis that the display suggests may be useful” (Miles et al., 2014, p. 13).

As a third source of triangulation, the students’ experiences are relayed in short vignettes. Vignettes enable specific cases to be described in more detail and support the findings for the overall study. They present a fuller picture of the students’ experiences by providing more context than individual quotations or data tables and add to the “thick description” required of qualitative studies. Just as Creswell (2012) concluded that “Grounded theory can incorporate a systematic approach, a flexible emerging design, and the use of active codes to capture the experiences of participants” (p. 431), grounded theory findings can be presented in multiple formats with the goal of illuminating theoretical underpinnings that lead to a theoretical model.

Findings for Research Question 1: How Does the DE Experience Influence the Socialization of High School Students as Future College Students?

Research Question 1, “How does the DE experience influence the socialization of high school students as future college students?” is the most overarching question of the study. To present the findings, I follow the students’ trajectory – from before their DE classes, to during their DE classes, and then to after their DE classes. I will discuss their motivations, perceptions and behaviors. The students’ perceptions include those of college students in general and of themselves as future college students. Examining students’ understanding of what it means to be a college student in general is central to
role acquisition theory, one part of the theoretical framework underlying this study, and ties into the socialization of students. For example, how did students’ understanding of the role of a college student affect their perceptions of themselves as future college students? Each set of perceptions will include an examination of the sources of those perceptions and any changes the students experienced. The findings will be compared by delivery mode – concurrently in the high school, online through the college, and on the college campus. However, a deeper comparison of the similarities and differences of the socializing influence of DE by delivery mode will be presented in the findings for RQ3.

In general, students reported their concepts of college students became more positive and more robust through the DE experience, and their self-perceptions as future college students became stronger. Students reported feeling more prepared and more confident after their DE coursework, the exception being students who did not pass their DE classes. Three students in the study did not pass all of their DE courses – one withdrew and two failed. The two who failed their DE classes reported not perceiving themselves as future college students nor feeling confident in their abilities to succeed in college after failing their DE courses. These three students’ cases appear as vignettes later in this chapter. All 40 students, however, expressed that they felt they gained skills that would help them be successful future college students through their DE classes. In addition, the theme of DE as being a transition time emerged and was present in vivo in the study’s results.
The Influences on and Motivations for Students Enrolling in DE

To begin to address the first research question and to begin to build a theoretical model that explores any socializing influences, I first examined the influences and motivations behind students enrolling in the DE courses. Students referenced counselors, parents, teachers, friends, and older siblings as people who influenced their choices to participate in DE classes. Forty-three percent of the students identified one influencer, 20% named two influencers, and 28% listed three. Because this study was not designed to measure the level of socialization, it is not possible to determine in this study if a correlation exists between the number of influencers and the level of socialization. However, all 28% of the students who did have three influencers either attended college after high school graduation or plan to attend college in the future. The same cannot be said for the groups of students who identified one or two influencers. As shown in Table 4.1 below, counselors and parents received the largest number of references by students, and older siblings received the fewest. Some of the students’ parents had attended college; some had not. If parents and siblings were combined into one category, “family” would be the largest influencing group, unless counselors and teachers were combined as a “school” reference group. Then, teachers and counselors combined as a “school” reference would be the largest category. Family being the largest influencing group on a person’s socialization is consistent with socialization theory, except, as demonstrated in this study, in a school setting. In a school setting, teachers, and in this case counselors and teachers, carry equal to or more weight than family as socializing influences (Wentzel, 2015).
Table 4.1. Number of Student References to People who Influenced Their Decision to Participate in DE Courses

<table>
<thead>
<tr>
<th>Influencers</th>
<th># of References by Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counselors</td>
<td>20</td>
</tr>
<tr>
<td>Parents</td>
<td>20</td>
</tr>
<tr>
<td>Teachers</td>
<td>16</td>
</tr>
<tr>
<td>Friends</td>
<td>13</td>
</tr>
<tr>
<td>Older Siblings</td>
<td>4</td>
</tr>
</tbody>
</table>

The students gave a variety of reasons for enrolling in DE coursework, and they often identified more than one reason. Eighteen percent of the students named three reasons for enrolling in DE, 48% identified two reasons, and 35% gave one reason. Table 4.2 below displays the students’ reasons and the number of references by the students for each reason. The number one reason students said they enrolled in a DE class was to get a “jumpstart” or “headstart” on college. Being interested in the subject and saving money through the reduced tuition tied for the second largest reason students reported enrolling in DE. Earning college credit early and saving money were also both reasons listed in the promotional materials created by OCHE and GFC MSU. Situated in the college
completion agenda, earning college credits before entering college is seen as a way to reduce time-to-completion and increase college completion. Offering DE for reduced tuition is meant to reduce the amount of student loan debt plaguing many students as well as entice students to engage in DE for the purpose of earning college credits early in an attempt to boost college enrollment and completion. Of all of the reasons cited by students, “looks good on a resume” was the lowest response with just one student giving that reason. Liking the format of the class and liking the teacher tied for the second least offered reason for enrolling in DE.

An analysis of the reasons given for enrolling in DE – either the type of reasons or the number of reasons – revealed no patterns when compared to students who did or did not perceive themselves as future college students or did or did not enroll in college after high school graduation. As mentioned above, this could possibly be because 66% of the students gave more than one reason for participating in DE. Additionally, when exploring the idea that the type of motivation – internal or external – had an influence, it is difficult to determine whether the reasons given were internal or external motivators. For example, “interest in the subject” is obviously an internal motivator, but what about “get a headstart on college classes?” The reasons behind wanting to earn credits or complete certain classes while in high school as a way to “get a headstart” varied by the individual. For example, one student wanted to complete a particular class as a concurrent DE course because he felt he would receive more help from the teacher in high school than in college. Another student wanted to earn credits in high school so he could take a harder math class in college. Still another student wanted to earn college credits while in high
school so that she could complete college faster and enter the workforce to help financially support her family. In addition, some of the reasons cross over into each other. For example, 10 students said they took DE classes to get a headstart on college and to save money. Earning credits while in high school would save a student money because he or she would pay half tuition for the credits. Even if the reasons were delineated into “internal” and “external” categories, 19 students gave reasons that would fit into both categories, such as to save money (external) and because they wanted a challenge (internal) or because they liked the teacher (external) and they were interested in the subject (internal). Further research concerning correlations between reasons for enrolling in DE and students’ self-perceptions could be the topic for a different study.

Summary Findings for the Sample as a Whole

Before examining findings for the different groups of students present in the study or specific perceptions before, during or after the DE coursework, this section describes the findings for the group as a whole. In order to gain information about the students’ college aspirations, perceptions, and behaviors, I asked students to discuss several items:

1. Their intentions to attend college or not before they took a DE course
2. Their concepts of college students before they took a DE course
3. Any changes in their concepts of college students after they took a DE course
4. Their perceptions of themselves as future college students before they took a DE course
5. Their perceptions of themselves as students during their DE coursework (high school and/or college since they were dually enrolled)
6. Their perceptions of themselves as future college students after their DE coursework

7. Their actual behavior after DE coursework (did they attend college or not after high school graduation)

8. Their planned future behavior (what do they intend to do regarding college attendance in the future)

The responses to these questions are presented in the summary tables below, see Table 4.3 through Table 4.5. Specific findings of the study are discussed in more detail following the tables. These tables are meant to show general trends and patterns within the group. Figure 4.1 further in the chapter tracks information by student in order to see the influence of certain student input characteristics, such as being a first-generation student.

Table 4.3 summarizes the information for the sample regarding their concepts of college students in general. As part of the socialization process, did their concepts of college students change through the DE experience? As shown in Table 4.3, as a whole, most of the students (83%) intended to attend college before they enrolled in DE courses. However, not all of those planning to attend college had an idea of what it meant to be a college student, as shown by the discrepancy between 83% who planned to attend college but only 55% who reported having a concept of college students in general before their DE courses. Fifty-five percent represented most of the students, with 38%
Table 4.3. Summary Results of Students’ Intentions to Attend College and their Concepts of College Students in General

<table>
<thead>
<tr>
<th>Perception of Self as Future College Student Pre-DE</th>
<th>Intention to Attend College (Question 1)</th>
<th>Had a Concept of College Students Pre-DE (Question 2)</th>
<th>Change in Concept Post-DE (Question 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=40</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of ALL</td>
<td>Yes (33)</td>
<td>86% 73% 100% 77% 100% 85% 100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No (3)</td>
<td>5% 13% 0% 14% 0% 0% 0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Undecided (4)</td>
<td>9% 13% 0% 9% 0% 15% 0%</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>58%</td>
<td>45% 67% 77% 0%</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>33%</td>
<td>50% 33% 23% 0%</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>9%</td>
<td>0% 0% 100%</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>52%</td>
<td>45% 73% 33%</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>9%</td>
<td>10% 7% 0%</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>33%</td>
<td>50% 20% 0%</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>73%</td>
<td>86% 47% 33% 55% 67% 92% 50%</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>18%</td>
<td>9% 27% 0% 27% 33% 8% 50%</td>
</tr>
<tr>
<td></td>
<td>Unsure</td>
<td>9%</td>
<td>5% 27% 0% 18% 0% 0% 0%</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>0%</td>
<td>0% 0% 67%</td>
</tr>
</tbody>
</table>

Note: The table above provides a summary of the results for students' intentions to attend college, their pre-decision concepts of college students, and the change in their concepts post-decision.
Table 4.3 Continued

<table>
<thead>
<tr>
<th>Perception of Self During DE</th>
<th>Intention to Attend College (Question 1)</th>
<th>Had a Concept of College Students Pre-DE (Question 2)</th>
<th>Change in Concept Post-DE (Question 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=40</td>
<td>Yes (33)</td>
<td>No (3)</td>
</tr>
<tr>
<td>% of ALL</td>
<td></td>
<td>83%</td>
<td>8%</td>
</tr>
<tr>
<td>HS</td>
<td></td>
<td>36%</td>
<td>67%</td>
</tr>
<tr>
<td>Between</td>
<td></td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td>College</td>
<td></td>
<td>12%</td>
<td>33%</td>
</tr>
<tr>
<td>Unsure</td>
<td></td>
<td>6%</td>
<td>0%</td>
</tr>
<tr>
<td>Unknown</td>
<td></td>
<td>12%</td>
<td>0%</td>
</tr>
<tr>
<td>Perception of Self as Future College Student Post-DE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td>88%</td>
<td>67%</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>12%</td>
<td>33%</td>
</tr>
<tr>
<td>Unsure</td>
<td></td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Subsequent Behavior</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College</td>
<td></td>
<td>73%</td>
<td>67%</td>
</tr>
<tr>
<td>Military</td>
<td></td>
<td>12%</td>
<td>0%</td>
</tr>
<tr>
<td>Work</td>
<td></td>
<td>9%</td>
<td>33%</td>
</tr>
<tr>
<td>Internship</td>
<td></td>
<td>3%</td>
<td>0%</td>
</tr>
<tr>
<td>Gap Year</td>
<td></td>
<td>3%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Future Plans</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College</td>
<td></td>
<td>85%</td>
<td>67%</td>
</tr>
<tr>
<td>Work</td>
<td></td>
<td>12%</td>
<td>33%</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>3%</td>
<td>0%</td>
</tr>
</tbody>
</table>
 saying they did not have a concept of college students before taking a DE course. Eighty-three percent of the students reported having an understanding of what it meant to be a college student after completing their DE courses, an increase of 28%. Most of the students (55%) also stated that their concepts of college students became more positive through their DE experience. However, 33% said their concepts of college students did not change. Of the 15 students pre-DE who did not have a concept of college students in general, one reported a negative concept of college students after DE, two reported no change in concepts after DE, and the remaining 12 stated a positive change in concept after DE. In general, very few students, only three, reported feeling more negatively about college students after DE than before DE. As discussed later in this chapter, two of the three took classes concurrently in the high school. One felt college students needed to be too serious; another thought college students had to work too hard. The third student attended DE classes on the college campus and was disappointed the college-only students did not take their schoolwork more seriously.

Information about the subgroups can be seen by looking at the vertical columns running alongside the table. For example, for the subgroup of the 38% of the students who did not have a concept of college students pre-DE, Table 4.3 shows that 73% of this group intended to attend college, fewer than the 86% of students who did have a concept of college students pre-DE. Thus, the students without a concept of college students were less likely to be intending to attend college than students with such a concept. In addition, this subgroup had more students experience a positive change in concept of college students (73%) compared to students who had a concept of college students before DE.
This subgroup was also less likely to perceive themselves as college students (46%) when compared to students who had a concept of college students (86%). Therefore, whether a student has a concept of college students before DE does seem to influence whether he or she has a self-perception as a future college student pre-DE. However, the gap narrowed and actually reversed after DE when 73% of the students who originally did not have a concept of college students chose to attend college while 64% of the students who did have a concept of college students pre-DE enrolled in college after high school graduation. The college-going percentage of students with concepts of college students pre-DE was influenced by the fact that 27% of the group with a concept of college students pre-DE enlisted in the military. The students who entered the military do intend to attend college in the future, bringing the percentage of the group with future plans to either stay in college or enroll in college to 95%, slightly higher than the 87% of the students who started without a concept of college students before DE. Results like these will be discussed in more detail in this chapter.

In addition to discovering information about students’ concepts of college students in general, this study also uncovered data regarding students’ perceptions of themselves as future college students and the influence DE had on those perceptions. In general, more students perceived themselves as future college students after completing their DE coursework than before their DE classes. Table 4.4 below provides a summary of the results regarding students’ self-perceptions as future college students. Again, these results will be discussed in more detail further in this chapter, and perceptions and
subsequent actions of individual students after high school graduation are shown in Figure 4.1.

Of note in Table 4.4, more students perceived themselves as future college students after DE, 68% pre-DE to 88% post-DE, so DE appears to have an influence on students’ self-perceptions as future college students. The percentage of students who were unsure if they could see themselves as future college students fell from 13% to 3% through the DE experience. Likewise, the percentage of students who did not see themselves as future college students decreased from 20% to 10% through the DE experience. The majority of students who had a self-perception as a college student pre-DE retained that self-perception after DE (96%). Only one student saw herself as a future college student before her DE classes and then did not after her DE classes. She did not pass one of her classes and had negative experiences with classmates and an instructor. Her case is detailed later in the chapter as a short vignette. In addition, half of the number of students who did not perceive themselves as future college students pre-DE had changed their perceptions after their DE classes. So, in general, students do not seem to lose their self-perceptions as future college students through the DE experience, but the opportunity is there to gain a self-perception as a future college student. The one student’s situation serves as a caution though for what could happen if a student is not successful in DE.
Table 4.4. Summary Results of Students’ Perceptions of Self

<table>
<thead>
<tr>
<th>Perceptions of Self</th>
<th>Perception of Self as Future College Student Pre-DE (Question 4)</th>
<th>Perception of Self During DE (Question 5)</th>
<th>Perception of Self as Future College Student Post-DE (Question 6)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes (27) No (8) Unsure (5)</td>
<td>HS (15) Between (13) College (5) Unsure (3) Unknown (4)</td>
<td>Yes (35) No (4) Unsure (1)</td>
</tr>
<tr>
<td>% of ALL</td>
<td>68% 20% 13%</td>
<td>38% 33% 13% 8% 10%</td>
<td>88% 10% 3%</td>
</tr>
<tr>
<td>Intention to Attend College</td>
<td>Yes 89% 75% 60% 80% 85% 80% 67% 100%</td>
<td>83% 100% 0%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No 4% 25% 0%</td>
<td>0% 15% 20% 33% 0%</td>
<td>6% 0% 100%</td>
</tr>
<tr>
<td></td>
<td>Undecided 7% 0% 40%</td>
<td>20% 0% 0% 0% 0%</td>
<td>11% 0% 0%</td>
</tr>
<tr>
<td>Had a Concept of College Students Pre-DE</td>
<td>Yes 70% 25% 20% 73% 62% 20% 0% 50%</td>
<td>57% 50% 0%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No 26% 50% 80%</td>
<td>20% 38% 80% 67% 25%</td>
<td>40% 0% 100%</td>
</tr>
<tr>
<td></td>
<td>Unknown 4% 25% 0%</td>
<td>7% 0% 0% 33% 25%</td>
<td>3% 50% 0%</td>
</tr>
<tr>
<td>Change in Concept of College Students Post-DE</td>
<td>Positive 44% 75% 80% 40% 69% 60% 100% 25% 57% 25% 100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Negative 7% 13% 0%</td>
<td>7% 0% 20% 0% 25%</td>
<td>6% 25% 0%</td>
</tr>
<tr>
<td></td>
<td>No Change 44% 0% 20%</td>
<td>47% 31% 20% 0% 25%</td>
<td>34% 25% 0%</td>
</tr>
<tr>
<td></td>
<td>Unknown 4% 13% 0%</td>
<td>7% 0% 0% 0% 25%</td>
<td>3% 25% 0%</td>
</tr>
<tr>
<td>Perception of Self as Future College Student Pre-DE</td>
<td>Yes 87% 62% 40% 33% 75% 74% 25% 0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No 7% 23% 40%</td>
<td>33% 25% 11% 75% 100%</td>
<td>0% 0% 0%</td>
</tr>
<tr>
<td></td>
<td>Unsure 7% 15% 20%</td>
<td>33% 0% 14% 0%</td>
<td>0% 0% 0%</td>
</tr>
<tr>
<td></td>
<td>Unknown 0% 0% 0%</td>
<td>0% 0% 0% 0%</td>
<td>0% 0% 0%</td>
</tr>
<tr>
<td>Perception of Self During DE</td>
<td>HS 48% 13% 20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Between 30% 38% 40%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>College 7% 25% 20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unsure 4% 13% 20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unknown 11% 13% 0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

n=40
Table 4.4 Continued

<table>
<thead>
<tr>
<th>Perception of Self as Future College Student Post-DE (Question 6)</th>
<th>Perceptions of Self</th>
<th>Perception of Self During DE (Question 5)</th>
<th>Perception of Self as Future College Student Pre-DE (Question 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes (35)</td>
<td>No (4)</td>
<td>Unsure (1)</td>
</tr>
<tr>
<td>Yes</td>
<td>96%</td>
<td>50%</td>
<td>100%</td>
</tr>
<tr>
<td>No</td>
<td>4%</td>
<td>38%</td>
<td>0%</td>
</tr>
<tr>
<td>Unsure</td>
<td>0%</td>
<td>13%</td>
<td>0%</td>
</tr>
<tr>
<td>College</td>
<td>63%</td>
<td>75%</td>
<td>80%</td>
</tr>
<tr>
<td>Military</td>
<td>19%</td>
<td>0%</td>
<td>20%</td>
</tr>
<tr>
<td>Work</td>
<td>7%</td>
<td>25%</td>
<td>0%</td>
</tr>
<tr>
<td>Internship</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Gap Year</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>College</td>
<td>93%</td>
<td>50%</td>
<td>100%</td>
</tr>
<tr>
<td>Work</td>
<td>7%</td>
<td>38%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td>25%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Post-DE self-perceptions do seem to influence behavior as 71% of students with self-perceptions as future college students attended college after high school graduation, compared to 50% for students who did not report seeing themselves as future college students after DE. The difference is amplified when looking into the future plans of the students. Ninety-four percent of those with a self-perception as a future college student after DE planned to remain in or attend college in the future; whereas, only 25% of students without a self-perception as a future college student after DE planned to remain in or attend college in the future. Part of the increase in the percentage of students planning to attend college in the future is due to the six students who planned to attend college in the future but enrolled in the military. More about these students will be discussed below. In addition, four other students with self-perceptions as future college students planned to enroll in college in the future, but took time between high school and college as a “gap year,” to work to earn money for college, to complete an internship, and to pursue another professional interest. The fact that 68% of the students in this study did enroll in college after high school graduation could color these findings; however, it is still true that only two of the five students who did not perceive themselves as future college students after DE or who were unsure if they saw themselves as a future college student enrolled in college, and one of those withdrew partway through the first semester. Only one of the five planned to still be enrolled in college in the future.

The effect of students’ self-perceptions as future college students after DE seems to have more influence on their behaviors after high school graduation than their self-perceptions during DE. Most of the students’ perceptions of themselves during DE were
reported as still a high school student (38%), somewhere in between or both a high school student and a college student (33%), and as a college student (13%). Sixty percent of the students who said they felt like high school students during DE enrolled in college after high school graduation, compared to 85% who felt in-between, and 60% who felt like college students. However, when you add in the students who enlisted in the military but plan to enroll in college in the future, the percentages become 87%, 85%, and 80% respectively, thus showing little difference. Contrary to what might be expected, those who reported feeling like college students during DE had the lowest percentage of students planning to remain in college or attend college in the future, 60% compared to 93% for those who felt like high school students, and 92% for those who felt in-between. The fact that only 13% of the students overall felt like college students during DE points to the theme that emerged from the students’ words of DE being a “transition” to college instead of an actual college experience itself. More about the transition theme will be discussed later in this chapter.

The last summary table, Table 4.5 below, displays the results regarding students’ subsequent behaviors after high school and future plans – what they did after high school graduation and what they plan to do in the future. As shown in Table 4.5, the majority of students (68%) did enroll in college after high school graduation. This number is lower than the 83% from Table 4.3 who said they intended to attend college before they took DE courses. However, the 83% who intended to enroll in college pre-DE is very close to the 85% from Table 4.5 who said they plan to stay in or enroll in college in the future. The number for future college increases when the six students who joined the military,
Table 4.5. Summary Results of Students’ Subsequent Behavior after High School Graduation and Future Plans

<table>
<thead>
<tr>
<th></th>
<th>Subsequent Behavior after High School Graduation (Question 7)</th>
<th>Future Plans (Question 8)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>College (27)</td>
<td>Military (6)</td>
</tr>
<tr>
<td>% of ALL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>89%</td>
<td>67%</td>
</tr>
<tr>
<td>No</td>
<td>8%</td>
<td>0%</td>
</tr>
<tr>
<td>Undecided</td>
<td>4%</td>
<td>33%</td>
</tr>
<tr>
<td>Has a Concept of College</td>
<td>Yes</td>
<td>52%</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>41%</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>7%</td>
</tr>
<tr>
<td>Perception of Self</td>
<td>Yes</td>
<td>63%</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td>Unsure</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>0%</td>
</tr>
<tr>
<td>Perception of Self</td>
<td>HS</td>
<td>33%</td>
</tr>
<tr>
<td></td>
<td>Between</td>
<td>41%</td>
</tr>
<tr>
<td></td>
<td>College</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>Unsure</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>11%</td>
</tr>
</tbody>
</table>

n=40
Table 4.5 Continued

<table>
<thead>
<tr>
<th>Perception of Self as Future College Student Post-DE</th>
<th>Subsequent Behavior after High School Graduation (Question 7)</th>
<th>Future Plans (Question 8)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>College (27)</td>
<td>Military (6)</td>
</tr>
<tr>
<td>% of ALL</td>
<td>68%</td>
<td>15%</td>
</tr>
<tr>
<td>Yes</td>
<td>93%</td>
<td>100%</td>
</tr>
<tr>
<td>No</td>
<td>7%</td>
<td>0%</td>
</tr>
<tr>
<td>Unsure</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Perception of Self as Future College Student Post-DE</td>
<td>College</td>
<td>71%</td>
</tr>
<tr>
<td></td>
<td>Military</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>Work</td>
<td>3%</td>
</tr>
<tr>
<td>Subsequent Behavior</td>
<td>Internship</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Gap Year</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>0%</td>
</tr>
<tr>
<td>Future Plans</td>
<td>College</td>
<td>89%</td>
</tr>
<tr>
<td></td>
<td>Work</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>0%</td>
</tr>
</tbody>
</table>
the one student who completed an internship, the one student who had a gap year, the one student who was working to earn money for college, and the one student currently pursuing a different professional interest are figured back into the number planning to attend college in the future. Therefore, it is apparent that examining DE student behavior longitudinally into the future instead of immediately after high school graduation would produce more accurate results about students’ behaviors, such as college enrollment. The studies I found included data for students matriculating to college the fall after high school graduation or used national or state datasets that provided a snapshot of college enrollment at a particular time. A longer view of student behavior and research that followed individual students would also capture more of the student departures. For example, in this study, three students who enrolled in college after high school graduation subsequently withdrew from college and plan to work instead of return to college.

One subgroup of students in particular had an effect on the results of the study. Although accounting for only 15% of the total student group, the six students who were enrolled in DE and then enlisted in the military were interesting. They had very definite reasons for enrolling in DE – they were interested in the subject because it tied to their military plans, such as a criminal justice course for a student planning to become a military police officer, or because they wanted to get a “jumpstart” on college. Those who wanted to earn college credits while in high school planned on using the military as a vehicle to pay for their college education. These six students were very focused on their future plans and made conscious decisions about enrolling in DE as a way to reach their goals. Unlike other students in this study, they were not in the DE classes because of their
friends or because they liked the instructor. Again, further examining the subgroups by looking at the different categories down the side of the chart, Table 4.5 shows that very few subgroups in this study reached 100% for any characteristic. Yet, all six of the students who enrolled in the military had a concept of college students before their DE classes, had a perception of themselves as future college students after their DE courses, and all intend to enroll in college in the future. The military subgroup also had the highest percentage of students who reported that their concepts of college students did not change through the DE experience, 67% compared to 22% of those who did attend college and 25% for those who went to work. Thus, the students who enrolled in the military were very firm and stable in their concepts of college students. In addition, the students who enlisted in the military also had the highest perception of themselves as future college students before DE at 83%, compared to 63% for students who went to college after high school graduation and 50% for those who went to work. Again, this could be because all but one of the six students discussed using the military education benefits to pay for college, so they had a clear future goal of earning a degree, a way to pay for that degree, and a purpose for taking DE classes related to that goal, and clearly saw themselves as future college students even before taking a DE class.

**Input Characteristics as a Factor of Perceptions and Behaviors**

As presented in Chapter 2, researchers have examined the input characteristics of DE students in order to determine if the characteristics act as confounding variables in the studies and to explore certain specific demographic information as the research topics themselves. In that vein, for this study, Figure 4.1 below attempts to identify any
differences in the input characteristics between the groups of students who did and did not have a concept of college students before their DE classes or after their DE classes, or who did or did not subsequently attend college based on those perceptions. Unlike the previous summary Tables 4.5 and 4.6, Figure 4.1 highlights the connections between parental college attendance, parental college expectations, students’ concepts of college students, students’ perceptions of themselves as future college students, and students’ subsequent college-attending behavior on an individual level rather than as the group as a whole. Gender, age and high school GPA were not included in the figure because the students were fairly homogenous in that all of the students were 18 or 19 years old, and all but two students had a high school GPA between 3.0 and 4.0. The only gender difference was that all of those who subsequently joined the military were male.

Throughout the study, gender was not a factor in the results. This could be because the students in the study were all engaged in DE courses, thus self-selecting into a certain segment of the high school population. Figure 4.1 includes all students in the study except five whose parents attended college and expected them to attend college, intended to go to college themselves, had a concept of college students, perceived themselves as future college students pre-DE, and are currently in college. These students were not included in the figure in an attempt to simplify its presentation and focus on the connections of more interest. Students in the “Not in College” category with an “m” by their names are currently in the military but plan to attend college in the future. Tables 3.2 and 3.3 in Chapter 3 display the characteristics of all students but do not show any correlational information.
Figure 4.1. Connections Between Students’ Input Characteristics, Perceptions and Behaviors

<table>
<thead>
<tr>
<th>Parental College Attendance</th>
<th>Parental College Expectation</th>
<th>Student Intention to Attend College</th>
<th>Pre-DE Perceptions</th>
<th>Pre-Self Perceptions</th>
<th>Not in College</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents – No College (5)</td>
<td>No Parent Expectation to Attend College (12)</td>
<td>No Personal Intention to Attend College (3)</td>
<td>No Concept of College Students Pre-DE (15)</td>
<td>No Pre-DE Self Perception as Future College Student (8)</td>
<td>Never Enrolled (3)</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>22</td>
<td>1</td>
<td>1</td>
<td>31</td>
</tr>
<tr>
<td>2</td>
<td>13</td>
<td>3</td>
<td>6</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
<td>23</td>
<td>7</td>
<td>31</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>26</td>
<td>26</td>
<td>32</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>15</td>
<td>24</td>
<td>26</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>Parents – No Degree (7)</td>
<td>16</td>
<td>24</td>
<td>13</td>
<td>34</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>17</td>
<td>25</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>11</td>
<td>23</td>
<td>3</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(m) = in the military
As Figure 4.1 above shows, of the 12 students whose parents did not attend college nor complete a college credential, three (25%) did not feel a parental expectation to attend college, one (8%) did not intend to enroll in college, and one (8%) was undecided as to whether or not to go to college. In addition, of those 12, seven (58%) did not have a concept of college students before their DE coursework, four (33%) did not perceive themselves as future college students pre-DE, and four (33%) are not in college currently; although, one of those students does plan to attend in the future.

Figure 4.1 above also graphically displays the connections of the students who felt there was no parental expectation to attend college. Of those 12 students, three (25%) had parents who did not complete a college degree. Also, seven (58%) of those 12 are currently not in college. Four (57%) of those seven are in the military, meaning four (33%) of the total 12 are in the military. In fact, six (60%) of the 10 students who plan to enroll in college in the future are in the military. In addition, six (100%) of the six in the military intend to enroll in college in the future. As mentioned previously, five of the six students in the military discussed enlisting in the military as a way to pay for their college. Additionally, Figure 4.1 above illustrates that of the seven students who did not intend or were unsure if they intended to enroll in college, three (43%) are not in college.

Essentially, no students with a particular input characteristic commonly considered to negatively affect students’ college aspirations or enrollment were found to influence any category of students in this study as far as their concepts of college students, self-perceptions as future college students, and college-going behavior after high school graduation. This could be due to the fact that these students had already self-
selected into engaging in DE coursework, a path historically leading to college attendance. Although this study found that 18% of the students did not intend or were unsure if they would attend college before taking DE courses, they still either met placement criteria or were considered suitable for the courses by their counselors or family. In this study, more students considered “first-generation” students were not found in the categories of those not feeling parental expectations to attend college, not intending to attend college, or not enrolling in college than other students. However, more students with parents without a degree were found in the category of those who had a concept of college students pre-DE than those students who had parents with degrees. A lack of parental college expectations also did not appear to influence students’ perceptions or behaviors. Although this may seem contrary to literature that reports a correlation between these factors and college perceptions and behaviors, the results are limited in this study to students who had already enrolled in DE courses, specifically through GFC MSU. Again, just by enrolling in DE courses, the students have self-selected into a different population than high school students in general and perhaps even other groups of DE students as DE programs’ designs, purposes, class offerings, entrance criteria, funding, delivery mode and other factors vary from program to program, even within school districts or college service areas.

The summary results presented so far and other results from the study are discussed in more detail in the rest of this chapter. The results first examine students’ recollection of their concepts of college students in general: before and after their DE experience, the changes that occurred, and the factors influencing those changes. Then,
the chapter provides the results for students’ recalled perceptions of themselves as future college students: before they enrolled in DE courses and after they completed the DE coursework, including changes along the way and the factors influencing those changes in self-perceptions. Findings about students’ remembered perceptions of themselves while they were in the DE classes is also included. Finally, this first part of the chapter addressing RQ1 will present several themes that emerged from the data regarding how DE influences the socialization of high school students as future college students, specifically how they build self-efficacy, value autonomy, view DE as a transition to college, and decide to continue in their role acquisition of a future college student or not.

**Concept of College Students in General: Before DE**

In order to determine if the DE experience influenced or changed students’ perceptions or understanding of the role of college students in general, which would then relate to their socialization and perceptions of themselves as future college students, I asked the students if they knew what it meant to be a college student before taking DE classes in order to get a feel for where they were in the anticipatory socialization stage of role acquisition and to establish a “baseline” for their perceptions before DE could have an influence. Of the 37 students who were able to articulate whether or not they had a perception of what it meant to be a college student before they took a DE class, 22 students (55%) said they did have an understanding of what it meant to be a college student. Nineteen (86%) of the students who had concepts of college students pre-DE had parents with college degrees. An additional three (14%) had parents who attended college but did not earn a degree. Only two (5%) had parents with no college experience. In
contrast, of the 15 students who did not have a concept of college students pre-DE, eight (53%) had parents with college degrees. An additional four (27%) had parents who attended college but had not earned a degree. Three (20%) had parents with no college experience. No noticeable difference existed between those who did have a concept of college students and those who did not as far as their reasons for participating in DE or who influenced their decision to participate in DE, however. Both groups listed the same assortment of reasons and the same influencers: counselors, parents, teachers, and friends. Thus, whether or not students have a parent with a college degree appears to influence whether or not students have a perception of what it means to be a college student pre-DE even if the students with a parent with a college degree do not identify that parent as an influencer to any greater degree than other students.

Even though 55% of the students reported having a concept of college students in general before enrolling in DE courses, their ability to describe a college student before taking DE courses was limited to naming a few traits, the most common being "hard working." This is consistent with the research of Karp (2012) in that before DE students are college “naïve,” a term used by Ozmun (2013) and in socialization theory (Maccoby, 2015). As one student in this study who said he did not have a concept of college students before his DE classes said:

I had no clue. I was honestly unsure of what it was going to be like because I hadn’t ever really spoken to a college student. I knew a few kids older than me who had gone to college or were still going to school, but I hadn’t ever really asked them or spoken to them about what it was like going to school and how is it different than high school. I didn’t know what to expect, but I wasn’t ready for what it actually was.
This student did have parents who had earned degrees and who expected him to attend
college. After completing his concurrent DE classes, he said he had a much better
understanding of what it meant to be a college student and perceived himself as a future
college student. He did enroll in college after high school graduation.

In addition to being hard-working, students also mentioned that students were in
college to gain knowledge that would help them in a future career. Three participants did
mention college students “partying” and having fun. These perceptions of partying came
from movies the students had seen. More about the sources of students’ concepts of
college students will be discussed later. Figure 4.2 below, a word cloud, illustrates the
word frequency results from the responses of students who were able to describe what
they thought it meant to be a college student before they took a DE class. As discussed
further in this section, those concepts did change through the DE experience.

Figure 4.2. Students’ Concepts of College Students in General Pre-DE. A word cloud
showing the frequency of words used by students to describe college students before they
took a dual enrollment class.
So, where did the students’ concepts of college students prior to engaging in DE originate and what influence did the sources have on their perceptions and behaviors? In the instances in which students could identify where they gathered their information about what it meant to be a college student, they reported building their perceptions from four main sources: family members (11 references), teachers/counselors (7 references), older friends who had gone to college before them (4 references), and movies (4 references). In all but one instance, the students said the information they received from these sources discouraged them from wanting to attend college and carried negative concepts of college students in general. Information from family members, teachers/counselors, and older friends who had gone to college contributed to students’ concepts of college students being "hard-working” and “stressed out” because of overwhelming assignments and unyielding professors. The one positive reference came from a student who said her older brother, who already attended college, assured her that she would be able to do the work.

Examples of perceptions built on information from family members included the following. All four of these students did complete their DE courses and enrolled in college after graduation.

Stories that I heard from my parents from when they went to college. I mean, I know it was, they are much older, so it’s a stretch from what it is now, but I’ve seen, my dad saved a bunch of his college papers that he had to do, and he’s done like 30-page papers on Thomas Jefferson being a botanist, and I was like, ‘Oh, no, no, no.’

My dad. He’s the type of person who has to do it multiple times to learn it, so he said he would do hours and hours of studying and he’d sit down at a table and do a problem over and over five times so he’d understand it.
My parents talked about how they kind of struggled in college, and they…my mom went back to college when she was in her 30s because she struggled with it when she was younger, so I guess I thought college would be pretty difficult.

I had heard stories, particularly from my grandpa, that they [professors] didn’t want you to do well, so you would go through their class and if you did above average or got past a certain point that they didn’t want, they would drop your grade just because. And they wouldn’t have a good reason. And so, I somewhat feared that would happen.

High school teachers also portrayed college students as needing to work hard because of overwhelming workloads and strict professors. The quotes below represent the students’ comments. These students did complete their DE classes and either enrolled in college after high school graduation or plan to enroll in college in the future:

Well, a lot of my other high school teachers would say, 'This is what you’re going to need to do in college; this isn’t going to work in college,' you know, just little things like that. And Mr. _____, kind of at the beginning was explaining that, 'This is really fast paced,' and 'This is what college level is going to be like, so if you aren’t going to be able to keep up, it’s probably not for you.'

My high school teachers made it [college] sound super difficult, and all the college professors were going to be strict, and we would have no privileges whatsoever in class, and you’d have no say with anything.

Like, they [high school teachers] always say, 'Well, when you’re in college, your professors aren’t going to tolerate this.'

Students who spoke with older friends who had attended college also had negative perceptions. The two students quoted below passed their DE classes and enrolled in college after high school graduation.

Well, I have several friends who already went to Bozeman. One of them is actually taking 19 credits right now, and she is so stressed out. She’s like,
'And they don’t even care. They don’t even know if you’re there.’ It’s like crazy stressful. A lot of the help she gets is not from the actual teachers. I know in one class it’s the teacher’s aide who teaches, not the actual teacher.

The movie references acted as the source of students’ concepts of college students “partying.” One student who originally did not intend to attend college but believed she would be successful as a college student and did enroll in college after graduation described college students as, “Party every weekend (laughs). I don’t know – that’s all college was, was a big party, a good fun time. That’s what everyone made it seem like. That’s what movies make it seem like. I never really thought about the school aspect.” Another student who did plan to attend college, did see herself as a future college student pre-DE, and who did enroll in college after graduation said, “So, I think I got a lot of those more superficial ideas from like movies, definitely the view of bigger universities and stuff like that. Definitely not realistic. It’s really hard.”

Even though most students had negative concepts of college students before DE, the existence of a concept of college students pre-DE – whether negative or positive – did not seem to influence students’ behavior after graduation or whether or not they passed their DE classes. All of the students without a concept of college students pre-DE passed their DE classes, 73% enrolled in college after graduation, and 87% plan to remain in college or attend college in the future. It seems the students’ perceptions after completing their DE courses were more influencing than their perceptions before DE. In many cases, DE positively changed the students’ perceptions about college students in general and about themselves as future college students, as discussed in the next section.
Concept of College Students in General: After DE

In general, whether students took their DE classes concurrently, online, or on the college campus, most students reported their concepts of college students changed for the better through the experience. Thirty-eight of the 40 students discussed their concepts of college students after taking a DE class. Of those 38 students, 22 (58%) felt their concepts of college students had become more positive after taking a dual enrollment class. Three (8%) said they had a more negative idea of college students after taking a DE class, and the remaining 13 (34%) students felt their concepts had not changed, as shown in Figure 4.3 below.

Figure 4.3. Change in Students’ Concepts of College Students after Taking a DE Class. Most students experienced a positive change in their concepts.

<table>
<thead>
<tr>
<th>Concept Change</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>22</td>
<td>55%</td>
</tr>
<tr>
<td>No Change</td>
<td>13</td>
<td>32%</td>
</tr>
<tr>
<td>Negative</td>
<td>3</td>
<td>8%</td>
</tr>
<tr>
<td>Unknown</td>
<td>2</td>
<td>5%</td>
</tr>
</tbody>
</table>

**Concept of College Students in General After DE: Positive.** Most (55%) of the students who participated in DE classes had a positive change in their concepts of college students. Those with positive concept changes also tended to either enroll in college after
high school graduation (73%), as shown in Figure 4.4 below, or plan to attend college in the future (86%), as illustrated in Figure 4.5 below. In addition to the 16 (73%) who did enroll in college after high school graduation, three (14%) entered the workforce, two (9%) enlisted in the military, and one (5%) began an internship. As discussed previously, six students who enlisted in the military plan to attend college in the future, as did the students completing an internship, enjoying a gap year, and pursuing other interests. Thus, 19 of the 22 (86%) with positive concept changes of college students reported college was in their future plans, with two (9%) opting to remain in the workforce, and one (5%) pursuing other interests, as shown in Figures 4.4 and 4.5 below.

Figure 4.4. Behavior of Those who had Positive Changes in their Concepts of College Students. Most of the students who had positive concept changes through their DE experience enrolled in college after high school graduation.
Students who attended college after high school graduation and students who did not enroll in college after high school said their concepts of college students in general became more positive after their DE courses. Of the 22 students (55%) whose concepts of college students became more positive, 11 (50%) centered their concepts on the idea that college was "do-able," that anyone could be a college student. Another eight (36%) said they felt college students were not necessarily smarter than other students but prepared for college, changing their concepts of college students from those possessing an inherent trait to having a characteristic that could be developed. Two (9%) could not verbalize a specific factor that positively influenced their concepts of college students. These findings support previous studies that found DE participation increased self-efficacy (Ozmun, 2013) and confidence (Karp, 2012). The findings also support Karp’s (2012) assertion in regards to role acquisition and socialization that DE provides an opportunity
for students to “try on” the role of college student as a “role rehearsal” (Thornton & Nardi, 1975). One student who did have a concept of college students pre-DE and who saw herself as a future college student said the DE experience positively influenced her concept by broadening her concept of who could be a college student. She completed DE classes both online and on the college campus and did enroll in college after high school graduation. Her comments reflected the views of other students. She said before DE she thought, "Wow, that [to be a college student] was, like, that’s hard stuff. You have to be smart to go to college," but after DE realized that, "Anybody can be a college student. I saw kids my age; I saw older people. I saw teachers furthering their education – everything. I saw it all." Other students who completed their DE classes and enrolled in college after their high school graduation said the following about college being “doable.” The following comments came from students who completed DE classes concurrently in the high school, on the college campus, and in a mix of modes:

Well, I guess when I first took [dual credit] History, I realized college wouldn’t be too bad as long as you did the work and showed up. It does prepare you for college because it is more difficult, which I did enjoy. So, I guess it was just like, ‘Hey, you can go to college; it’s not going to be super hard like everyone says it will be.’ You just have to participate and do your thing. (concurrent)

To me, being a college student was this whole other tier of learning. It was way more advanced, and when I took those classes I learned it really wasn’t that much of a stretch, you know, as you think of it. To me, it was like this big, scary like “Oh well, I’m in high school and I don’t know anything.” And once you get to college it’s going to be so much studying and papers and you’re not going to have time to do anything except for your classes, and I was relieved when I took those dual enrollment classes that it wasn’t going to be that hard, as hard as I thought it was going to be. (concurrent)

A lot has changed. I’m a lot more confident. I see that the classes weren’t anything like I thought they would be. I didn’t have to write any 20-page
research papers. It was a lot easier than I thought it was going to be. They went really well. The teachers were encouraging. I don’t think I had any teachers who put me down or made me feel bad. I didn’t have any dictator-type teachers. They were all really nice and encouraging. And, I always had plenty of time to get everything done unless I procrastinated, which was my fault. I didn’t ever have trouble getting the stuff done on time. (on the college campus)

They [college students] don’t have to do, like, spectacular at it. You can just do your best at it...I just feel like some people, like my boyfriend. He feels like he couldn’t go to college. He tells me he’s not smart enough and this and that. And it’s not [paused] I’m like, where are you getting that? There are people who come to college from all different places in their lives. There are people that are super old and what are they doing? They’re doing it. (in a mix of modes)

A student who did not subsequently enroll in college and who attended a DE class on the college campus said she learned more about being a college student and recommended DE courses to her younger brother, even though she chose to pursue other interests instead of attend college after high school:

I’m like, ‘Dude, go for it because you’ll learn things and you’ll be ahead of everyone else pretty much because not only will you have the learning from the classes but you’ll also have life experiences that go with them’.…Like, I have a lot of great friends from the class that I took, and it was a good learning thing for me…At first I was like, ‘I’ll do what I need to do, and if it’s not great, it’s not great, but at least I’m trying, right?’ And I remember one day I was super stressed out, and I went to my professor and I said, ‘Look, here’s the deal.’ And he was like, ‘I totally get it. You’re doing fine. You just need a little extra help or time with it, so I’m going to give you the tools you need, but you should have asked sooner.’

In general, after taking a DE course, students still described college students as hard working, like they did before the DE classes, but they had more robust descriptions and added traits such as “independent,” “responsible,” “mature,” “focused,” and “goal-oriented” to their definitions. These traits will be discussed in more detail later in the chapter as they relate to the students’ self-perceptions as future college students and as
emergent themes. The differences between different delivery modes will also be presented further in the chapter, but for now, these students’ comments serve as confirming evidence of the students’ expanded concepts of college students:

I found that you have to be more independent. The teachers are not going to come after you if you forgot to do an assignment or anything. You’re going to be held responsible for 100 percent of the work that you do, and, um, if you haven’t been independent for long before, it might be a little scary. \textit{(concurrent)}

I would say the biggest thing is really the responsibility. In high school, your teachers kind of really held your hand a little bit and helped you. While your college instructors will let you know if you’re falling behind, it’s really up to you to decide how you’re going to succeed in it. You have to be the one to come to class. There’s really no penalty for not coming, other than a couple of points that they do attendance for. \textit{(concurrent)}

You know, we were these high school students, but we were able to stop at the coffee shop. If we didn’t go to class, nobody was going to chase us down. You know what I mean? Nobody was going to chase us down and be like, ‘You’re truant.’ You’re just simply not there, and you get a zero. So, it’s a big responsibility. And that freedom is important. \textit{(on the college campus)}

Kind of being with an older group of people, it was definitely a little different because everyone just seemed a lot more mature. They just seem like more into what they’re doing. \textit{(on the college campus)}

It’s just people trying to further their education and get where their goals are...It’s pretty much everybody and everybody. You don’t got to be smarter. You have to have a goal in mind, I guess. \textit{(in a mix of modes)}

\textbf{Concept of College Students in General After DE: Negative.} Not all changes in student’s concepts of college students were positive. Even though most of the students (55\%) reported positive changes in concepts of college students, three (7\%) students viewed their concepts of college students as being more negative after a DE course. Unlike some students who welcomed the challenge of the DE courses, two students
described being “serious” and “hardworking” as negative attributes. Both students took their DE classes concurrently in the high school. One student said, "After all those [DE classes], I was like, 'Wow, not looking forward to college now. It’s going to be tough. It’s a lot of work. You have to do a lot more studying for it.'" The other student said she found college students to be “more serious,” and viewed that as a negative trait because “I’m not taking anything really seriously in my life.” The third student took her DE classes on the college campus and reported that she was disappointed the college students were not more dedicated. As she said:

They weren’t as aspiring to study as I thought they would be…It was almost like they went begrudgingly through the stuff; they weren’t very dedicated. They would often complain about not getting assignments done, but that was because they had been up late the night before, up partying or playing video games or hanging out with their friends. And, so, I was disappointed to see the lack of dedication, perseverance, endurance, love of studying. It was somewhat depressing to see the lack of enjoyment, to see that they didn’t see the importance of knowledge, of studying, of the opportunity that they had. I felt like they were missing out on the opportunity they were given. It was really sad.

All three students did pass their DE classes, and all three did subsequently enroll in college, so their negative concepts of college students did not seem to affect their behavior or intention to become college students themselves. For two of the students, strong parental expectations could have trumped their negative concepts of college students and probably played into their enrolling in college. The third student saw herself as a future college student pre-DE. Therefore, other factors besides one’s concept of college students influences students’ decisions to enroll in college.
Concept of College Students in General After DE: No Change. In addition to students who had positive and negative changes in their concepts of college students, some students reported they had no change in their concepts. Thirteen (34%) of the 38 students who discussed a change in their concepts of college students after taking DE classes felt their concepts had not changed. Of the 13 students who stated no change had occurred, 10 (77%) felt they knew what it meant to be a college student before they took a DE class, and 12 (92%) said they could see themselves as successful college students before they took the DE classes. The one remaining student (8%) was unsure. Six (46%) of the students subsequently enrolled in college, as shown in Figure 4.6 below. Four (31%) entered the military, one (8%) entered the workforce, one (8%) took a gap year, and one (8%) pursued other interests.

Figure 4.6. Subsequent Behavior of Those who Expressed No Change in their Concepts of College Students. More students whose concepts of college students did not change enrolled in college after high school graduation than the other behaviors of military, work, gap year, or other interest.
Some of the students who said their perceptions did not change did not enroll in college after graduation, but they intend to in the future. As illustrated in Figure 4.7 below, 12 (92%) of the 13 students who said their perceptions did not change plan to attend college in the future, with one (8%) student planning to remain in the workforce.

Figure 4.7. Future Planned Behavior of Those who Stated No Change in their Concepts of College Students. Only one student who did not have a change in the concept of college students does not plan to remain in or enroll in college in the future.

The difference in the number of students who enrolled in college immediately after high school graduation and those who plan to enroll in college in the future is largely due to four of the students who entered the military and plan to use the military’s educational funding to complete a degree in the future. One of the other two students who delayed entering college did so to enjoy a gap year in which he said he was “basically getting energy back from school before going into more school.” The other student pursued a professional interest after graduation but plans to enter college in the future.
Interestingly, the students who did not perceive a change in their concepts of college students through the DE experience displayed a strong alignment between their concepts of college students and their self-perceptions as future college students. They based both of these perceptions on an ability to successfully complete difficult coursework and were confident in their abilities before enrolling in DE courses. For the 12 of 13 students who felt like they knew what it meant to be a college student before they took a DE class, perceived themselves as future college students, and experienced no change in their concepts of college students after DE, their perceptions all aligned in that they perceived both college students and themselves as able to get good grades and work hard, both before and after their DE classes. This perception of themselves as academically competent and hard-working stemmed from their academic performance in high school. Some of comments from this group included the following:

I’ve always been a little bit more of an academic myself. I’ve always worked really hard at my classes.

I felt pretty much the same way [about college students and myself]. I got pretty good grades in the classes.

I felt like I would have [been a good college student], yes. I’m a hard worker, so I think I would have handled it.

I just figured college was, I don’t know, like every other regular school. You learn stuff, take tests, and you’ll learn some other stuff I guess.

I think I was probably ready. I got mostly A’s, maybe a couple of B’s throughout high school, but mostly I worked really hard, got my work done, and got good grades.

I pay attention in class a lot. I think I would have [paused] I mean I was a good student. I was lazy, not going to lie. But when I did my work, I did well. It was easy for me, and I thought that would transfer over to college for me, and it has.
A Comparison of Those with Positive, Negative, and No Changes in their Concepts of College Students in General After DE

So how do the three different groups compare – those with positive perception changes, negative perception changes, and no perception changes – as far as concepts of college students in general and self-perceptions as future college students? Figure 4.8 below presents the percentage of students in each group who originally intended to attend college, had a concept of college students in general before they took a DE course, perceived themselves as future college students before DE, perceived themselves as future college students after DE, enrolled in college after high school graduation, and

Figure 4.8. Comparison of Intentions, Perceptions and Behaviors of Students Based on Type of Change in their Concepts of College Students Post-DE.

![Figure 4.8. Comparison of Intentions, Perceptions and Behaviors of Students Based on Type of Change in their Concepts of College Students Post-DE.](image-url)
who plan to attend college in the future. Although tests for statistical significance were not performed, a few general observations about the groups can be made. The “positive change” group had the lowest percentage of students who felt they had an understanding of what it meant to be a college student (45%) before they took a DE course and the lowest percentage who saw themselves as future college students (55%) pre-DE of all the groups. For students who experienced a positive change in their concepts of college students, the percentage of students who perceived themselves as future college students increased after taking a DE course from 55% to 91%. The percentages remained the same for students who experienced a negative change (67%) and for those who experienced no change in their perceptions (92%). In addition, the greatest difference between those students intending to go to college and those who actually enrolled in college the subsequent year occurred in students who had no change in perception, from 85% intending to enroll to 46% actually enrolling. Part of this difference is explained by the fact that four students in this group enlisted in the military but plan to attend college either while they are serving or after they leave the military. The “no change” group contained four of the six students in the study who entered the military. The other two students who joined the military experienced positive changes in their concepts of college students, joined the military, and plan to attend college in the future. As mentioned previously, for the three students who experienced a negative change in their concept of college students, the negative change did not affect their behavior as all three enrolled in college and plan to continue in college. All three did intend to attend college before taking a DE course as well. Also, all groups had a higher percentage of students who
could see themselves as future college students than those who actually enrolled in college. Again, the six students who joined the military account for part of this difference; another two students said they perceived themselves as future college students but are choosing to follow other interests at this time. In addition to those eight students, one completed an internship instead of going to college, one is working to earn money for college, and one took a gap year. Only one did not go to college who also had no intention of attending college prior to DE, and he had a positive change in his concept of college students. He enrolled in DE classes because he was interested in the subject and because his friends were in the class. Although he did not and does not intend to enroll in college, his experience in DE made a favorable impression on him. The student had been homeschooled and attended DE classes on the college campus. As he said:

I guess I didn’t really think about it too much because I didn’t have plans to continue on and do more classes… I would definitely say I felt like a college student. I wasn’t treated any differently or anything like that. It was very welcoming, especially when people heard that we were dual credit. It was a very positive thing for people… Even just having to write the papers for it and just learning what it was like to be in a classroom setting. That was helpful [in learning more about what it meant to be a college student].

Therefore, DE has the ability to positively influence students’ concepts of college students, which in turn can influence college-going behavior after high school. However, no change in perceptions may occur for students whose concepts of college students and their perceptions of themselves as future college students are strongly aligned. DE has the strongest influence on those who do not have a concept of college students pre-DE. In addition, a negative change in concept does not necessarily influence college-going behavior after high school graduation unless a student already possessed a self-perception
of himself or herself as a future college student pre-DE that also changed negatively during the DE experience and the person discards the role of a future college student.

Factors Affecting Changes in the Concepts of College Students in General

Whether they changed their concepts of college students or not, the students based their post-DE concepts of college students in general on the experiences they had in their DE courses. The factors that contributed to their concepts of college students in general included the coursework, the teachers, the environment, and their classmates. Table 4.6 below shows the number of references for each factor students said affected their concepts. The coursework had the most references from students (31), followed closely by teachers (27) and the environment (26). The environment included the actual setting, as well as the climate created by the teacher, teacher expectations, and classmates. The environment will be defined in more detail below. Classmates also received 19 references. Coursework seemed to influence all but one student positively. Most students said they enjoyed the challenge of the coursework and were interested in the subjects. One student who completed his DE classes concurrently, did not have a concept of college students before his DE classes, and had a positive change in concept of college students said:

<table>
<thead>
<tr>
<th>Factor</th>
<th># of Students Who Identified the Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coursework</td>
<td>31</td>
</tr>
<tr>
<td>Teachers</td>
<td>27</td>
</tr>
<tr>
<td>Environment</td>
<td>26</td>
</tr>
<tr>
<td>Classmates</td>
<td>19</td>
</tr>
</tbody>
</table>
I took so much away from that class, but things like that I really like – to be throw straight into it. I think just that little bit of struggle; I’d never really struggled with school to that point. Finally finding out that struggling is good. And I really enjoyed that because I’d go home and I’d figure something out, especially like that [class] – I had no clue what I was doing. And, I’d finally figure it out and put all the pieces together, and the satisfaction of knowing that I figured it out or that I could learn through all that challenge was a lot better than just going to a class and sitting there for 45 minutes and already basically knowing what was going on.

Conversely, one student was discouraged by the difficulty of the work. This student did not have a concept of college students pre-DE either, but she felt she would be a successful college student in the future because she had done well in her classes up to that point. She took DE classes concurrently in the high school and said the experience caused her to see the college-level coursework as significantly more difficult, thus discouraging her from attending college. However, she did enroll in college after high school graduation. She said:

I also took another class my senior year, but that didn’t go too well for me, so I didn’t do the AP or dual credit for that one. But, after all those, I was like, ‘Wow, not looking forward to college now. It’s going to be tough. It’s a lot of work. You have to do a lot more studying for it.’

The coursework was especially relevant for the group of students who expressed no change in their concepts of college students. Many of the students in that group commented on the coursework and the influence their ability before and during DE to complete it successfully had on their perceptions. They strongly incorporated the ability to do the college-level coursework into their concepts of college students in general and of themselves as future college students. Both students quoted below reported no change in their concepts of college students and completed DE classes concurrently. The first
went directly to college after graduation; the second took a gap year and plans to enroll in the future.

Um, I don’t think the classes were too challenging compared to other classes. They were pretty much the same level of difficulty I guess. Maybe it was just the teachers that made it easier to learn.

It was actually stuff that I already knew. I was just taking them to get them out of the way and also do them because I actually went fairly high with my math skills.

In addition to coursework, teachers were also seen as factors positively influencing students’ concepts of college students in all cases but one. For one student, the teachers’ comments that she needed to become “more serious” reinforced her parents’ same sentiments. She reported that her parents told her she needed to be “less goofy” and “more serious” in order to do well in college.

However, she said, she did not want to take anything seriously at this point in her life, so the teachers’ comments strengthened her already negative concept of college students and her own belief that she would not be a successful future college student. The student did enroll in college after graduation, however, and plans to complete her degree.

The next influencing factor, the environment, was mentioned more often by students attending DE classes on the college campus than in the other two modes; however, it was an influencing aspect of the experience for students who took classes concurrently and on the college campus as well. The environment is defined as the setting itself – in the high school or on the college campus – as well as the climate created by the teacher, teacher expectations, and classmates. The environment was more than just the
delivery mode or the classmates alone. The environment was mentioned as positively influencing students’ concepts of college students if the environment encouraged autonomy – an attribute Karp (2012) would say was necessary for an authentic college experience that would aid in role acquisition. More about autonomy will be discussed under the emergent themes section of this chapter. Students in both concurrent and college campus DE classes reported enjoying having more perceived freedom in their DE classes and being treated more as adults; both the characteristics of being independent and mature became part of the students’ concepts of college students in general and contributed positively to their perceptions of what it meant to be a college student.

The final influencing factor, classmates, was also discussed by concurrent and college campus DE students and generally contributed to positive changes in students’ concepts of college students. Concurrent students said they enjoyed being in classes with other students who were focused on school and wanted to be in the class to learn. Students on the college campus appreciated the diversity of students and their more mature behavior. In all but two cases, the environment contributed positively to the students’ concepts of college students. For the two students for whom classmates had negative influences on their concepts, one was because she felt the classmates were too serious, and the other felt the students were not serious enough.

In general, the four influences had positive effects on students’ concepts of college students – coursework, teachers, environment, and classmates. The positive change in concept for each aspect is consistent with students’ overall positive changes in concepts of college students in general through DE. Only three students reported negative
changes in their concepts of college students after completing their DE courses, and 13 students expressed no change in their concepts. Each of the four influencing factors is presented separately below.

**Effect of Coursework.** Students especially included the coursework when describing the differences between high school and DE courses, both concurrently and on the college campus. This difference between their high school classes and their DE classes influenced their concepts of college students. Students commented on the amount and the level of difficulty of the college-level coursework, whether in concurrent DE courses, online, or on the college campus. Specifically, students mentioned the need to do work at home, read their textbooks, study for tests, take notes, and seek help when needed as things they needed to do for their DE courses that they did not need to do for their high school classes. As one student who completed DE classes concurrently said:

> Most of the time they [DE courses] would require you to commit time outside of class, whether it be studying for a large test, which, honestly, you should be expected to do, but in high school you’re not. Sometimes you just wing it, and you get by the test, and sometimes you don’t, but you still get by the test.

A student who enrolled in DE classes on the college campus reported similar increases in the level of rigor of DE courses:

> It’s eye-opening going from easy high school classes where I could just sort of float by to ‘Oh, hey, I didn’t do so well on that test. I guess I better probably study. I should probably get some friends and ask teachers questions.’

Rigor and the need to study for tests were the top two aspects of DE coursework identified by students that influenced their concepts of college students. Table 4.7 below
details the number of students who referred to different aspects of the coursework. As an aspect of the DE coursework, rigor in general received the most student references (31), followed specifically by increased studying for tests (17).

Table 4.7. Number of Students Referring to Various Aspects of DE Coursework

<table>
<thead>
<tr>
<th>Aspect</th>
<th># of Student References</th>
</tr>
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<tbody>
<tr>
<td>Rigor in General</td>
<td>31</td>
</tr>
<tr>
<td>Increased Studying for Tests</td>
<td>17</td>
</tr>
<tr>
<td>Format (computer-aided instruction, i.e. MyMathLab; Learning Management System, i.e. D2L; etc.)</td>
<td>15</td>
</tr>
<tr>
<td>Amount of Homework</td>
<td>13</td>
</tr>
<tr>
<td>Pace</td>
<td>11</td>
</tr>
<tr>
<td>Deadlines</td>
<td>11</td>
</tr>
<tr>
<td>Amount/Need to Read</td>
<td>6</td>
</tr>
<tr>
<td>Level of Writing</td>
<td>3</td>
</tr>
<tr>
<td>Notetaking</td>
<td>3</td>
</tr>
</tbody>
</table>

Below are two comments from concurrent students regarding rigor, followed by a quotation from a student who completed DE courses on a college campus:

I think it kind of made me realize, like the psychology class went in more depth than the high school one. I guess that just shows that college goes in more depth than like say the high school basic English or basic Algebra. *(concurrent)*

We covered more in-depth, more in detail, and I really enjoyed that. I really liked that. I’m a history guy. And, you know, for the first three years of high school you just kind of gloss over a certain time period, and just kind of [paused] I mean, you learn a lot, but you don’t learn A LOT about what you’re learning about. *(concurrent)*

In high school, you go on school trips and you don’t have homework for that day. But in college classes, you still have your homework every day, so you have to be more driven to keep up with all the deadlines and, for me, high school classes were really easy, so it was kind of nice to have a little bit more of a challenge. *(on the college campus)*
In discussing testing, students made comments similar to the following example quotations:

The biggest thing was how important the tests were, but another thing was that he told us we were expected to read the material before we got into the classroom, you know, read over the chapter and then go over it with him in class to see, like to more solidify it. \textit{(concurrent)}

Actually [class] was the first glimpse into that. It was a lot like a normal class, but it was the first time I heard how heavy the tests are compared to homework because ever since then homework has been the number one part about grades. \textit{(concurrent)}

The third most referenced aspect of coursework involved the format (15). The format referred mostly to computer-aided instruction, which was new to many of the students in the DE courses. For example, the DE math courses utilized a computer-aided instruction program called MyMathLab or MathXL, which included homework problems, videos, and often the actual tests. Students in online classes and in classes at the college campus used an online Learning Management System called Desire2Learn or D2L to submit assignments, review course materials, and sometimes take quizzes or tests. Even the face-to-face classes at the college used D2L for such purposes.

The level of writing and notetaking received the fewest number of student references at three each, but they were identified by students as being a part of the college-level DE coursework. The amount of homework (13), pace (11), deadlines (11), amount/need to read (6) were also mentioned. Student comments regarding pace included the following:

I enjoyed the faster pace. They have high expectations so they, I’m not trying to single anyone out here, but I think the teachers know that when kids come into their classrooms as AP or dual enrollment teachers, they know that it’s going to be the smarter or the kids who are going to work
harder so they throw more at you and it’s going to be harder work, so I think that’s a big thing too. *(concurrent)*

The amount of work and how fast they move. Like, when I took my first dual enrollment, I was like, ‘Wow, this is crazy. We do a chapter a week; this is nuts.’ *(concurrent)*

**Effect of Teachers.** In addition to the coursework, students in all three modes discussed how their interactions with their DE instructors affected their perceptions of college and college students – whether the interactions resulted in a positive or negative change, or in no change at all. The students in concurrent classes reported positive, negative and no changes in their concepts of college students. The one student who mentioned instructors in the online delivery mode experienced positive and negative interactions with the faculty which affected her concept of college students in general; however, she also took classes on the college campus and expressed a negative change in her concept of college students from that instructor. On the college campus, however, besides the student just mentioned, the students reported positive changes in their concepts of college students and college through interactions with the college faculty. In several cases, the students commented specifically that their interactions dispelled their concerns or contradicted information they had received about college faculty being unforgiving or uncaring from their families and high school teachers. Specific comments from students in each of the three delivery modes regarding teachers are presented below.

**Concurrent Classes.** Some students taking DE classes concurrently felt a difference in how they were treated by their dual enrollment instructors versus other high
school teachers, and those students reported positive changes in their concepts of college
students. Some of their comments regarding their instructors were as follows:

Because they required so much work to be done, more studying, more time
donated outside of class, it made you feel [paused] the teachers would still
hound you, but not as much. If you failed a test, there wasn’t as much of a
chance to get a redo as there would be in a non-dual enrollment class, I felt
like, because they’re holding you to a much more, well not much more, but
to a dual purpose test.

Uh, it’s a little bit more responsibility. Teachers don’t baby you through
quite as badly as they do in a normal high school class.

She [the DE instructor] was a little more like strict with deadlines and stuff
like that, which I believe was a good thing.

Sometimes in writing specifically he would be really hard on how he graded
our papers writing wise. I know the first couple of papers I wrote for him I
went from getting 100 percent on my papers junior year with Ms.
________ to the first paper I wrote for him was like a 15 percent or
something, and it wasn’t that I was that bad; it’s just that his standards were
that much higher for us.

The teachers expected more of us, I think. I think they realized that if we
wanted to be in this class that was viewed as a higher and harder class, that
we are going into it kind of ready for what they’re going to throw on us, no
matter what it is. Especially my hardest class I ever took in high school was
my [DE] class and that was because of my teacher. I went in day one of
school and like everyone goes to day one of school expecting ‘This is what
we’re doing for the year,’ and I remember he sat us down and talked for five
minutes about what we were going to do and then we were going into notes
about [the subject].

…the high expectations and the fact that we’re, like I said, big boys and
girls. We need to do our own work. The teachers might not always be there
to hold our hands, you know, we have to figure things out for ourselves.
Especially my Biology teacher, Mr. _________. He would teach us; he
would give us all of the information we needed, but if someone asked him
a question that was redundant or unnecessary, he would just tell them to go
look through their notes or look in their book if they needed information.

My biggest one was my [DE class] teacher, Mr. _________. He was hard
on us. He never, like if we did a good job he would let us know. But, if we
were slacking off in class or something, he’d more than let us know. He was blunt and honest to the point…he never neglected to tell us, ‘Hey, you’re not doing good.’ And he’d single us out too, which people don’t like being singled out because of the embarrassment, but I think I got singled out more than once, and when he’d single me out it would make me feel bad because I had neglected to do something, but it also helped me because I was like, ‘Ok, I definitely don’t want to go through that again,’ so I’d work harder.

Some students, however, did not feel a difference between their concurrent instructors and regular high school teachers and reported no difference in their concepts of college students because of their teachers:

I guess it stayed the same. The teachers I always had for the dual enrollment were really good. They didn’t put too much on the student. They explained everything really well. So [paused] I don’t know.

I think it was mainly just how it was presented by the teacher. If the teacher would have been less hands-on, it would have felt more like college. But, that’s definitely not a complaint.

I mean, it was more or less the same for me because I actually work better on my own, but I did see a number of students that seemed to do better in classes where the teacher was more one-on-one with all of their students. The students that I saw doing fairly well in the classes were more one-on-one I saw doing not quite as well during the periods that I shared the dual credit courses with them.

**Online Classes.** The one student who identified instructors in her online DE classes as having an influence on her perceptions reported both positive and negative interactions, but only the negative interaction affected her concept of college students in general, and particularly her self-perception as a future college student. She took four DE classes online and passed three of them. She did not pass one of her DE classes, did not enroll in college after graduation, and has no plans to attend college after a negative
interaction with the instructor in the class she failed. She entered the workforce instead and plans to keep working. She said:

Um, I had an [subject] teacher – my [subject] class was online – and he was very uninterested in helping students and very, like, I went to all of my [high school] teachers with all my questions because he wouldn’t answer them and even my teachers couldn’t help me answer them. So, I did fail that class. I stopped doing it. I don’t know, it was very [paused] I don’t know the word to describe it. Just not [paused] it wasn’t, I don’t know, it just wasn’t something I enjoyed. I didn’t feel like I was learning from it all.

On the College Campus. Students who took their DE classes at the college were interacting with college instructors and felt the difference between high school teachers and college instructors. With the exception of the student mentioned above, the interactions resulted in positive changes in students’ concepts of college students.

Um, I think, just [paused]this is going to sound crazy but the whole no mercy thing. They don’t care if you’re a high school student. They’re like, ‘I know you’re a high school student, but you chose to take this on so it’s your responsibility.’ And, I feel like that’s a huge thing because doing something like that, it totally kicked me in the rear first semester because I was like, ‘Oh, yeah, it’s not high school.’ So, I think just like pushing me to succeed was a big thing because I was kind of nonchalant at first. I’m kind of like that in general. I’m very laid back. I do my job. I do what I need to do, but extra stuff – that’s not really my thing. So, pushing me to succeed was really a big thing and just responsibilities, I guess.

Actually I appreciated that we were set to a certain standard and our age didn’t matter to what we were expected to do and how they [the instructors] treated us. One thing I really appreciated about the college classes was how I could be treated as an adult and not as a kid taking a college class, I guess you could say.

They’re [college instructors] not going to sit there and go through all your work with you. They’ll give you advice and tell you go use your resources, and they’ll be as flexible as they can, but I definitely feel like in high school they do the like ‘no person left behind.’ ‘We’re going to call your parents and get your parents involved.’ …It’s just more grown up.
Some students’ interactions with the DE college faculty directly contradicted their perceptions prior to DE. The following student discussed how her experience with DE instructors on the college campus influenced her perceptions and contradicted the negative image she had received prior to DE from her family:

I gained more confidence after going through [the teacher’s] class because I did so well in his class, a lot better than I thought I was going to. And he gave us everything imaginable to help us attain what we needed. He was always there for any source or help, so I never felt I was dropped or out to fend for myself. I knew I could always go back and ask questions, that questions were always allowed, that if I had a particular subject I didn’t understand that I knew I could go ask some questions, so teachers were out there to help me, not to hinder. And, I had kind of got the idea that teachers in college could be dictator-like and wish the worst upon you. I had heard stories, particularly from my grandpa, that they didn’t want you to do well…And so, I somewhat feared that would happen, so I went into it more with a negative attitude fearing that they would go in there and wish badly upon me, so I saw that he [the teacher] didn’t at all. In fact, he wanted us to succeed; he didn’t wish failure upon us.

Effect of the Environment. After the coursework and instructors, the environment was the third aspect of the DE experience students said influenced their concepts of college students in general. When students discussed the environment affecting their perceptions, they talked about the physical space – college campus or high school classroom – but also the instructor, classmates, rules, formats and expectations in that space. A separate section in this chapter specifically discusses the similarities and differences between students’ experiences depending on the delivery mode of their courses: concurrently in the high school, online through the college, or on a college campus. This section discusses the environment as a whole and its influence on students’ concepts of college students in general. Twenty-six students identified the environment of
their DE classes as shaping their concepts of college students. The environment created a sense of autonomy and responsibility, which students considered part of being more mature and which will be discussed later in the chapter as an emergent theme. Teacher expectations and the rules associated with the setting largely contributed to the sense of autonomy and responsibility. For example, students discussed differences in attendance policies. They said in high school if a student were absent, the school would notify the parents. In college, there may be consequences for missing class, such as losing points, but the student is responsible for being in class instead of the parents being responsible for making sure the student is in class. As one student said, “You can make that choice to go to class or not. Your parents don’t get a phone call if you skip class.” If the DE class put the onus of attending on the student, the student felt it created more autonomy and responsibility.

Another example of a difference in environment discussed by the students is a shift in who was responsible for learning the material. Students described high school teachers as being focused on “no child left behind” and making sure all students understood the material before moving to the next concept. In contrast, students said college instructors expected students to be prepared before class or get left behind. If a DE instructor required students to be more independent in their learning by being prepared before class, doing work on their own, or looking up answers themselves instead of asking the teacher, then students perceived that as fostering autonomy and responsibility. One student explained, “I wasn’t used to going home and having to do all
the work myself and then you were expected to know everything when you came to class. I was really unprepared for that.”

The students attached the attributes of being independent, responsible and mature to their perceptions of being a college student. These attributes emerged from the data for students in all three delivery modes, adding to the universality of the theme. However, the environment was mentioned more often by students who completed their DE courses on the college campus versus those who participated in DE concurrently in the high school. Students in concurrent classes recognized that being in the high school had more constraints on freedom than taking classes at a college, for example the structure of the bell system, school attendance policies, and needing a hall pass. Yet, as stated, students in all three delivery modes found increased autonomy and responsibility in their DE classes when compared to regular high school classes and commented on the influencing effect of the environment:

…in most classes it was like, ‘You have to sit here; you have to do this,’ but, like, in [the DE class] when we had lab days we could sit where we want and be more independent. We didn’t have to sit down, be quiet and do our work. It was more like a free environment, like it is here [at the college]. (concurrent)

Even on the online, I felt like you had to be really responsible and it was up to you. Nobody was pushing you to do it at all. That’s another thing that’s hard with online classes is you’re not really, you’re just expected to get on there and check what’s going on, and I feel like that’s something that they don’t do in high school because they like [paused] I don’t want to use the word baby, because it’s not baby, they just kind of like, it’s more guiding in high school. It’s more like if you’re falling behind they like [paused] I mean same here too [paused] but I feel like with the online classes that’s kind of not there at all. (online)

You know, we were these high school students, but we were able to stop at the coffee shop. If we didn’t go to class, nobody was going to chase us
down. You know what I mean? Nobody was going to chase us down and be like, ‘You’re truant.’ You’re just simply not there, and you get a zero. So, it’s a big responsibility. *(on campus)*

I don’t know if it surprised me, but I did appreciate college is more mature than high school you could say. It’s a more traditional form of school but it’s not super dramaful, and I don’t know, more mature than I’ve heard my friends talk about public high school. *(on campus from a student who was homeschooled)*

Because of the environment you’re in, like, just being around, like, the people around there [at the college for a DE class] kind of made you feel more like an adult than anywhere else. *(on campus)*

I really like this environment a lot more than the high school environment, and I think it makes you feel more grown up and more studious. At least, that’s how I felt anyways. *(on campus)*

**Effect of Classmates.** Both students who took classes concurrently and those who took their DE classes on the college campus commented on the effect their classmates had on their concepts of college students. Students who took their DE classes online did not comment on their classmates. Online classes in general do not have as much interaction between students as other delivery modes. This lack of interaction could reduce the influence of the classmate factor for online students. Students in online classes tend to not visually see each other, not “speak” to each other except for through discussion boards, and not engage in as much group work as in-person classes. This lack of interaction would be especially apparent in asynchronous online classes, such as those offered by GFC MSU.

**Concurrent Classmates.** Students in concurrent classes reported both positive and negative perceptions of their classmates. One of the issues with concurrent classes in this
study is that the classes consist of a mix of students. Some students in the class are taking the course for dual credit; some are not. In some cases AP students and honors students are in the same classes as students taking the class for DE, such as an advanced biology course or writing class. In other cases, some students in a class are not accelerated at all while others are taking the class for DE, such as Introduction to Criminal Justice. However, even with the co-mingling of DE and non-DE students in the same class, most students noticed a positive influence from their classmates, represented by the comments from the following two students:

I would say I liked the atmosphere better just because I was with other people who wanted to learn, who wanted to be there, and weren’t just there because they had to take it.

It’s really nice to be in a class with the kids who don’t take school as a joke…So, it’s really cool to be in a classroom with students who are going to challenge themselves and have a respect for the teacher as much as you do. And being in that environment where everyone wants to challenge themselves and wants to learn really helps a lot.

Even though most of the concurrent students had positive comments about the influence of their classmates despite the mix of DE and non-DE students in the class, some did not. Several students made remarks similar to the one quoted below:

Even if it was dual enrollment, I felt that some people were not taking it as seriously as they could have. Although, as I look back on it, I don’t think high school is the time to take stuff seriously, and I wish I wasn’t as serious…Yeah, so like some of them [other students] weren’t taking it as seriously as the people who were going to pay for it.

*College Campus Classmates.* Classmates on college campuses were significantly different than DE students’ classmates in the high school, and students recognized the
influence such diverse students had on their concepts of college students in general. The students’ concepts of college students shifted from students who were similar to themselves or to those whom they saw in movies to the reality of the diversity of college students on a two-year campus. The average age at GFC MSU Fall 2015 was 27.2 (GFC MSU, 2016). Students come to campus from all walks of life, some with children, some with full-time jobs, some from the military, etc. The effect of the classmates may have been different had the students attended a traditional four-year university. However, students in this study who completed their DE courses on the GFC MSU campus had their concepts of college students broadened to include a variety of different types of people— all in college, all pursuing a college education:

In my high school, we are all the same age and we have all grown up together. We have been who we were; we’d always been the same kids since kindergarten because I went to a K-12 school. But, in college, I was going to class with 50-year-old people, 20, 30, 40, whatever. All these different people from all these different places. So, I think that really, really opened my eyes to what life was going to be like.

Anybody can be a college student. I saw kids my age; I saw older people. I saw teachers furthering their education—everything. I saw it all.

It was a huge shift going from homeschooling to then being on like a public campus, a lot of different people, a lot of different events going on. It was a big shift from being a homeschooler.

It definitely shows the difference that it’s not high school anymore, but that you can keep learning, and it’s nice that there’s so much more variety versus in high school you still have everyone being like the same age and at the college it isn’t, and everyone has their own different schedule but they’re all there for the same thing.

And that was another thing I really liked, and was something I kind of didn’t like about the dual enrollment—kind of being with an older group of people. It was definitely a little different because everyone just seemed a lot more mature. They just seem like more into what they’re doing. I think it affected
me positively because I think it showed me that stuff changes after high school and that people change (laughs). People get more serious, and people actually want to learn when they come here. I don’t know [paused] I just feel like that throughout high school a lot of the people that were my peers were disengaged and didn’t want to do much. Or, they just wanted to get through stuff really fast, or they had a lot of life stuff going on too…It was nice to be with a group of people that, just to see the future, what you were going into. Um, but I also did feel a little stigma from peers here [at the college] sometimes. Not verbally or anything. Once they found out you were dual enrollment, that you were a lot younger, they were like, ‘What? That’s not fair.’ Like [paused] that kind of thing. I don’t know [paused] I think that’s just how it goes.

Students’ Perceptions of Themselves as Future College Students: Before DE

In addition to examining how DE students perceived college students in general before and after their DE coursework, germane to this study and the research questions addressed in this study was an exploration of how students perceived themselves as future college students before and after their DE classes. In most cases, when asked, “How did you perceive or see yourself in terms of being a future college student before you took a DE course?”, students had more difficulty in discussing themselves as future college students than they did describing what it meant to be a college student in general. Many asked for clarification with responses such as, “Like what?” and “What do you mean?” Several students said they had not previously thought about themselves in terms of being a future college student. When asked, “Did you think you would be successful as a college student before you took the DE class?,” however, the answers came more quickly and in the positive. Students’ perceptions of themselves as future college students seemed to center around their own perceived ability to do the college-level coursework, part of the concept of perceived self-efficacy that emerged from this study and that will
be discussed in more detail in the section of this chapter on emergent themes. As Figure 4.9 below shows, 27 (67%) said they could see themselves as future college students, eight (20%) could not, and five (13%) were unsure. Interestingly, the 67% of students who said they perceived themselves as future college students pre-DE was considerably less than the 83% who reported they intended to enroll in college when they registered for their DE classes. So, some DE students planned to attend college even though they did not perceive themselves as future college students at the time. Other influencing and confounding variables besides students’ self-perceptions as future college students must have motivated students to plan to attend college, such as parental expectations. Smith (2007) found parental expectations influenced students’ college aspirations and enrollment more than participation in DE. However, An (2015) found DE created
motivation for students to attend college. In any case, the gap between students who perceive themselves as future college students and those who intend to enroll in college provides an opportunity for DE to increase students’ self-perceptions as future college students to match their college aspirations. An opportunity existed for DE to have a positive influence on the 20% who did not have a self-perception as a future college student and the 13% who were not sure if they saw themselves as future college students or not.

Students who Did Not Perceive Themselves as Future College Students Pre-DE. It is not surprising that the majority (67%) of the students in the study perceived themselves as future college students before taking a DE course, given that they were taking a class that would count for college credit. However, not all students had a self-perception as a future college student pre-DE. They had other reasons for participating in DE courses and reasons for not perceiving themselves as future college students. Eight (20%) of the students did not originally see themselves as future college students. Of those eight, four (50%) took DE classes at the recommendation of a high school counselor, one (13%) to augment the high school curriculum, one (13%) because of a friend, one (13%) because of a friend and to augment her high school courses, and one (13%) because the subject matter related to his future plans in the military. Two of the eight (25%) said they did not feel like future college students because they did not feel prepared for college, two (25%) did not plan to go to college at all but were in DE because their friends were in the courses, one (13%) was not sure what she wanted to do after high school graduation, one (13%) said she did not perceive herself as a future college student because she lacked
information about being a college student, one (13%) did not feel she was serious enough to be a college student, and the cause for one (13%) student is unknown. Table 4.8 below shows specific characteristics of these eight students. Gender is not included in the table because it did not have an influence on the findings. Two of the eight (25%) students were first-generation college students. Four (50%) of the eight students who did not see

Table 4.8. Characteristics of Those Students who did not Perceive Themselves as Future College Students before Taking a DE Course

<table>
<thead>
<tr>
<th>Student</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Gen.</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Unknown</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Family Income</td>
<td>Middle</td>
<td>Middle</td>
<td>Middle</td>
<td>Middle</td>
<td>Middle</td>
<td>Unknown</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>HS GPA</td>
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<td>2.5-2.9</td>
<td>3.0-3.4</td>
<td>3.5-3.9</td>
<td>3.0-3.4</td>
<td>Unknown</td>
<td>3.5-3.9</td>
<td>3.5-3.9</td>
</tr>
<tr>
<td>Planned to go to College</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Parents Expected to go to College</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Unknown</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Had an Concept of College Students Pre-DE</td>
<td>No</td>
<td>Yes</td>
<td>Unknown</td>
<td>Yes</td>
<td>No</td>
<td>Unknown</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Concept Change Post-DE</td>
<td>Positive</td>
<td>Negative</td>
<td>Unknown</td>
<td>Positive</td>
<td>Positive</td>
<td>Unknown</td>
<td>Positive</td>
<td>Unsure</td>
</tr>
<tr>
<td>Perceived Self as Future College Student Post-DE</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Unsure</td>
<td>Yes</td>
</tr>
<tr>
<td>Reason took DE</td>
<td>Friend, augment HS courses</td>
<td>Counselor</td>
<td>Counselor</td>
<td>Counselor</td>
<td>Counselor</td>
<td>Jumpstart on college</td>
<td>Friend</td>
<td>Augment HS courses</td>
</tr>
<tr>
<td>Subsequent Behavior</td>
<td>College</td>
<td>College</td>
<td>Other Interest</td>
<td>College</td>
<td>College</td>
<td>Work</td>
<td>Work</td>
<td>College</td>
</tr>
<tr>
<td>Future Plans</td>
<td>No College/working</td>
<td>College</td>
<td>Other Interest</td>
<td>College</td>
<td>College</td>
<td>College</td>
<td>Work</td>
<td>College</td>
</tr>
</tbody>
</table>
themselves as future college students before taking a DE course also did not have a concept of college students in general before DE courses; that proportion is higher than the 38% for the entire group that did not have a concept of college students before their DE coursework; although, statistical tests for significance were not calculated as this is a qualitative grounded theory study. Three (37%) of the eight without a perception of themselves as college students before their DE coursework still did not view themselves as future college students after their DE coursework. This percentage, 37%, is higher than that for all of the students as a whole (10%) or any other group after DE coursework. These three students without both a pre- and post-DE perception of themselves as future college students comprised 75% of the total four students in the study who did not perceive themselves as college students after their DE courses. Six (75%) of the eight who did not perceive themselves as future college students pre-DE did subsequently enroll in college, but two (25%) have since withdrawn and entered the workforce with no plans to attend college in the future. One (13%) is pursuing other interests, and one (13%) is working. Therefore, it seems that students who engage in DE without a self-perception as a future college student remain less likely to have a self-perception as a future college student after their DE experience than students who enter DE with a self-perception as a future college student; however, the opportunity exists for the self-perception to change and become more favorable in developing a self-perception as a future college student as four (50%) changed from no self-perception as a future college student pre-DE to a self-perception as a future college student post-DE. One additional student (25%) shifted from
no self-perception as a future college student to unsure or maybe a self-perception as a future college student.

Students Unsure of Their Perceptions as Future College Students Pre-DE. The students who were “unsure” of their self-perceptions had more significant changes in their self-perceptions through the DE experience than those students who said they did not perceive themselves as future college students pre-DE. As shown in Table 4.9 below, all five of the students (100%) said their perceptions of themselves as future college students changed from unsure to having a self-perception as a future college student, as opposed to 50% for students who said they did not have such a self-perception pre-DE.

Table 4.9. Characteristics of Students Unsure if They Perceived Themselves as Future College Students before Taking a DE Course

<table>
<thead>
<tr>
<th>Student</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1^a Gen.</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Family Income</td>
<td>Middle</td>
<td>Middle</td>
<td>Middle</td>
<td>Low</td>
<td>Middle</td>
</tr>
<tr>
<td>HS GPA</td>
<td>3.0-3.4</td>
<td>3.0-3.4</td>
<td>3.5-3.9</td>
<td>3.0-3.4</td>
<td>3.0-3.4</td>
</tr>
<tr>
<td>Planned to go to College</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Parents Expected to go to College</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Had a Concept of College Students Pre-DE</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Concept Change Post-DE</td>
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<td>No Change</td>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
</tr>
<tr>
<td>Perceived Self as Future College Student Post-DE</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Reason took DE</td>
<td>Try college</td>
<td>Interest in subject</td>
<td>Counselor, wanted a challenge</td>
<td>Teacher</td>
<td>Interest in subject</td>
</tr>
<tr>
<td>Subsequent Behavior</td>
<td>College</td>
<td>College</td>
<td>College</td>
<td>College</td>
<td>Military</td>
</tr>
<tr>
<td>Future Plans</td>
<td>College</td>
<td>College</td>
<td>College</td>
<td>College</td>
<td>College</td>
</tr>
</tbody>
</table>
So, a difference in the influence of DE on the socialization of college students is especially potent on students who are “unsure” of their self-perceptions as future college students rather than a rigid “no.” One (20%) of the five students said she specifically took a DE course to try college: “I just took it to see kind of what college life was about and to pretty much, like, kind of get an idea of how things kind of work around the college.”

This supports Karp’s (2012) assertion that DE serves as an opportunity for students to practice the role of college student and move towards that role acquisition. If the environment is “authentic” to a college experience, DE can serve as the formal stage of role acquisition.

The students who were unsure of their self-perceptions as future college students had a variety of reasons for taking the DE classes. In addition to the one student who wanted to try college, two (40%) of the five students took the classes because they were interested in the subjects. The remaining two (40%) students took the classes at the recommendation of a counselor and teacher.

A relationship exists between students being unsure of their self-perceptions as future college students and their concepts of college students in general. Like the eight who did not see themselves as future college students before they took DE classes, these five unsure students had a higher percentage of students who also did not have a perception of what it meant to be a college student in general before DE coursework than the students as a whole. All, 100%, of the students who were unsure of their self-perception as a future college student also did not have a concept of college students in general. This correlation makes sense because how can one have a self-perception as a
type of person if one does not have a perception of that type of person in the first place? From a role acquisition theory standpoint, a person cannot move into a formal stage of perceiving one’s self in a particular role and trying on that role if one has not gone through the anticipatory socialization stage in which one gathers information about the role and starts to develop a perception of that role.

Participation in DE shaped these students’ concepts of college students in general by providing information and experiences through DE that could inform their perceptions, in some cases acting as an anticipatory socialization stage for those without a pre-conceived idea of what it meant to be a college student and then providing an opportunity for the student to move into a formal role acquisition stage in which he or she could rehearse the role. None of the “unsure” group could describe his or her perception of a college student before taking a DE class. After taking a DE class, four (80%) of the five students said they knew what it meant to be a college student and described college students in a positive light. All five of the students could also perceive themselves as future college students after taking a DE class. Four (80%) of the five subsequently enrolled in college, and one (20%) entered the military. All five (100%) plan to attend college in the future – four (80%) continuing in college since they are already enrolled, and one (20%) going to college after finishing his military duty. The student who is currently in the military said he was not sure if he could see himself as a future college student until after he took the concurrent DE class, enjoyed it, and realized he could complete college-level work:

I thought being a college class I thought it would be I guess a little bit harder than it was. It wasn’t too challenging I guess. I enjoyed it. I had to keep up
on my work and what not, but it wasn’t like everything was too
[paused]sometimes people make college out to be like, ‘Oh, it’s going to be
super hard,’ and maybe this might have been just a base level class so it
wasn’t meant to be too hard, but I enjoyed it anyway. I didn’t think it was
like crazy hard. I just, you know, I was on it, and it was something that
genuinely interested me, you know, so I think I got like a B in that class…
So, I guess just the idea of being able to do that and take classes moving
forward from there.

Students who Perceived Themselves as Future College Students Before DE. Most
of the students in the study did perceive themselves as future college students before DE
and perceived themselves as future college students based on their past academic
performance. As would be expected because DE does result in the accumulation of
college credits, most of the students in the study, 27 or (68%), of the students said they
did perceive themselves as future college students before they registered for a DE class.
As demonstrated in Table 4.10 below, in concordance with their self-perceptions as
future college students, all but three (89%) intended to go to college. Of the two (7%)
who were undecided, one joined the military and one pursued another interest after
graduating from high school, but both plan to complete college in the future. The one
student (4%) who was not planning to attend college originally decided by the end of her
DE experience that she would enroll in college and did so after her high school
graduation. However, one student (4%) who did enroll in college after his high school
graduation withdrew after one semester and is now working with no near future plans to
attend college. In addition to the military, internship and gap year students who plan to
enroll in college in the future, one other student is currently working to save money to
attend college in the future. Thus, the total percent of students planning to be in college
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in the future for this group of students who had self-perceptions as future college students before taking DE classes is 93%. The students’ self-perceptions as future college students aligns with their future behaviors. This finding underscores the importance of helping students develop a self-perception as a future college student as it affects their future behaviors, particularly enrolling in college. The one student (4%) who changed her self-perception from being a future college student to not being a future college student has already been discussed and is currently working. She is the student who reported a negative interaction with her DE instructor and DE classmates. As has been mentioned, her case will be presented as a vignette further in this chapter. Gender was not included in Table 4.10 because it seemed to have no influence on the students’ self-perceptions as future college students pre-DE.

Many of the students who said they felt they would be successful as future college students believed so because they perceived themselves as being hard-working, had done well in school thus far, and had already taken hard classes. These attributes aligned with their concepts of college students in general. Some of the students’ responses were as follows:

I was like, ‘As long as I get good grades, I’ll be fine.’

I have pretty good study habits, so I wouldn’t be completely blindsided by the workload because I took a lot of honors classes too so I wouldn’t be completely lost I guess.

I think [I’d be a successful college student]. I think I’m pretty serious and hard working. And I’m pretty goal oriented.

In addition to having already completed what they considered to be difficult coursework, the students who perceived themselves as future college students referred to
encouraging comments made by influencers in their lives, specifically family, teachers, and high school counselors, who thought they would be successful future college students. Examples of student comments included the following:

They [my parents] wanted me to go to college. They knew that I was smart enough and prepared to go to college.

My advisor too was like, 'You should really try this [DE]. You are too smart to just not doing anything with your life.'

Nobody in my family really went to college. I’m the first one, but it’s always just been in my head that I should go to college. That’s how my dad raised me.

Perceptions of Themselves During DE

Having explored students’ perceptions of themselves as future college students before their DE courses, I then examined their perceptions of themselves during their DE classes. DE means “dual enrollment;” thus, students are enrolled as high school students and college students in those classes at the same time. Yet, how do students actually perceive themselves while in those classes? Do they see themselves as high school students or as current college students? The answer could influence their perceptions of themselves as future college students after they complete their DE courses. When asked if they felt like a high school student or a college student while in the DE classes, only five (13%) of all the students said they felt like or saw themselves as current college students while taking their DE classes. As Figure 4.10 shows below, 15 (37%) students still felt like high school students, 13 (32%) as someone “in-between” or “both,” four (10%) student responses are unknown, and three (8%) students were not sure how they felt while in their DE classes. Each of these main categories will be discussed separately
below: perception of self as a high school student, as in-between high school and college, and as a current college student during their DE courses.

Figure 4.10. Students’ Perceptions of Themselves During their DE Coursework

The largest group of students reported perceiving themselves as high school students while in their DE classes; this was particularly true for students who took their courses concurrently in the high school. This finding also underscores the difference in the socialization influence of the delivery mode, which will be discussed in more detail in the findings for RQ3 later in this chapter. Fifteen students (37%) said they felt like high school students while taking their DE classes. The 15 students took classes concurrently in the high school, on the college campus, online through the college, and in a mix of delivery modes. For the students
taking the classes concurrently in the high school, the feeling of being a high school student came from the environment and how the classes were taught:

The teachers I always had for the dual enrollment were really good…I would say it was still more like a high school class than a college class though…Just the schedule for one would be a big thing. Sometimes you wouldn’t have anything to do in class and another day you would have to cram to get a bunch of work done. Most of it was done in class, and now in college you can go home and do the rest of it yourself. Kind of like that busy work you would always get. And there’s none of that now. It’s just your assignments that you need to do, your paper that you have due at the end of the semester, or big project – it’s the big stuff you have to look at not just the little stuff you have to do every day.

I don’t know, it still felt like a high school class because you’re still like really getting taught, like you’re still getting lessons and everything. I still had to BE at school. It wasn’t an option.

Even though some students participated in DE courses online through the college, they often were still in the high school environment because they stayed at the high school, were assigned a time to complete their DE courses, and did that work usually in the library or a computer lab. This high school environment influenced their self-perceptions as still high school students during their DE courses. Two students said they felt like high school students while taking their DE classes online through the college. One student was from a small, rural high school, and she took other classes online for high school credit only through the Montana Digital Academy (MTDA). So, for her, she said the class felt just like another subject to complete. No distinction was made regarding the nature of the subject or the level of rigor. Her MTDA high school classes were online and so was her DE course from the college. Taking classes online was a way to augment the small school’s curriculum. Her DE class was simply another class to complete. That sentiment
of the DE course just being another subject in a student’s curriculum was echoed by a student who was homeschooled but went to the college campus for some classes:

I don’t know if I really identified myself so much as a college student or that I was taking classes at the college. But, I did think it was really cool that I could be taking college classes and still be in high school at the same time…Another reason could be that first semester I was only taking one class, so it wasn’t like I was a full-time college student at the campus. I guess I incorporated it into like the same school subjects: I had to do this in math, I had to do this in English, I had to do this in my music class…We were in a homeschool group too, so I was pretty used to going different places to do work, not just at my house.

In addition, 14 students did not distinguish between their DE courses and other classes they were taking as Honors or Advanced Placement (AP) classes. All but three of these students participated in concurrent classes, so the blurring of lines between the different forms of accelerated learning was most prevalent amongst students in concurrent classes. Some of the classes students said they took for DE are not offered as DE, but the students still included them in their discussion of DE classes and referred to them as DE classes. The students tended to use the terms DE and AP interchangeably, and sometimes even Honors, and often had trouble distinguishing one format from the other, as shown by the replies below to the question, “What classes did you take as dual enrollment?”:

I took a biology class; I’m not sure what the credit was for. And, then I took college algebra, the 121, and pre-calc 151.

I took College Algebra. I don’t know if it was for dual credit or not. The other one I took was Human Biology.

For dual credit in high school I took the Honors Human Biology 5-6, and the Honors Chemistry, and I also took AP Biology but when I went and talked with my teachers about them when I was all done about credits, they’re all different forms of dual credit, like AP, and Honors Chemistry
was through UGF [University of Great Falls] rather than through Great Falls College, and Honors Bio was through Great Falls College. We had the option of taking the AP exam, and I opted to take the exam for that one [Honors Biology]. Oh, and I also took M098 and 121 through Great Falls College.

I took Introduction to Psychology, Introduction to Nursing, and I took…do the ones I took in high school count too? I took that one here, at Great Falls College, and I took the nursing one here online. Yeah, and I took [paused] it was a basic human and anatomy class. It was called BIOH 5/6 at the high school. I took that the whole school year. And then I took honors chemistry which transferred as 121 here, and I took that at [the high school]. Oh, that one was UGF, and I had to go to UGF and pay to get my credits transferred to here. But, it filled out my CHMY 121, which was really nice. So, I got that, and then I did an advanced placement biology class that came out as like a bio lab/lecture; it wasn’t really anything specific. So, it counted as BIOB 160/170. I passed that test, so I got those credits. I think that is all.

Again, the subject matter did not seem to influence socialization. The rigor of the coursework did, as discussed previously, but not the actual type of class, such as English versus Music. For students, one subject seemed to be equal to another subject; it was simply another class to complete. Table 3.4 in Chapter 3 displays the DE class subjects in this study and the number of students enrolled in each subject area. Also as discussed previously, part of the confusion for students over which classes are DE and which are not is caused by having a mix of students in the concurrent classes. Instead of having a section of a course designated for DE students, the high schools combine AP, Honors, DE, and sometimes non-accelerated students into the same section. As one student explained:

I guess the level of difficulty was a little bit more, but not everyone who took the class took the dual credit. For instance, the AP [class], you could choose to just take the test, and they kind of just gave you the credits. You didn’t pay for the credits; you just paid for the test. And my sister did that, and we were in the class together, and it was the same for both of us for dual credit and for AP.
Mixing students in the same class lessened the socializing influence of the DE concurrent classes. Students in those classes were aware of the differences in types of students and noted that some students did not take the class as seriously as DE students because the other students were not paying for the credits. Combining different types of students also reduced the authenticity needed for role rehearsal and socialization (Karp, 2012; Maccoby, 2015). Several students commented on the effect of having DE and non-DE students in the same class. One student who completed DE classes in all three modes specifically addressed this issue when discussing her concurrent classes:

"See that’s another thing [about concurrent classes] – I noticed some people who were taking the dual enrollment classes [paused] you didn’t have to pay for the credits at the end if you didn’t want to, because I know there were some people who took the tests and stuff but they didn’t pay for the credits, so I don’t think that was, but they totally could have… Yeah, so like some of them weren’t taking it as seriously as the people who were going to pay for it.

Not all students who perceived themselves as high school students while in DE courses were in concurrent classes though. Two students enrolled in DE courses on the college campus said they still felt like high school students while in DE because they felt young and knew they had not graduated from high school yet. As one student said:

"I think it made me feel more like a high school student because it brought out that more of the emphasis that I was in high school still and that I was in the Great Falls public school system and still kind of attached to that K through 12 thing. I still wasn’t busting out yet. I felt young coming here too, very young. I know I was definitely one of the youngest people in my class for sure.

Several students viewed high school graduation as the milestone that marked their transition from seeing themselves as a high school student to being a college student. From their perspective, not having graduated from high school yet created a mental
barrier to feeling like a college student, even though they were completing college-level work concurrently or attending classes on the college campus. Not having graduated from high school seemed to be key in blocking their ability to see themselves as a current college student while in their DE classes.

**Perception of Self as Between a College and High School Student During DE.**

The students who said they felt like they were "in between" or “both” a college student and a high school student acknowledged they were doing college-level coursework but did not feel like a college student yet. As one concurrent student said, he felt like "both because it was at the high school, but there were expectations of college work." Even some students who were taking DE courses at the college reported feeling like something in-between because they were younger than the other college-only students and still had not graduated from high school. Some quotes from these students are as follows:

> Well, I felt a little bit out of place, I guess, because I was younger than everybody else in the classes. And, I was here in college, so that made me feel like a college student.

> I didn’t really feel like either. It was kind of like a weird in-between thing because there was one other girl from [the high school] who was in the math class too, and I think she kind of felt the same. Like, we only talked with each other and no one else in the class really ever talked. I mean, they all kept to themselves, and we, like, didn’t really know where we fit in there.

> Whenever I would explain it to people I would just explain, 'I’m dual enrollment. I’m in high school and I’m in college.' I guess I didn’t really consider myself as one or the other, so I was just both.

Similarly to the students who felt like high school students during their DE courses, the students who perceived themselves as in-between or both a high school student and a college student while in DE also acknowledged that without a high school graduation,
they still felt tied to the K-12 system. They did not feel they could be college students until after their high school graduations.

The students’ perceptions of themselves as “in-between” high school and college lead to an emergent theme of this study – that of students’ viewing DE as a “transition” to college instead of an actual college experience itself, even for those students who attended DE courses on the college campus. More about DE being a transition will be discussed later in this chapter and in Chapter 5.

Perception of Self as a Current College Student During DE. Few students perceived themselves as current college students during their DE courses, regardless of the delivery mode. Of the five (13%) students who felt like current college students while taking DE classes, three (60%) completed their DE classes on the college campus, and two (40%) stayed concurrently in the high school. The three who took their DE classes on the college campus said they felt like current college students while in their DE classes because they were taking the classes on the college campus, with other college students, and from college instructors. In addition to being treated like college students by the faculty, the students said they felt like college students because of the increased rigor, the setting itself, the increased diversity in classmates, and the increased autonomy:

I would definitely say I felt like a college student. I wasn’t treated any differently or anything like that. It was very welcoming, especially when people heard that we were dual credit. It was a very positive thing for people.

I felt like a college student honestly...because of the environment you’re in. Like, just being around, like, the people around there kind of made you feel more like an adult than anywhere else. It was also kind of an eye opener too because when you go from a high school all day to a college; it’s a whole
different transition. The classes meet at different times. Classes are longer than at a high school.

As far as high school, it’s all set, you know, 8 to 3, going through it all. You have homework, etc., etc. But with the [class at the college], I had to take the initiative to go to the study groups, getting prepped for the classes, prepped for tests, prepped for skills tests. I had to take that time out of my own schedule. Whereas with high school, everything is at the high school, except the math homework problems or whatever. It’s that kind of set 8 to 3; whereas at the college, it’s more on your own. Which I enjoyed. I loved it. I loved getting out at 10:00 from the high school to go to the [college] class at 1:00. It was nice.

The two students who said they felt like current college students while in their DE classes even though their classes were concurrently taught in the high schools said they felt that way because the teachers treated them differently than in regular high school classes:

I’d say more like a college student because in most classes it was like, ‘You have to sit here; you have to do this,’ but like in Ms. _____’s class, when we had lab days we could sit where we want and be more independent. We didn’t have to sit down, be quiet and do our work. It was more like a free environment, like it is here [at the college].

She [the teacher] definitely made us feel like college students. She helped us with what she could, but she wasn’t going to sit there and hold our hands the whole time. She told us basically we had to be big boys and girls now and if we really, really needed help she’d give it to us, but if we were just trying to get out of work she wouldn’t help us.

The students’ comments highlight the importance of teachers setting college expectations to create as authentic of a college environment in the high school as possible for students in concurrent DE courses in order to foster socialization and role rehearsal, as recommended by Karp (2012).
Students’ Perceptions of Themselves as Future College Students Post-DE

Having discussed students’ perceptions before DE classes and during DE courses, this section presents the findings of this study regarding students’ perceptions after their DE coursework. The results indicate that more students are likely to perceive themselves as future college students after DE than before DE. An increase in the number of students with self-perceptions as future college students after DE speaks to its socializing influence. As demonstrated by Figure 4.11 below, 87% of the students perceived themselves as future college students after their DE coursework, compared to only four students (10%) who did not see themselves as future college students post-DE. One student (3%) was unsure if he could see himself as a future college student. The 87% who perceived themselves as college students after DE represents an increase of 20% from the 67% who saw themselves as future college students pre-DE. All but one of the original 27 students who saw themselves as future college students pre-DE remained a part of the 35 students who perceived themselves as future college students post-DE. One student experienced a shift from perceiving herself as a future college student pre-DE to not seeing herself as a future college student post-DE. Her situation is presented as the Case 4 vignette in this chapter. Nine students moved from not seeing themselves as future college students pre-DE to perceiving themselves as future college students post-DE.
Students who Perceived Themselves as Future College Students Post-DE. First and foremost, DE seems to have a socializing influence on students as their perceptions of themselves as future college students became more positive from pre-DE to post-DE. A total of 87% of the students in the study perceived themselves as future college students post-DE, a 20% increase from pre-DE. Because such a large percentage of the total students in the study fell into the category of perceiving themselves as future college students post-DE, a separate table detailing their characteristics has not been included. However, it is important to note that students’ perceptions of themselves as future college students after DE matched their college-going behavior after high school graduation in all but one case. Thirty-four of the 35 students (97%) who said they could see themselves as future college students either enrolled in college after high school graduation or plan to enroll in college in the future. The one student whose perception of herself did not match her behavior actually enrolled in college and persisted in college even though she did not
see herself as a future college student after DE. A vignette of her case is presented as Case 1 in this chapter. In addition, two students who perceived themselves as future college students after DE and who did enroll in college after high school graduation withdrew from college after one semester. One student cited health issues; the other identified finances as his reason for leaving. Neither have plans at this time to re-enroll in college in the future. In general, however, these findings speak to the importance of students’ self-perceptions as future college students on their behavior after high school graduation, specifically enrolling in college.

Students who Experienced a Change in their Self-Perceptions as Future College Students. Participating in DE appears to be able to influence positive changes in students’ self-perceptions as future college students, which leads to college enrollments. Nine students or 23% of the sample shifted from not seeing or being unsure of themselves as future college students pre-DE to perceiving themselves as future college students post-DE. Because DE is being discussed as a socializing influence, the nine students whose self-perceptions changed are of particular interest to this study. As displayed in Table 4.11, of the nine students whose perceptions of themselves changed to future college students, five (56%) were previously “unsure” if they considered themselves as future college students, and four (44%) did not perceive themselves as future college students.
Table 4.11. Characteristics of the Students Whose Perceptions of Themselves Changed to be Future College Students Post-DE

<table>
<thead>
<tr>
<th>Student</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intended to Attend College</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Undecided</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Undecided</td>
</tr>
<tr>
<td>1st Generation</td>
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<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Parents Expected College Attendance</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Had a Concept of College Students in General</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Perceived Self as Future College Student Pre-DE</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Unsure</td>
<td>Unsure</td>
<td>Unsure</td>
<td>Unsure</td>
<td>Unsure</td>
</tr>
<tr>
<td>Perceived Self as Future College Student Post-DE</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Passed DE Courses</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Of the nine students whose perceptions changed, only two (22%) students had a concept of college students in general before taking their DE classes, and all but one student had a positive change in their concepts of college students following their DE courses. These
students’ behaviors matched their newly found perceptions of themselves as future college students in that all nine either enrolled in college after graduation or plan to enroll in college in the future. Two of the students indicated they originally were undecided as to whether or not to pursue college, and one student had not planned on attending college, yet all three of these students did enroll in college after graduation. A different student, one of the nine, who did enroll in college has since withdrawn and does not intend to return to college. She plans to work instead.

**Students Who Did Not Perceive Themselves as Future College Students Post-DE.**

If one of the goals of DE is to prepare students for college and to encourage students to enroll in college, and students’ self-perceptions as future college students influence their behavior after high school graduation, then it becomes imperative to examine those students who leave the DE experience without acquiring a self-perception as a future college student. In order to do so, this section presents information about the characteristics of these students, their concepts of college students in general, and their self-perceptions as future college students, and provides vignettes of the students who did not possess self-perceptions as future college students post-DE.

The students who left DE without a self-perception as future college students have few characteristics in common, as illustrated in Table 4.12 below. Ironically, the four students who said they did not perceive themselves as future college students after DE all intended to attend college pre-DE. Only one of the four students, however, actually saw herself as a future college student pre-DE. Therefore, an apparent disconnect existed between their aspirations and their self-perceptions. The one student who did perceive
herself as a future college student lost that perception as the result of several negative interactions, as described in Case 4 in this section. In addition to the four students who said they did not perceive themselves as future college students post-DE, one student said he was not sure if he saw himself as a future college student or not. The one student who said he was unsure stated that he did not have a self-perception as a future college student pre-DE, so he actually moved closer to a self-perception as a future college student, from “no” pre-DE to “unsure” post-DE. He did not and does not plan to enroll in college, however. He is working instead. Of the four students who said they did not perceive themselves as future college students after completing their DE courses, one student said

<table>
<thead>
<tr>
<th>Student</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intended to Attend College</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>1st Generation</strong></td>
<td>No</td>
<td>No</td>
<td>Unknown</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Parents Expected College Attendance</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Unknown</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Had a Concept of College Students in General</strong></td>
<td>Yes</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Had a Change in Concept of College Students</strong></td>
<td>Negative</td>
<td>Positive</td>
<td>Unknown</td>
<td>No</td>
<td>Positive</td>
</tr>
<tr>
<td><strong>Perceived Self as Future College Student Pre-DE</strong></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Perceived Self as Future College Student Post-DE</strong></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Unsure</td>
</tr>
<tr>
<td><strong>Delivery Mode of DE</strong></td>
<td>Concurrent</td>
<td>College Campus</td>
<td>Online</td>
<td>Online and on College Campus</td>
<td>College Campus</td>
</tr>
<tr>
<td><strong>Passed DE Courses</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Some</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Subsequently Enrolled in College</strong></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Future Plans</strong></td>
<td>College</td>
<td>Other</td>
<td>Work</td>
<td>Work</td>
<td>Work</td>
</tr>
</tbody>
</table>
she would probably be successful as a future college student, but she is enjoying working and plans to continue to work and pursue other interests instead of attend college. Another student subsequently enrolled in college, but withdrew after failing her college courses her first semester; she also did not pass her DE class while in high school. The third student also did not pass one of her DE classes, does not see herself as a future college student, and plans to continue to work. More information about students who did not pass their DE courses will be presented after this section. The fourth student who did not perceive herself as a future college student after DE courses did enroll in college and is continuing to pursue her degree.

The number of students who did not perceive themselves to be future college students after taking their DE classes is so small (five) that it is difficult to make comparisons to other groups of students. However, Figure 4.12 below compares the characteristics of this small group to the larger group of 35 students who did see themselves as future college students post-DE. As seen in Figure 4.12, both groups exhibited a gap between the percentage of students pre-DE who intended to enroll in college and those who actually did. However, students with a self-perception as future college students recovered and gained on the initial intention with 94% planning on remaining in or attending college in the future, compared to 20% for those without such a self-perception as a future college student. The percentage of those students planning to remain in or attend college in the future is significantly lower for students without a self-perception as a future college student compared to those with a self-perception as a future college student. Only one student without a self-perception as a future college student
attended and plans to remain in college. She is the vignette Case 1 below. In addition, although it appears in Figure 4.12 that more students without a self-perception as a future college student saw themselves as current college students during DE, that is not the case. Rather, the larger percentage (20%) for students without self-perceptions as future college students compared to 11% for students with self-perceptions as future college students is caused by the smaller number in the “no self-perception group.” Only one student without a self-perception of himself as a future college student felt like a current college student during DE, compared to four students who had such self-perceptions as future college students after DE and perceptions as current college students during DE.
The one student was homeschooled and attended DE courses on the college campus. He did report feeling like a current college student while in those classes because of the way he was treated by the faculty, the rigor of the coursework, and the actual setting. As discussed previously, one student who did not perceive herself as a future college student after completing her DE coursework did initially have such a self-perception. She accounts for the 20% of the group with self-perceptions as future college students pre-DE. Her situation is described in the vignette Case 4 below.

The students who did not perceive themselves as future college students after taking DE classes felt so for a variety of reasons and should be examined on an individual basis. As seen previously in Table 4.12, some of the student characteristics counter research on students’ college aspirations and enrollments. For example, three of the students have parents with postsecondary educations, which should increase their likelihood of having self-perceptions as future college students (Renn & Reason, 2013), but it does not for this group in this study. In fact, in Case 1, the parents’ influence shaped their daughter’s perception negatively to not see herself as a future college student because she felt she could not reach their expectations for her. Additionally, three of the students have parents who expected them to attend college. Again, based on research, this should have positively influenced their self-perceptions as future college students and their college-attending behaviors (Smith, 2007), and yet it did not. In addition, two students had concepts of college students before enrolling in DE, two had positive concept changes of college students in general after their DE courses, one had no change, two enrolled in college after graduating from high school although one subsequently
withdrew, and they participated in DE in a variety of the three modes. As stated previously, the one characteristic that traditionally would have been associated with this group is that 80% of these students, all but one, did not have a self-perception of themselves as future college students prior to DE. However, neither did nine other students in the study who did develop self-perceptions as future college students after completing their DE coursework. Each of the five cases without a self-perception as a future college student after their DE courses is presented below.

Case 1. The first student who did not perceive herself as a future college student after taking a DE class had very educated parents who had high academic expectations of their children, including this student. As the youngest child, in her words she felt “goofy” and “not serious.” This self-image did not align with her perception that a college student must be “serious” and “focused.” She took College Algebra and Biology for dual credit concurrently in the high school. She said reading the textbook and memorizing the terms in her biology class was difficult. She identified comments from her teachers and family that reinforced her concept that college students must be “focused” and that she needed to change before she went to college: “Ms. ________, she told us that we will not have much time about other stuff so just try to focus and get done everything on time and everything like that.” Regarding her parents, she recalled, “They were always telling me to be serious and stop being like a child. I’m the youngest in my whole family, and so I’m like goofy.” She stated she felt she had to become “…more mature. More serious. I had to work on my seriousness a little bit.” The student did subsequently enroll in college because her older brother who was already in college assured her she could do the work
and advised her to take easier classes her first semester. She said she did not feel like a college student though until after she had graduated from high school, enrolled in college full-time, and began to work: “When I started working and going to college both it was like, ‘Oh, come on, I’ve got to do this. You’re in college now. You’ve got to focus.’ It was like that.” The student is struggling in her writing class but plans to continue in college and earn a healthcare degree.

Case 2. The second student who did not perceive herself as a future college student after DE coursework did initially plan to attend college and enrolled in a DE math class on the college campus in order to get a jumpstart on college. Her parents attended college and expected her to do so too. It is unknown how she perceived college students in general before or after she took the DE class; however, she did see herself as a future college student and had scholarships to multiple colleges. She was concerned about failing in college though, as she said: “I think everyone feels they’re going to not succeed for a little bit because it’s kind of like I have all of my high school stuff, plus I’m going to be doing adulting, you know?” After taking the DE class, she decided being a future college student did not match whom she was or what she wanted to pursue: “At the end of the day, I was just kind of like, ‘You know, is this really what I want to do? Do I really want to like spend all of my money and not even be sure if this is really what I want to do?’ So, I’m kind of just like (pauses), I know I want to write, but at the same time, I feel like going to school for journalism is not what I need to be doing right now.” Instead, the student is pursuing other interests and does not plan to attend college in the future. She explained, “Honestly, at this point, I don’t [see myself as a future college student]
because I have so many other avenues and doors that have been opened to me through other things that I’m doing. So, like, right now, I don’t really feel the need to go get a degree necessarily.”

Case 3. Less is known about the third person who did not perceive herself as a future college student after taking a DE course because it was very difficult to get her to talk with me. However, her story is important because she is one of only three students interviewed in the study who did not pass their DE classes. She did originally plan to attend college, and she registered for one writing class online through the college for dual credit. She said she took the class because she wanted to complete some prerequisites before enrolling in college. She took the class online instead of concurrently in the high school or on the college campus because she worked after school and felt she did not have the extra time she felt the concurrent or college campus class would require. However, she said, registration problems caused her to start the course late so she was behind from the beginning. She only submitted a couple of assignments and failed the class. She stated that failing the DE class reinforced her perception that she would not be a successful future college student, and she decided she was not going to college. However, after her high school graduation, she reconsidered and enrolled in three college classes online in the fall. She did not pass them either, so now she is working two jobs and does not plan to return to college. When asked why she took the college classes online when she failed the DE class in the online mode, she said she took the classes online because she was not able to take classes on the college campus, not even in the evening, because of the work schedule of her two jobs.
Case 4. Like the other three students discussed so far, the fourth student planned to attend college before taking the DE course. Her parents had attended college but not earned degrees, and they expected her to attend college. Before taking a DE course, she said she felt she had an idea of what it meant to be a college student and saw herself as a future college student. She was attending the alternative high school and had spent time on the college campus as part of various art shows. She stated she felt prepared for the coursework when she took her first DE class. She took DE classes in both the online mode and on the college campus. She felt younger than the other students in the on-campus class and did not feel like she fit in with her classmates though. She said, “It was kind of, I don’t know, it very much provided that new student feeling, like when you’re a little kid walking into a new school and starting over, it was very much that.” She also found the instructor to be less personal than her high school teachers:

It’s a lot less personal, like the teachers are a lot less focused on the students. Like, our math teacher never really asked questions, and when she did none of the students actually answered. It was always just like so quiet, and we all just kind of minded our own business.

Because the math class used a computer-aided instruction program called MyMathLab, the student said she felt comfortable with the class because it was somewhat self-paced, like her alternative high school classes. She felt the same with several of the online classes; the self-paced nature was similar to her alternative high school experience. However, that changed in her senior year:

My second semester was a lot harder, my senior year. That was a lot harder. The first classes, my math and anthropology – they were very much like I was used to. One of them was online, and my homeroom teacher was a math teacher, so it was very much what I was expecting. But, my second semester, it was very different and that’s kind of what made me stop going.
The increased difficulty, a negative comment made by the online instructor, and a promotion at work caused the student to quit doing the work for her online DE class:

He [the online instructor] told me in one of his emails when I asked him for help with something, he told me I was a high school student and that’s why I wasn’t understanding. And I thought, ‘Okay. I guess I’m done here.’… When I stopped taking the writing one, I realized (paused), I started working more; I started working three jobs, and now I’m down to two, and I realized that I could, I had all these jobs and I didn’t have any college experience and I could kind of keep doing that.

The student said she did look into enrolling in college once, but the program she was interested in had been discontinued:

I mean, no one at the college ever kind of helped me. When they told me the rad tech program was cancelled, apparently it had already been cancelled for like a year and no one had informed anyone at like [the high school]…And so then when I was at the college talking to them about how I didn’t know what else I wanted to do, none of them were like, no one helped provide options to do anything else. They were like, ‘Oh, okay, since you can’t do that, like, I guess you can go.’

She concluded, “I just don’t know if I would go back. I don’t know what I would go back for.” She is currently working in retail and was just promoted to supervisor. She said she does not currently see herself as a future college student.

**Case 5.** The last student to say he did not perceive himself as a future college student after his DE experience said he was “unsure” how he perceived himself. Unlike the other four students, he did not intend to enroll in college when he registered for his DE class. He took the class at the urging of a friend. He is a first-generation college student, and his parents did not expect him to go to college. He did not have a pre-conception of a college student in general and did not see himself as a future college student before taking the DE class. However, he did have a positive change in his concept
of college students after taking the class and felt like he gained information about what it
meant to be a college student. He said, “It definitely wasn’t like a full college experience
obviously with it being just the one class, but it did give me a little bit of experience
interacting with professors and seeing how stuff goes on a campus.” He was
homeschooled, so he had to adjust to a formal school setting. He stated, “Even just
having to write the papers for it and just learning what it was like to be in a classroom
setting. That was helpful.” As for perceiving himself as a future college student after the
DE class, he said, “I don’t know. I guess I didn’t really think about it too much because I
didn’t have plans to continue on and do more classes.” He is currently working and plans
to continue to work with no college in his future plans.

Influence of Not Passing their DE Classes on Students’ Self-Perceptions

Not passing DE classes seems to negatively influence students’ self-perceptions
of themselves as future college students. A small group of three students in the study did
not pass at least one of their DE courses. They represent only 8% of the sample, but two
of those three students (66%) also did not perceive themselves as future college students
after their DE courses. Therefore, not passing a DE course seems to have a particularly
negative influence on students’ socialization as future college students. Of those three,
one student passed one class and withdrew from another. He said he could see himself as
a future college student, but he chose to enter the military and plans to attend college in
the future. Another one of the three students passed most of her DE classes but failed one.
She did not subsequently enroll in college and said she does not see herself as a future
college student. She plans to work instead. She is Case 4 discussed above. The third
student who did not pass at least one DE course is Case 3, as discussed previously as well. She did enroll in college, withdrew after failing her first semester, and is working with no plans to attend college in the future. Although one person in this group of students who failed a DE class enlisted in the military and does perceive himself as a future college student and plans to enroll in college in the future, the other two students stated they do not perceive themselves as future college students and do not see themselves enrolling in college in the future. Although the overall percentage of this group compared to the total number of students in the study is small (8%), these students were difficult to reach and may represent a larger segment of the population. In addition, their stories could serve as cautionary tales about recommending or placing students in DE classes who are not prepared or who will not be successful in those classes. The socialization impact of not passing a DE class needs further examination, as is recommended in Chapter 5 of this study.

Emergent Themes from the Study Related to Socialization

While analyzing students’ concepts of college students in general before DE and after DE, their perceptions of themselves as future college students before DE and after DE, and of themselves while taking DE classes, several themes related to the socialization of the students as future college students emerged from the data. These emergent themes will be discussed below: increased self-efficacy in both academic and social contexts, the importance of autonomy in furthering the role acquisition of students as future college students, DE as a transition between high school and college, and DE as a preparatory transition to the military.
Increased Self-Efficacy through DE. The DE experience seems to increase students’ self-efficacy in both academic and social contexts. This increased belief in their ability to succeed as a future college student influenced their development of a self-perception as a future college student or strengthened an existing self-perception as a future college student. As mentioned previously, 87% of the students in the study reported perceiving themselves as future college students after their DE coursework, compared to 67% before their DE classes. Ben-Avie et al. (2012) refers to “future orientation,” which is similar to self-efficacy. They emphasize the importance that skills needed to transition to college develop in a context similar to a college classroom so that transferability of the skills can occur. If students participate in DE in a concurrent classroom designed to mimic a college classroom or if students complete their DE courses on a college campus, they have an opportunity to develop skills they need to be successful college students. If students recognize they have gained such skills, and if they begin to feel “prepared,” “confident,” and “comfortable” as future college students, they build self-efficacy and move towards role acquisition as a future college student.

Karp (2012) recognized the connection between an authentic DE experience and students’ ability to acquire knowledge about college students. Because DE provides an opportunity for students to acquire this knowledge, DE also appears to aid students in acquiring the role of future college students by providing an opportunity for role rehearsal. Students gain skills as and knowledge about future college students through their DE experience. Gaining skills important for, knowledge about and experience as future college students adds to the students’ self-efficacy. Students who perceived
themselves as future college students used the words “prepared,” “comfortable” and “confident” to discuss how they felt after their DE classes and how those feelings helped them to feel like they would be successful future college students. Feeling “prepared,” “comfortable” and “confident” created a self-efficacy or belief that they could be future college students.

Weidman (1989) recognized the influence of academic and social contexts on students. In-line with Weidman, students in the study also identified academic areas of preparedness and social areas of preparedness that increased their self-efficacy. Students discussed general feelings of academic preparedness, specific skills related to academic preparedness, and social skills that led to their feeling more confident and comfortable in their roles as future college students. These feelings helped them develop self-perceptions as future college students.

*Academic Preparedness.* Thirty-eight students talked about feeling prepared because of their experience in DE. Whether they took the DE classes concurrently in the high school, on a college campus, or online through the college, their comments ranged from general feelings of preparedness to specific skills. Their discussions of feeling prepared to be a future college student because of their DE experience contributed to their self-efficacy as demonstrated by their following comments:

Once I was in the [DE] class I was like, ‘Oh, yeah. I can do this.’ It’s just another class, you know?

[Without DE] I probably would not have been as prepared as I needed to be. I probably would have had a more, I wouldn’t say grim, pessimistic outlook for the semester because in the beginning it was hard. I didn’t have my footing. Every day I went home and I had to get reassurance from my
family and friends that it was going to be okay. If I hadn’t taken those [DE] classes, I might have dropped out within the first few weeks.

I think taking the dual enrollment class helped me understand what college courses were going to be like compared to high school courses so I kind of knew what to expect when I went. So after that I was really excited to go to college.

Maybe this is just what I’ve notice among my friends and I – there were a few of us who took dual enrollment classes and pushed ourselves really hard in high school, and we’re all still in school, but the kids who didn’t, who kind of slacked off in high school and just took the easy route, haven’t been as successful. A couple of them have even dropped out of school now because they couldn’t handle it. I think if you take the bare minimum, you’re not going to be ready for what real school is like because this is real school.

Well, just the fact that I was in a college class made me feel really smart, especially compared to some of my peers that were struggling in their normal classes. I have to admit, the ego wasn’t very good for me, but I did feel really successful. I felt like I actually had a chance of becoming a doctor or a veterinarian or a dental hygienist, which I wanted to be for a while. But, it did make me feel like I really could succeed at it…Honestly, I think the dual credit classes helped out SO much. They really did make me think I could handle college, especially after most of my family decided college was too hard.

**Feelings of Confidence.** In addition to feeling academically prepared for college, students discussed feeling confident in their ability to be a successful college student.

These feelings of confidence demonstrate the self-efficacy they gained through the DE experience.

[Without DE] I don’t think I would have been as confident being fulltime because I wouldn’t have known what was expected from me in classes, how hard they would be, or the format for doing things in college. I don’t know if I would have been as sure as what I wanted to go towards. And, I don’t think I’d be as comfortable because I wouldn’t know where things are or how things are run. Me, as a person, I want to understand how to do things before I do them, so I think the dual enrolment classes helped condition me for what I’m doing now.
I would say that I had learned how college works, how to manage my time a little bit better than you normally would in high school because in high school they tend to break it down a little bit for you but in college they just give you a larger assignment, more projects, and they don’t break it down into steps that are day-by-day. They just give you a due date, and you have to learn to manage your time. And that definitely helped when I went to college because there were due dates and papers and assignments that were due a few days out and they didn’t break it down so I definitely learned to manage my time in that area. And, it also gave me more of an understanding of how college is – you have different teachers and they teach different subjects…they do that in high school too but it’s just a little bit different, so I wasn’t as nervous to go to college because I had already experienced it.

I felt like I had already had a notch under my belt because I had already gotten that headstart. I just felt really confident about going to college, you know, having the drive to go and get it done.

I felt like I am finally starting to understand this; I’ve got a good feeling from this [DE class]. I wasn’t sure if I was going to start out in college right out of high school and that was kind of like, ‘Yeah, I think I’m ready. I’m ready to start right into college after high school.’

*Feelings of Being Comfortable.* Besides feeling confident, students expressed feelings of being comfortable as a future college student. Being comfortable is a signal of the self-efficacy students gained through their DE courses.

I guess I just felt more comfortable and not so overwhelmed because I knew what I was getting into… also it just kind of helped me get a feel for what the expectations were. The first two classes I took, I got C’s, and I’ve had A’s ever since. So, I think it did help me get a feel. It was like a crash course, you know? See what was expected.

I guess since I started when I was 16, I feel more comfortable with the campus and if I need something where to go for it. Now that I’m full-time, or even when I was doing dual enrolment full-time, those 11 credits, I used the college a lot more, staying here during the day to do my homework instead of going home after classes.
Specific Skills. In addition to feeling academically prepared in general, students discussed specific skills they learned in their DE classes that they believed would be beneficial as a future college student. All students reported gaining skills. Even those students who reported not perceiving themselves as future college students after completing their DE courses, those who failed their DE courses, and those who chose not to enroll in college said they gained beneficial skills through the experience. One student who chose to work instead of attend college said:

It [DE] prepared me for my job. It prepared me for being held accountable for everything. Being held accountable for coming, not coming, being on time. In college, if you flunk out, you flunk out. In high school, they’ll beg and plead, you know? But, college isn’t like that, and life isn’t like that. If you don’t show up to work, then, you know what I mean? You don’t get paid.

Specific skills listed by the students included academic and social skills. Academic skills included notetaking, studying, reading, writing, managing time, prioritizing tasks, doing homework, thinking critically, paying attention to details, meeting deadlines, being independent, submitting work online, and taking tests. Social skills included communicating with instructors and seeking help. The student quotations below demonstrate how learning those skills increased their self-efficacy and role acceptance as future college students:

I learned how to take notes a little better in both those [DE] classes. That can really help you out, if you can understand and write out your material pretty quick. I mean, other than that, I think I would have been alright because, you know, they [high school teachers] do do a good job trying to prepare you for the next level. But, those classes [DE] did do a little bit better; I think they might have just because of the critical thinking and all of the other stuff you had to learn and remember and try to get down.
[I learned] how to manage your time and picking up the material that’s more important versus the material that’s just sort of more of fluff. Paying attention in class. How to be a college student, how to think quicker and get your material down so you’ll understand and know what you need to do come test time.

First, I learned D2L, which was a big thing. You know, learning how to navigate that and having help. I think time management and learning about deadlines. Because deadlines in high school aren’t as obvious, you know, because in college you have a midnight deadline and you do it. Whereas in high school, there’s more leeway. So I think I learned more time management and organizational skills.

In high school I never really had to study very much for tests. I kind of just went and aced them. I never really had to study. Taking a college course dual enrollment, I figured out I had to study. So, I developed a lot of study skills that I’ve now used this semester being an actual full-time college student. So that helped me to learn those before I actually got to college.

Social Preparedness. In addition to general academic preparedness and specific skills, students discussed the social preparedness they felt they gained from their DE experience that would help them be future college students. Weidman (1989) included the social context of student socialization in his model of undergraduate socialization. Not all students discussed social aspects, however, but because the study used semi-structured interviews and followed the constructivist approach to grounded theory espoused by Charmaz (2014), students talked about issues most salient for them. Perhaps for students who were shy or who were concerned about the social aspects of attending college, social preparedness resonated more loudly for them than for other students. Following are some student quotations showing the connection they felt existed between their social preparedness and their self-efficacy and role acquisition as future college students:
I did feel more confident because honestly I was nervous. I really wasn’t much of a social person so it was really nerve-wracking at first. So, taking that class, it was a little bit better...I have Asperger’s Syndrome, so I’m also autistic, so it’s like, you know, I’m kind of glad I met the people who seemed to have a little bit of a struggle. There was one person who was on the electric scooter, and I was like, ‘Oh, my God. I’m not the only disabled person in this school!’ I also found out more about people with disabilities who want to go to college, so it made me feel a little bit more confident and open minded.

I think personally I would have been slightly more intimidated [without having taken a DE course]. I’m not a very extroverted person as it is. I’m kind of shy. In my classes, I don’t really speak up a lot. I like to listen to what people are saying. In my senior year especially I probably would have been intimidated by everybody, felt kind of like the little kid. I don’t know if that would have affected my grades in my classes at all. I try to do well in my classes regardless of the situation or how I’m feeling, but I know for other people that feeling intimidated could seriously affect how well they did in the classes.

I would have been terrified [without DE]. Without having any experience whatsoever going down to [college], I would have been scared and nervous because I would have had no idea what to expect. I wouldn’t have known if the people would be nice or friendly, or how easy it would have been to make friends and because some college students I had heard would go to class and they’d take their class and get done and they didn’t really know anybody in the class, and then other people would get to know the people in their class, so I didn’t really know how that worked. But after coming here, I kind of knew how that worked, that you’d go to class and some students you would get to know better than others. So whenever I went down there [to college], I had a better idea of well, you’re going to meet people in your class but you’re not going to get as close to them as you did when you were in high school because you’re not going to see them in every single class because your students change from class to class.

I’m definitely more studious now, and a lot more social. I’m willing to make friends with someone I don’t know to make a study group, so we can help each other understand things. And I’ve noticed I’ve done that a lot this semester with the classes I’ve been taking.

Feelings of Autonomy Influenced Students’ Perceptions. Just as feeling prepared academically, learning specific skills, and becoming more socially prepared influenced
students’ self-perceptions as future college students, so did gaining experience being autonomous. Students used such words as “independent,” “freedom,” “responsible,” “mature,” and “accountable” to describe what socialization theorists call “autonomy” (Simpkins et al., 2015). Feeling autonomous emerged from the data as a key component of students’ socialization and was included in their concepts of college students in general and of themselves as future college students after their DE classes. Creating opportunities for more autonomy for DE students is discussed in more detail in Chapter 5. The following comments from students demonstrate this connection between autonomy and their perceptions:

It [DE] was definitely a lot more independent than a high school class was. You had to do a lot more work yourself. So, it definitely, from what I’ve heard from other kids who went to college, it definitely prepared them.

I learned a lot more about responsibility. Just knowing you have work you have to do, so that’s always on the back of your mind. And, I learned different studying techniques that are more helpful than others. I think I learned a lot more confidence – not having to go in and ask questions all of the time, kind of finding out stuff on your own.

I became more responsible…I feel like I have matured more as well. Obviously I’ve matured with age, but those [DE] classes really got me into the college mindset that you need to be here. You can’t half be here. You can’t go to college half-assed. You have to be all in.

They [DE classes] help you realize you’re going to have to be more independent and spend more of your time outside of the classroom. I just have to donate more of my time, my personal time, to studying because that’s what’s helping better me. It may not be fun, but if I want to graduate from college, I’m going to have to learn to manage my time and sacrifice it.

**DE as a Transition to College.** One strong reoccurring theme in students’ discussions of their perceptions of themselves as future college students through the DE
experience was the idea that the DE classes were a “transition” to college. Nineteen students made references to their DE experience as a transition. Even though students in DE classes were enrolled as college students while in high school and they were doing college-level work, many of the students did not view themselves as college students yet, as evidenced by the fact that only five students said they saw themselves as college students during their DE classes. Another three were unsure. More students (15) said they still felt like high school students, and 13 said they felt like someone “in-between” or “both” a college student and a high school student. The theme of DE as being a transition was expressed by students taking classes concurrently in the high school, online through the college, and on the college campus. Students said they did not feel like they were college students while in their DE classes because of their younger age, they were still taking other classes as part of a high school curriculum, and they had not graduated from high school yet. Other students recognized that living at home or knowing their instructors in the high school acted as differentiators between themselves and their perceptions of full-time college students and prevented them from seeing themselves as current college students while in their DE courses because they knew their classes and experiences in DE differed from college. Students said they did not feel like actual college students until they graduated from high school, enrolled as full-time college students, began to register for college-only classes, met with their advisors to plan their schedules, or began to work while attending college.

The majority of students in the study though, 87%, did see themselves as future college students, emphasis on the “future,” reinforcing the concept of DE as a
transitionary experience. Some students used the word “transition” directly, while other students’ comments contained ideas of a transition, such as “half a foot” in college. One student discussed learning to navigate college by watching her mother go through the registration process for her DE classes and then beginning to assume those responsibilities herself as she became a full-time college student. Another student made similar comments about learning through her counselor. As she said, “It was nice to have my counselor be able to kind of speak for me and represent for me because I wasn’t really able to, and learn through her how to do it.” Some of the other students’ comments regarding the DE experience as a transition are as follows:

I actually got a little peek into college. With the [DE] class in high school, it was the perfect little window into college. It was like, ‘This is what it’s like.’

[Without DE] I kind of feel like I would be walking into [college] not knowing what was going to happen. And this way, I got a little bit of a heads-up on what college is going to be like.

Getting like half a foot in through dual credit really helped when I actually became a full-time college student this last fall. I felt like my first classes weren’t really my first classes.

First of all, my friends were in it also and my counselor was there to help; whereas, sometimes when you go to college your first year, you have no one to help you or show you, or at least you feel that way. So, I think it better prepared me for college as a whole.

In dual enrollment it’s not, like, it’s a lot different than college classes but it’s ten times different than high school classes ‘cuz, like, my high school classes were super laid back, not much work, even though I thought it was a lot of work. My dual enrollment classes were a lot of work, but I knew that it was for college. But, as soon as I got here it’s even more different. It’s a little more work, and you’ve got to, you’ve always got to come.
For me, it was kind of like a little tease because you’re like kind of in college but you’re not really in college yet and you’re kind of a college student but you’re not really yet, and you just kind of want to be.

For the [class] and the [class], it was kind of on the border of a high school class and a college class. I think it was a good transition from a high school class to a college class, but you saw aspects of both.

There was a lot of change going from high school to dual credit and dual credit to college. Like, even the classes that I had taken really prepared me for the classes I’m currently in or the classes I took last semester. It was nice to get the transition.

It [DE] was definitely great preparation for going to college because it is not as strenuous as going to a college because it’s not like you are moving away or going out on your own. You still have your family with you, so not everything is uprooted and totally different. So, it’s a very good transition area in which you can start taking classes and find out what they are like but without having to leave your house, leave your family, leave your state, whatever you happen to be doing.

I would definitely encourage someone to take at least one [DE] class because it gives them perspective on how a college class might be even though I’d say it’s a little bit easier than a full college class because you do develop skills that you need in college, like the notetaking and planning and knowing that you have to come to class, and just like that self-motivation.

**DE as Preparation for the Military.** In addition to DE acting as a transitionary space for students to move from high school to college, this study found an unexpected connection between students planning to enter the military and DE. Six (15%) of the 40 students in the study enlisted in the military after their high school graduations, and all six planned to pursue a postsecondary education either while they were in the military or after they served. Some of the students who joined the military specifically chose to take a DE course because the subject matter related to their military plans: one student took a criminal justice course because he planned to become a military police member, another
took emergency medical courses because he planned to be a military police officer as well, and another student enrolled in math because he wanted to become an engineer in the military. In addition to being interested in the subjects, students also commented on the military’s financial educational benefits and saw DE and then the military as a transition to college. As one student explained:

I mean, I do want to get a degree in criminal justice. I just the opportunity I felt was better here [in the military rather than in college]. So, I joined the army, the military police actually. And, I plan on taking advantage of the educational opportunities through that afterwards. It was just at the time [paused]. I don’t come from a lot of money or anything like that [paused], so I don’t know, the opportunity was the best.

Other military-bound students said they enrolled in DE classes to get a jumpstart on their degrees because they planned to go to college either while in the military or afterwards:

Already I’d signed up with the military; I was just planning on taking college in the future. I just wanted to get those [classes] out of the way just so I could go find a major once I found one that I liked.

At the time I was kind of like, I wanted to join the Air Force to travel more, instead of going to college like it seems everyone else does, you know? Everyone’s either a Griz or a Bobcat. So that’s why I decided to sign up for the Air Force. I’ll see if I like it. If I do, I’ll stay with it. I figured I could do college while I was in. So that way I could do college while I worked. Say I go somewhere cool, then I could do college and work.

The students who enlisted in the military also commented that the responsibility and work ethic they felt they learned through their DE courses served them well in the military. As one student currently in the military who participated in DE on the college campus said:

I think being in the college environment just kind of got me set up and kind of got me down the road, what it would be like to be in college, to be in a college environment. It also helped me here in the military too just ‘cuz the
amount of studying you need to do kind of prepares you for whatever you need to take care of.

Summary for RQ 1: How Does the DE Experience Influence the Socialization of High School Students as Future College Students?

To summarize the findings related to RQ1, “How does the DE experience influence the socialization of high school students as future college students?,” DE coursework influences most students’ concepts of college students in general and of themselves as future college students. In both instances, the majority of those changes in perceptions were positive as students learned more about being a college student by taking DE classes. Students said they gained information about college students from family members, teachers/counselors, movies, and older friends who had gone to college. The students’ DE coursework, instructors, environment, and classmates have the greatest effect on the students’ perceptions. Students’ own perceptions of themselves as future college students stem greatly from their own self-efficacy, which they tend to determine based on their ability to do the academic coursework. Students who said their concepts of college students did not change through the DE experience tended to feel they had a strong understanding of college students in general and of themselves as future college students pre-DE based on their previous academic performance. In most cases, students’ perceptions of themselves as future college students matched their college-going behavior after high school graduation: students who felt they were future college students attended college after graduation or planned to attend college in the future. Of special note, however, were the findings for students who did not pass their DE classes or who did not perceive themselves as future college students after their DE courses. Of the three
students who did not pass at least one of their DE classes, two did not enroll in college after graduation, and the one who did enroll withdrew during her first semester and does not plan to return to college. Additionally, four of the five students who did not see themselves as future college students do not plan to attend college in the future, leaving only one student in that group pursuing a college degree. Also of special note is the change in self-perception for nine of the 13 students who did not perceive themselves as future college students before they took a DE course and did so after taking a DE class. All nine either subsequently enrolled in college or plan to in the future. One of the nine students has since withdrawn from college and plans to work. The students who did report that they perceived themselves as future college students after taking DE classes discussed feeling more “prepared,” “confident” and “comfortable” about college, both academically and socially. They also identified a variety of specific skills they felt they learned in their DE classes that would help them be successful future college students. Emergent themes included the development of self-efficacy, the importance of autonomy, and DE as a “transition” from high school to college and to the military.

Findings for Research Question 2: What Aspects of the DE Experience Influence the Socialization of High School Students as Future College Students?

Maccoby (2015) defines socialization as the “processes whereby naïve individuals are taught the skills, behavior patterns, values, and motivations needed for competent functioning in the culture…” (p. 3). In order to address RQ2, “What aspects of the DE experience influence the socialization of high school students as future college students?,” I used that definition to look for factors affecting skills, behaviors, values and
motivations that influenced the perceptions of students in DE courses in regards to both college students in general and of themselves as future college students. I also examined the socialization process for influencing factors before the students took DE classes, while they were taking DE classes, and after they completed their DE coursework. Before students enrolled in a DE course, they said their concepts of college students came from family members, teachers/counselors, older friends who had already gone to college, and movies. After students engaged in DE courses, they identified coursework, teachers, environment, and classmates, as shown previously in Table 4.6, as being the biggest influencers of their perceptions. These findings have been discussed in previous sections as they pertained to specific groups of students, such as students who perceived themselves as future college students after DE classes and students who did not perceive themselves as future college students after DE courses. Some of these same factors emerged from the data, as allowed by Charmaz (2014), again when analyzing the data for RQ2. For RQ2, four aspects of socialization acted as initial bins for analysis as supported by Glaser and Strauss (Creswell, 2012): skills, behaviors, values, and motivations. Therefore, some cross-over between the findings for RQ1 and RQ2 exist, but in this section, in discussing the findings for RQ2, these elements are addressed as structural components themselves rather than as aspects that shaped the meaning of the DE experience for students as in RQ1.
Skills

Learning skills is part of the socialization process (Maccoby, 2015) and part of role acquisition (Thornton & Nardi, 1975). Students identified a variety of skills they learned through DE which could be categorized as beneficial in “academic” or “social” contexts, as included in Weidman’s (1989) socialization theory. Students discussed these skills as being necessary to be successful future college students and reported learning them from two sources: teachers and other students. The students discussed efforts made by their concurrent DE teachers to explicitly teach skills such as notetaking, study skills, writing, and test-taking strategies. Students reported concurrent teachers giving advice and telling students what college would be like in order to prepare them for that next step in their education – college. For the students taking DE classes online or on the college campus, students recognized that a few teachers directly taught some skills, such as time management through the Becoming a Successful College Student course, but students mentioned learning skills from other students more than did students in concurrent classes. As exhibited in Table 4.13 below, study skills were by far the most referenced skills students said they learned through their DE experience, with 19 references. Communicating with faculty was second with 12 references. Attending class, being on time to class, managing stress, calculator skills, and library skills each received one reference.
Table 4.13. Skills Students Identified as Learning through DE

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<tr>
<th>Skill</th>
<th># of Student References</th>
<th>Type of Skill</th>
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<th># of Student References</th>
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Below are some of the students’ comments regarding the skills they reported learning through DE, organized by the source of the skill: teachers or classmates.

**Teachers as a Source of Learning Academic Skills.** Students mostly recognized academic skills they learned from their DE instructors. Some examples of the students’ responses are as follows:

They [the DE teachers] said in the classes that they [the tests] were set up to challenge you, for you to fail, for you to learn from, and I learned a lot of test-taking skills. I learned how to decipher which is the best answer, not just the answer that looks alright. *(on the college campus)*

I’d say my notetaking skills and calculator skills. [The DE instructor] spent hours, class periods, going over calculator use, and I felt it really helped in college now because they expect you to know the calculator already if you’re in that high of a math class. *(concurrent)*

[The DE instructor] would try to pass on good study habits, just kind of give us tips and ideas about, ‘If you’re going to be in college, this is what’s really
going to help you with this.’ He tried to find something that each of the
students struggled with and tried to give each of them enough feedback to
improve that effectively, not just tell us we were doing it wrong, but how
we were doing it wrong and how we could fix it. *(concurrent)*

**Teachers as a Source of Learning Social Skills.** In addition to specific academic
skills, students discussed learning soft skills too, such as communicating with instructors
and meeting deadlines:

My [class] teacher – he was pretty good about explaining how things were
going to play into college…And, he really stressed being able to
communicate with your professors. *(concurrent)*

I guess in our Becoming a Successful Student class [the teacher] mentioned
how college classes develop soft skills that you need. I would agree with
that. It did teach you to be on time to class, have a good attitude, to submit
assignments, you know, all of those different skills you need. *(on the college
campus)*

**Classmates/Other Students.** In addition to learning skills from teachers, students
also learned from classmates. The instruction from classmates, however, was not as
explicit as that from instructors. Students reported learning skills from students in a more
informal manner:

I feel some of those skills are a little bit of studying skills, like what you can
do in your free time. You know, you have a big exam coming up, what could
you do? Even if you have the biggest free time, maybe brush up on some of
the studying. It did help with some of the skills. I had fun, you know, talking
with others who may have different ways of studying. *(multiple modes)*

**Behaviors**

Just as the students said they learned the skills needed to be a college student from
teachers and other students, they identified learning the behaviors of college students
primarily from their teachers and other students too. Before they took DE classes, those students who had a concept of college students identified their family members, teachers/counselors, movies, and older friends who had gone to college already as sources of information upon which they based their concepts. However, upon enrolling in DE courses, teachers and classmates became the primary influencers and sources of information. Students learned the behaviors of college students by rising to meet the teachers’ expectations, interacting with the teachers, and observing and interacting with other students. They also learned behaviors associated with the environment they were in, such as participating in study groups or going to the Academic Success Center (tutoring center) for help. The behaviors students learned centered around becoming more independent learners, but asking for help when needed. These learned behaviors coincided with the students’ perceptions of autonomy, which they incorporated into their concepts of college students and which they recognized as influencing their self-perceptions as future college students. Examples of their comments follow:

[The DE teacher] would teach us; he would give us all of the information we needed, but if someone asked him a question that was redundant or unnecessary, he would just tell them to go look through their notes or look in their book if they needed information. (concurrent)

Before [DE], I would just sort of throw it down on a piece of paper and it would be fine because if I needed help I would just go to my teachers. But after my [DE] teachers told me that if I needed help I needed to go to my notes or the book, I started taking notes a lot more intently because I found out that most of the time what the teacher tells you is going to be on the exam instead of what’s in the book. So, I learned to take notes really well. And, I found that if I take notes and then go back and take more notes of it as I thought later or expand on my notes, it helped a lot. (concurrent)

With the Academic Success Center, I had learned how that worked and if that worked for me, and so I found whenever I was doing the Academic
Success Center it was better if I went straight to the teacher rather than going through the Success Center, so then when I went down to college I figured it would be along the same lines, and so I would just go straight to the teacher and ask the questions. *(on the college campus)*

So for math last semester, I met with my teacher after class or before class. She showed up relatively early and she stayed after to where we could all ask questions. And now for my anatomy and physiology class I’m taking this semester, I go to open lab almost every day, and there are other teachers in there that you can ask other questions to, but even if [the instructor] is in his office for his office hours, we can go in there and ask him questions, and he’s completely open to taking his time and telling us what we need and figuring stuff out. *(on the college campus)*

I have used classmates as study groups. I go to the Academic Success Center; just about every day I’m usually there. Sometimes just to independent study, sometimes I get help. *(on the college campus)*

**Values**

Socialization theory identifies family and religious leaders as the main sources of learning values (Maccoby, 2015), but as found in this study, in an educational setting the sources shift to teachers and classmates (Wentzel, 2015). The students in this study did refer to family as teaching values, such as being hard working, before they took DE classes, but after the DE courses, the students discussed other classmates as the source of learning values, such as wanting to learn, enjoying challenge, being hard working, and having goals, which they associated with being college students and incorporated into their self-perceptions as future college students. Turning to classmates as sources for learning values is also in accordance with socialization theory that points to the growing importance of peer influence during adolescence (Simpkins et al., 2015). Thornton and Nardi (1975) included learning the values associated with a role as part of the formal stage of role acquisition. Students seemed to learn about the values of their classmates by
observing them and interacting with them informally more so than any explicit instruction from the classmates. As mentioned previously, students who participated in DE made more references to their classmates than students who completed their DE courses concurrently in the high school, but both groups of students acknowledged the influence of their classmates on their values.

It’s really nice to be in a class with the kids who don’t take school as a joke…So, it’s really cool to be in a classroom with students who are going to challenge themselves and have a respect for the teacher as much as you do. And being in that environment where everyone wants to challenge themselves and wants to learn really helps a lot. (concurrent)

A lot of things I’ve kind of picked up on in my classes is a lot of how they [other students] live their lives and what they want to do is based on their personal experiences, and some of them talk to me about that and stuff and it gives me more of a perspective on things. (on the college campus)

Kind of being with an older group of people, it was definitely a little different because everyone just seemed a lot more mature. They just seem like more into what they’re doing. (on the college campus)

People get more serious, and people actually want to learn when they come here [college]. I don’t know…I just feel like that throughout high school a lot of the people that were my peers were disengaged and didn’t want to do much. (on the college campus)

These people [classmates], I mean, they don’t live with their parents anymore. They have their own families. It’s just more grown up. It just seems more like oriented towards what they want to do in their future. (on the college campus)

**Motivations**

Students in the study did not seem to acquire motivations from others. Examining motivations students may gain from those with whom they interact coincides with Maccoby’s (2015) definition of socialization; motivations is the fourth category in his
definition. Additionally, learning the motivations of a particular group acts as part of the formal stage of role acquisition (Thornton & Nardi, 1975). However, students in this study only discussed motivations as they pertained to themselves. They did not reference adopting motivations from their instructors, their classmates, or anyone else. They did acknowledge that their classmates were goal-oriented, but not specifically what those goals were or that they adopted that trait themselves from others. The students in the study focused on their own motivations for attending college. The students in the study identified personal reasons for wanting to become a future college student. Most, but not all, of their motivations seemed to stem from their family backgrounds, either to continue family patterns or to break family patterns as demonstrated by the following comments:

I went to Job Corp and I thought it was the greatest thing in the world because you got paid for it along with all of this other stuff – no, everything I thought was awesome about Job Corp changed. After about five months of Job Corp, of hell, I said, ‘No, I’d rather go back; I’d rather be a college student because this sucks.’

I have a lot of family in healthcare. My uncle’s been an oncology RN for like 30 plus years…I’ve always looked at the healthcare field… I knew I wanted to go to college. I knew a college degree would help me in life.

I did plan to go to college. I’ve always wanted to go to college. Both my parents went to college. My mom went to UM. My dad went to MSU.

My older sisters never went to college, just barely passed high school. So, I kind of wanted to prove [my family] wrong and show that I could get a successful career and maybe bring our family out of its debt by going to college and getting a nice job.

My mom is currently unemployed, and my dad is a journeyman plumber. And he works really hard. And that’s kind of another thing that pushed me into going to college. I definitely don’t want to work that hard and get paid that little for it. It’s not good. I’m tired of it.
I know there’s a statistic that people that are the offspring of people who go to college are more likely to go to college…I’ll start the line of going to college.

**Perception of Self as a Future College Student as an Influencing Aspect of DE**

Although most of this section for RQ2 has focused on the skills, behaviors, values and motivations acquired by students as part of the socialization process, an important influencing aspect of the socialization influence of DE is the student’s perception of himself or herself as a future college student. Family, teachers, and classmates not only influence how students perceive college students in general, but also how students perceive themselves as future college students. Students whose concepts of college students matched their perceptions of themselves as future college students before taking a DE class were less influenced by the factors of the DE experience, as evidenced by their responses that they did not experience a change in perception and felt like future college students both before and after their DE courses. Students who did not have a firm concept of college students before taking a DE course, however, were more influenced by the DE experience. As students experienced positive interactions with teachers and other students, and if they were comfortable in the DE environment – whether in the high school, online, or on the college campus – they began to adopt the identity of a future college student and perceived themselves as future college students. However, students who had a negative experience with an instructor or were not comfortable in the DE class were likely to not perceive themselves as a future college student after taking a DE class.

How students perceived their ability to complete the DE or college-level coursework also affected the students’ socialization as future college students. Students
who did not pass at least one of their DE courses were less likely to see themselves as future college students. Two of the three students who did not pass at least one of their DE classes did not see themselves as future college students. The third student said he did see himself as a future college student, but he enlisted in the military instead of enrolling in college.

As presented previously, many of the students discussed their perceptions of themselves as future college students in terms of their academic performance, including grades, being “smart,” and taking “hard classes.” Once they attempted the coursework and found that it was “doable,” that they could complete the work, they said they gained confidence and perceived themselves as future college students.

Summary for RQ2: What Aspects of the DE Experience Influence the Socialization of High School Students as Future College Students?

The findings for RQ2, “What aspects of the DE experience influence the socialization of high school students as future college students?,” differ depending on the stage of the DE experience. Based on the findings for RQ1, before students took a DE course, they identified family members, teachers/counselors, older friends who had already attended college, and movies as affecting their concepts of college students. However, the factors shifted to the coursework, teachers, environment, and classmates after students took a DE course. When examining the skills, behaviors, values and motivations students acquire through the DE experience as part of the socialization process as defined by Maccoby (2015), teachers and classmates remained prominent influencers. Teachers and classmates played major roles in students acquiring or
understanding the skills and behaviors of college students. Other students were the primary source of gathering information about the values of college students, while the students’ understanding of the motivation of college students was more grounded in their own personal reasons for attending college. Those reasons were individualized and tended to include a desire to either follow family patterns or break family patterns.

Findings for Research Question 3: How Does the DE Delivery Mode Shape Students' Socialization as Future College Students?

Because students can take their DE classes concurrently in the high school, on the college campus, or online through the college, the third research question for this study asked, “How does the delivery mode shape students’ socialization as future college students?” The question is especially relevant in this grounded theory study because “environment” was identified by the students as one of four factors affecting their concepts of college students and of themselves as future college students after they took a DE course. The delivery mode was one aspect of what they considered to be the environment. Thus, the importance of the research question was reinforced in vivo from the data gathered from the students because they directly mentioned the environment, including specific references to the delivery modes by the students who took classes in more than one mode. The environment included the actual space and the atmosphere found in that location. For example, students commented on concurrent classrooms being in the high school with bells, regular high school students, busy hallways, morning announcements, and assemblies, as compared to DE courses online through the college or on the college campus that do not have any of those things. All of those things and the
lack thereof contributed to the atmosphere, along with the behaviors of classmates, behaviors of instructors, and expectations set by the instructors. The degree of autonomy was also recognized as contributing to the atmosphere of the classroom, with more autonomy being granted online through college and on the college campus than in a concurrent classroom. Four students in the study experienced DE classes in more than one modality, enabling those students to particularly address the differences and similarities they observed and the effects of the different modes on their perceptions and socialization as future college students.

As presented in Chapter 3, most of the students in the study completed their DE classes concurrently in the high school. As shown in Figure 4.13 below, 57% of students in this study enrolled in DE courses taught concurrently in the high schools, followed by 23% on the college campus, 10% online through the college, and 10% in a mix of modalities. In this section each of these modes will be examined specifically and compared to each other to determine their influence on students’ concepts of college students in general, on their self-perceptions as future college students, and on their perceptions of themselves as students while in the DE courses.
Figure 4.13. Student Participation in DE by Delivery Mode

<table>
<thead>
<tr>
<th>Mode</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concurrently in the High School</td>
<td>23, 57%</td>
</tr>
<tr>
<td>On the College Campus</td>
<td>9, 23%</td>
</tr>
<tr>
<td>Online through the College</td>
<td>4, 10%</td>
</tr>
<tr>
<td>Mix of Modes</td>
<td>4, 10%</td>
</tr>
</tbody>
</table>

Concept of College Students in General

The delivery mode could not affect students until after they had experienced it, so I analyzed students’ changes in their concepts of college students after they completed their DE courses. Like all students in the study, the students who had positive changes in their concepts of college students participated in their DE classes in a variety of modes, as shown in Figure 4.14 below. At 59%, the majority of the students who had positive perception changes about college students in general took the DE classes concurrently in the high school, but so did the majority of students in the study. The second largest group of students with positive perception changes about college students took DE courses on the college campus at 23%, with online having the lowest percentage at 4%.
Figure 4.14. Delivery Mode of the DE Courses for Students Whose Changes in their Concepts of College Students were Positive

In fact, students enrolled concurrently comprised the largest portion of each category of change in concepts of college students in general: positive, negative, and no change. However, as shown in Figure 4.15 below, the online delivery mode accounted for the smallest proportion of the students who had a positive change in their concepts of college students when compared to the other two modes. As will be discussed below, the influence of online DE courses on students’ socialization was less than the other two modes in all categories. Students said they did not feel a difference in those DE classes from other online high school classes they were taking, such as from the Montana Digital Academy. They also had less interactions with their online instructors and classmates than their face-to-face classes. This is significant in that instructors and classmates were identified as major influencers in the students’ socialization; therefore, the impact of the online courses was less than for other modes. Additionally, the online students generally completed their DE coursework on a computer in the high school library or computer lab,
especially reducing the online influence when compared to DE classes on a college campus. Eight of the 13 students (62%) who reported no change in their concepts of college students in general completed their DE courses concurrently in the high school. Two of the students with no change in perception took the classes online (15%), two completed the classes on the college campus (15%), and one student (8%) enrolled in a mix of online and on campus DE classes. It should be noted that only three students had a negative change in their concepts of college students from before DE to after DE, and the change in concept was unknown for two students.

Figure 4.15. Comparison of Change in Concepts of College Students in General by Delivery Mode

However, looking at the proportion of changes in concepts of college students in general within each delivery mode shows that only one (25%) of four students who took their classes online reported a positive change in their concepts of college students. Two
of the online students reported no change in their concepts, and one online student’s change in concept is unknown. The online delivery mode is the only format without a positive change in the concept of college students as the largest category within the mode. These results are summarized in Figure 4.16 below.

Figure 4.16. Comparison of Delivery Modes by Change in Concept of College Students in General

<table>
<thead>
<tr>
<th>Delivery Mode</th>
<th>Positive Change</th>
<th>No Change</th>
<th>Negative Change</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concurrent</td>
<td>57</td>
<td>35</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>On Campus</td>
<td>56</td>
<td>22</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Online</td>
<td>50</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Mix</td>
<td>75</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Self-Perceptions During Their DE Coursework

In addition to students’ concepts of college students in general, I examined students’ self-perceptions. I started the analysis of the influence of the delivery mode on students’ self-perceptions while they were in their DE courses to see if a progression towards role acquisition or socialization during the DE courses existed and if it differed by mode. During their DE courses, students reported feeling like either high school students, someone in-between high school and college, or as a current college student,
with most students saying they felt like high school students. However, none of the students who said they felt like high school students completed DE coursework on the college campus. Of all the students, 15 (38%) students said they felt like high school students, 13 (33%) like someone in-between or both high school and college, five (13%) like a current college student, four (10%) responses are unknown, and three (8%) students were unsure of their perceptions. Figure 4.17 below details the breakdown for each of those categories by delivery mode. No online students fell into the categories of feeling like a college student or unsure. Students in mixed modalities only reported feeling like students “in-between” high school and college. In addition, students who perceived themselves as a college student during their DE classes completed their DE coursework concurrently and on the college campus, but not in the online delivery mode. Therefore, students who took DE classes on the college campus were the most likely to
view themselves as current college students while in their DE classes, and students who took their DE classes online were least likely to see themselves as current college students during the DE courses. This early acquisition of the role of a college student could indicate a stronger socializing effect for students taking DE classes on a college campus than in the other delivery modes.

Looking at the data now by mode to see the percentage of the types of self-perceptions students experienced in each delivery mode while in DE classes, as shown in Figure 4.18 below, it is clear that all four students taking classes in more than one mode or a “mix” of modalities felt like students in-between high school and college, and, indeed,

Figure 4.18. Comparison of Delivery Modes by Self-perception During DE Courses

they were taking classes in the high school and from the college. Also, students who took classes online perceived themselves as high school students or students in-between college and high school, with one student’s response unknown. None of the online
students perceived themselves as current college students while in their DE classes. The online students usually worked on their DE courses in a computer lab, library or classroom at the high school. The majority of students in concurrent DE courses reported feeling like high school students. As discussed previously, students identified the coursework, teachers, classmates, and the environment as influencers on their socialization. Although the coursework would not necessarily change amongst the different modes, all of the other three influencing aspects would. For concurrent classes, even though the coursework should be college-level, the teachers and classmates are still high school teachers and classmates. Much of the environment was also still “high school,” with bells, high school rules, assemblies, posters on the walls, dedicated classrooms, prom, sports, etc. Therefore, students in concurrent DE courses were less likely to see themselves as current college students while in DE classes than students in DE classes on the college campus.

Students’ Perceptions of Themselves as Future College Students after Their DE Coursework

Like students’ concepts of college students in general, the effect of the delivery mode could not be explored until after students had engaged in the modes, so the analysis of students’ self-perceptions as future college students begins after they completed their DE coursework. For students who perceived themselves as future college students post-DE, the delivery mode did not seem to have an influence as the percentages of students in the category were similar to the delivery mode percentages in general for the study. After completing their DE coursework, 35 students (87%) said they perceived themselves as
future college students, four students (10%) said they did not, and one student (3%) was unsure. Exploring the data by looking at the post self-perceptions as future college students by delivery mode, Figure 4.19 below illustrates that the majority of those who perceived themselves as future college students after completing their coursework took

Figure 4.19. Comparison of Self-perceptions as Future College Students After DE Coursework by Delivery Mode

![Graph showing self-perception after DE coursework by delivery mode.](image)

their DE courses concurrently; however, the majority of students participating in this study completed their DE courses concurrently. Students without a self-perception as a future college student after their DE courses though split evenly amongst the four delivery modes. Perhaps this even split illustrates that factors other than the mode contributed to their lack of a self-perception as a future college student. For example, as described in the five vignettes previously presented in this chapter, the students did not perceive themselves as future college students for a variety of reasons – a disconnect
between a perception of themselves and of college students in general, a failure to successfully pass a DE course, negative encounters with faculty and classmates, and a desire to pursue other interests. The one student who was unsure if he perceived himself as a future college student after his DE coursework took the class on the college campus, did not intend to enroll in college before taking a DE course but took the class because his friends were in it, and still decided not to attend college after graduating from high school. None of these reasons had to do with the delivery mode.

From Figure 4.20 below, it is clear that the majority of all students in each delivery mode perceived themselves as future college students after completing their DE classes. As stated previously, 23 students (58%) took classes concurrently in their high schools, nine (23%) on the college campus, four (10%) online, and four (10%) in mixed modes. Therefore, the number of students being compared on the college campus, online, and in mixed modes is fairly small when compared to those taking courses concurrently.

Figure 4.20. Comparison of Delivery Modes by Self-perception as Future College Students After DE Coursework
The delivery mode does not seem to have as large of an influence on students’ self-perceptions as future college students as other factors, namely the coursework, teachers, classmates and other aspects of the environment besides the mode. As discussed previously, students based much of their self-perceptions as future college students on their ability to successfully complete the coursework. That was the number one influencer. The coursework is also the one common influencer shared by the modes. All modes should be delivering college-level coursework, and the students’ ability to complete the college-level coursework is independent of the mode. However, the other influencers besides the coursework – teachers, classmates, and environment – have a stronger influence on the college campus, followed by concurrently in the high school if autonomy and opportunities to develop self-efficacy are present.

Perceptions of Students in Multiple Delivery Modes

Four students took DE classes in multiple modes, and, therefore, they had the ability to compare the influence of the different modes on their concepts of college students in general, their perceptions of themselves while in their DE courses, and their self-perceptions as future college students. Two students took DE classes online and on the college campus. Neither said she saw herself as a college student during the experience. One student took classes concurrently and on the college campus. He said he did not see himself as a college student in his concurrent class; although, he did in his on-campus class. The fourth student took classes in all three formats: concurrently, online, and on the college campus. She discussed the differences and similarities between the modes and their influences on her self-perception as a current college student during the
DE experience and as a future college student after the DE courses. Of the four students, three perceived themselves as future college students after the DE experience, and one did not. The three who did perceive themselves as future college students did enroll in college after high school. The one who did not, did not enroll in college after graduating from high school. Each of the four students’ comparisons are presented below as cases.

**Case 1: Online and On-campus.** For one student in particular, the delivery mode did not influence her perception of herself as a future college student as much as her ability to complete the coursework in either the online or the college campus mode. She took her first classes on the college campus and then moved into an online course. She discovered she was capable of doing college-level work, a fact she was not sure of before. This student did not originally plan to attend college. As she said, "Well, I always had ideas of going to beauty school, and [paused] I just wanted to get out of town, to explore. I didn’t really care about furthering my education because I didn’t know what I wanted to be or do." The student intended to work after high school graduation but was persuaded to begin taking DE courses by her high school counselor.

The student said she gained confidence in her abilities as a college student in both her online and face-to-face classes. The student enrolled in one DE class on the college campus for two semesters in a row, and then took one online and two on campus in a third semester. Because so much of the first two courses were taught using the college's learning management system (LMS), even though they were face-to-face classes, she said there was not a lot of difference between those face-to-face classes on the college campus and taking the online class through the college in the third semester. She explained that
she had already learned to navigate the LMS by turning in papers in D2L and to be independent by checking the calendar for due dates. She did not see a difference in the influence the delivery mode had on her self-perception as a college student during her DE courses. Her confidence grew though as she moved from earning C's in her first two DE classes to A's thereafter.

However, when asked when she began to feel like a college student, she responded, "Probably the third semester I dual enrolled because that is the semester I graduated, so part of it I was just going to college. Then I guess I considered myself a college student." Like other students reported, she did not change from feeling like a high school student taking college classes to a college student until she graduated from high school. The student is currently enrolled at the college working on her Associate of Arts and contemplating plans to transfer to a four-year university.

Case 2: Online and On-campus. Unlike the previous case, the second student who took DE classes both online and on the college campus had unfavorable experiences in both modes that caused her to decide to not enroll in college. Like the previous student, this student took five DE classes. Four were online, however, with only one on the college campus. She took the one on campus and one online class her first semester as a DE student. As a junior in high school, she did not feel she fit in the on-campus class because she was younger than the other students. The only student she interacted with was another DE student from her high school. She said she enjoyed one of the online classes because it contained a variety of activities and was well organized. She felt two of the remaining online courses were okay but repetitive in their read-and-respond approach.
She did not pass the fourth online class because she stopped doing the work after she asked the instructor for help and was reportedly told she would not understand the assignment because she was still in high school. Because she was no longer doing the online classwork, she picked up more hours at work and subsequently decided that she did not need to attend college in order to make a living even though she had previously planned to attend college. Therefore, she did not enroll in college after her high school graduation. She said before the DE classes, she could see herself as a future college student and was often on campus because her artwork was part of several public school art shows displayed at the college. After her negative experiences in two of the five DE courses and a promotion at work, she no longer perceived herself as a future college student but as a strong, capable member of the workforce. She was very proud of her promotion to a supervisor position at a retail store at the age of 18. She no longer planned on attending college. She felt she could be successful in life without college.

**Case 3: Concurrent and On-campus.** The third student felt the on-campus DE class influenced his self-perception as a future college student more than the concurrent class specifically because of the difficulty of the tests in the class. He took one DE class concurrently and then one class on the college campus. He said he always planned on attending college and heard about the DE courses through a high school counselor. Even though he did see himself as a future college student before he took the DE courses, he said he felt the DE courses solidified that self-perception. He reported that both modes boosted his confidence in his ability to be a college student, but the on-campus course had a stronger influence. Like other students in this study, he based much of his self-
perception as a future college student on his ability to complete the college-level coursework. He acknowledged there was an increase in rigor from his other high school classes to the DE course, and then another increase in rigor from the concurrent DE class to the DE class on campus. The student discussed the difficulty of the testing in the DE class on the college campus in particular as compared to his concurrent DE class: “They said in the classes they [the tests] were set up to challenge you, for you to fail, for you to learn from.” He said the questions were more difficult than test questions in his concurrent DE class and that he was not used to major exams which accounted for much of the course grade. He said in his high school, students who had good attendance and good grades did not take final exams. He said having taken the DE course on the college campus and now regular college classes, he disagreed with that policy: “Last semester that hurt me a lot because I wasn’t really prepared for the finals, I guess, as I could have been.” The on-campus DE course also included skills-based tests in a healthcare field, which the student said he found stressful because students had to perform the skills in front of the instructors. In addition, the on-campus DE course included certification tests in the healthcare field. During the DE courses, he reported still feeling like a high school student in the concurrent class but more like a college student in the on-campus class as he saw he could do well in the course alongside college-only students. As he said, "I know especially with the [on-campus] class, going through it and saying, 'I’m doing decent; I’m actually doing kind of good,' I felt, 'Hey, I can do this. I’m actually going to be the [career]. I’m going to do this.’” He said, “As far as the [concurrent] class, it felt more like high school. It was, with the way [the instructor] taught it, harder, but it was in
the high school. It was more homey. It was tougher than other [high school] classes, and I surprisingly did really well in it. It was just [paused], I don’t know how to explain it really well.”

He also mentioned the atmosphere and structure as parts of the environment of the on-campus classes that affected his self-perception. He liked the freedom of the college campus and made a clear distinction between when he was at the high school as a high school student and when he came to the college campus as a college student for his DE class. The student did subsequently enroll in college and is on-track to complete his associate degree and transfer to a university to complete a bachelor's degree.

**Case 4: Concurrent, Online, and On-campus.** One student interviewed completed DE classes in all three delivery modes: concurrently in the high school, online through the college, and on the college campus. She said taking the concurrent classes did not affect her self-perception as a future college student because she did not feel an increase in rigor in the concurrent DE courses, and the environment was still in the high school with other high school students, bells, commotions in the hallway, sports, assemblies, etc. When comparing the concurrent classes to the online and on-campus DE classes, she said:

I think the expectations were a lot lower [in the concurrent class]. I mean, not a lot a lot lower, but I thought there was a noticeable difference, just for me though. I mean, I feel like my level works a little bit more higher, but I feel like some people definitely kind of got by with some lower level work. I felt like it was just every day in the morning, then there was the bells. That really bugged me. I didn’t like the bells. There were a lot of people in the hallways when the bells went off. There were just too many people. I felt weird...Like, there were the morning announcements and that took, like, forever, and then that just took a whole chunk of the morning. And then
people would get in trouble, or, like, it was just weird. Or there were assemblies, a lot of sports stuff... I felt everyone was distracted. And even if it was dual enrollment, I felt that some people were not taking it as seriously as they could have.

The student also commented on the pace and length of the concurrent classes. The concurrent classes she took in the high school lasted for the entire academic year instead of one semester as in college. When discussing the differences, she said the following:

It’s [concurrent classes] like the whole school year. Because I feel the semesters here [on campus] are really intense, but they’re short. It’s like, work, work, work, work and then you’re done. And it’s kind of, like, just a few months, but then at the high school level it’s just, like, it felt like it just kept going. I don’t know. And the tests seemed, like, a lot easier. I don’t know why. That could have just been the teachers. The tests were easier for me. The lab practical exams were a lot easier in high school than I’m experiencing now [in college].

Factors of the Delivery Mode Affecting Students’ Perceptions

Students who completed their DE classes concurrently in the high school and subsequently enrolled in college after high school graduation discussed two transitions – between high school and DE, and then DE and college. Students who completed their DE classes on the college campus and then enrolled in college after high school graduation discussed only one transition – from high school to college. Such a difference in students’ descriptions of the transitions calls into question the authenticity of the concurrent classes. Authenticity is a vital part of socialization and role acquisition (Karp, 2012).

Students’ identification of the factors affecting the influence of the delivery mode on their perceptions mirrored those they identified as affecting their perceptions in general. Students who discussed the delivery mode as a factor in their perceptions of themselves as a future college student referenced the rigor of the coursework, the
teachers’ expectations, classmates, and the physical space as having an effect on their perceptions. Coursework, teachers, classmates, and environment emerged from the data as the influencers of students’ perceptions of themselves as future college students regardless of mode. Although slightly different, students identified basically the same factors when discussing the modes. Each of these factors will be discussed below.

Coursework. Students who took classes concurrently and then subsequently enrolled in college acknowledged that the rigor increased from high school to DE and then from DE to college. As several students said:

In dual enrollment it’s not, like, it’s a lot different than college classes but it’s ten times different than high school classes ‘cuz, like, my high school classes were super laid back, not much work, even though I thought it was a lot of work. My dual enrollment classes were a lot of work, but I knew that it was for college. But, as soon as I got here it’s even more different.

Even though I was still in high school and it was still a dual enrolment course, I definitely didn’t need to study that much or as intense as I do now. I spend a lot more time hitting the books and doing my homework and all that now than I did in high school.

As a full-time college student? Um, more work. You have to think way more. You have to pay attention really hard in class because...in high school it's the whole idea of ‘no child left behind.’ In college it’s the idea of ‘you better understand it or you will get left behind, and if you need help come see me after or go to the tutoring center.’ See, in high school, I never had to use a tutor or anything, but the second I got into 151 math, I was like, ‘Tutor,’ all the time because that class is ridiculous.

Similar student comments regarding the rigor and differences between high school and DE and then DE and college can be found in the “DE as a Transition to College” section of this chapter.
Teachers’ Expectations. Most students recognized that many of the high school concurrent DE instructors tried to prepare students for college by raising the standards in their DE classes and fostering autonomy in the students. Making the students more responsible for their own learning and allowing more freedom in the class were the two qualities students associated with college-instructor behavior. As one student said, “The teacher of the dual credit math courses actually had to act more like a college professor than a high school math teacher, so I got some practice in there.” However, the concurrent students recognized there were differences between their concurrent DE and college teachers. These differences were related to the amount of autonomy granted to students and the level of responsibility placed on the students, as shown by the following student comments:

Well, the teachers who were teaching the dual enrollment classes, it was, I guess you could say they sort of held our hands a little bit for the first couple of weeks and a little while after, but they really helped us get a hold with any questions or concerns that we had. And that was really comforting. Not every college teacher is going to help you like they did. I feel like the teachers at the high school were much more attentive to the students.

…from the classes I did take, I guess it would just be the hands-on approach the teacher had. In college, the teachers aren’t really hands-on at all, but in high school you still have the teacher who’s there to work with you the whole time.

Some students, however, questioned why there was still a difference between their concurrent DE instructors’ expectations and those of college instructors when the DE courses were supposed to be taught as college-level classes. As one student said:

I feel like I definitely didn’t get that from my high school dual enrollment instructors. I mean, they definitely told us, they warned us that college was going to be a lot more. But that’s what they kept saying – that there’s going
to be a lot more expected in college. But if we’re in a college-level class, why isn’t it?

One student who took her DE classes online and at the college campus compared the college and high school DE instructors this way:

Definitely in the online and the face-to-face here at the college, I definitely felt more as a college student. Even on the online I felt like you had to be really responsible and it was up to you. Nobody was pushing you to do it at all...I feel like that’s something that they don’t do in high school because they, like, I don’t want to use the word baby, because it’s not baby, they just kind of like, it’s more guiding in high school.

Classmates. As stated previously, students in the concurrent classes discussed the positive effect they felt being in a DE class with other students who were interested in learning and wanted to be challenged as compared to regular high school classes. For example, two concurrent students said the following:

I would say I liked the atmosphere better just because I was with other people who wanted to learn, who wanted to be there, and weren’t just there because they had to take it. So, the atmosphere was definitely better.

It’s really cool to be in a classroom with students who are going to challenge themselves and have a respect for the teacher as much as you do. And being in that environment where everyone wants to challenge themselves and wants to learn really helps a lot.

Students taking classes on the college campus discussed the maturity and diversity of the other students, as demonstrated by the following comments:

It definitely shows the difference that it’s not high school anymore, but that you can keep learning, and it’s nice that there’s so much more variety versus in high school you still have everyone being like the same age and at the college it isn’t, and everyone has their own different schedule but they’re all there for the same thing.
I think it affected me positively because I think it showed me that stuff changes after high school and that people change (laughs). People get more serious, and people actually want to learn when they come here.

In both cases, in concurrent classes and on the college campus, DE students took on some of the traits of the other students – being responsible, mature, open-minded, goal-oriented, and focused – that they saw modeled in their classmates. Acquiring characteristics of a particular group of people is part of role acquisition (Thornton & Nardi, 1975); this is an example of that process occurring. The students added those characteristics to their concepts of college students in general and to their perceptions of themselves as future college students after their DE courses. However, students recognized a difference between their concurrent classmates and future college classmates. One student discussed what she felt would have been different had she taken DE classes on the college campus instead of concurrently in the high school. She described her feelings this way:

Because I was actually going here [on the college campus], I would have been seeing a college instructor, and there’s all kinds of different people in your classes, different ages too, which was kind of a shock to me when I first started going here [as a full-time college student] versus just the people you’ve been with since ninth grade in the high school.

Of the 23 students enrolled in concurrent classes in the high school, two students stated they felt not all of the students in the DE courses were taking the class seriously. Of the nine students who took DE classes on the college campus, one student expressed disappointment in some classmates’ lack of seriousness about school.

**Physical Space.** In addition to the instructors and classmates, students identified the physical space as having an impact on their perceptions. Still being in the high school
had a negative impact on concurrent students. They said it made them still feel more like high school students and prevented them from “getting the whole college experience.”

One student said she would like concurrent DE students to have the opportunity to go to the college campus:

Maybe just a visit to the college to see what the classrooms actually look like. I think that would help. I know we did it in middle school, but once you get to high school you sort of forget about that. So maybe just a visit to the college, sitting in on a class would help. Coming to the campus would have allowed me to know how the college was set out a little bit better instead of having to come and find my classes; I would have already known. I guess that’s the only thing it would have done better for me. Besides the face-to-face interaction with an actual college teacher here or professor.

After enrolling as a full-time college student, another student who took her classes concurrently in the high school found out that some DE students take their DE classes on the college campus. She said:

There’s a couple of Central [High School] kids in my psychology class, and I think that’s really great too to be able to go to a class and see what the college atmosphere is like. Because it is different than high school, and I think that might help too for something different to do, something the high schools could offer.

Students who did go to the college for their DE classes identified benefits of being on the college campus, such as becoming familiar with the college itself and college processes.

Two students expressed their thoughts as follows:

I hadn’t really gone to the Academic Success Center for dual enrollment, but as soon as I started into my college I think I felt okay to go into there more because I felt comfortable being here at the school and not getting lost.

I think because I had to go in for registration and stuff, I was already familiar with the building and where everything was. That was a big help. I knew a few people at the college already because of that, and they helped the transition be a lot easier because I had a connection with them previously. And, just knowing what to expect in a college course rather than just in a high school.
Another student who completed her DE classes on the college campus discussed the potential differences she might have experienced had she taken the DE classes in a different delivery mode than on the college campus:

It would have been definitely different because that was really my big concern with going to college was that it wasn’t going to be the same kind of atmosphere. So, being able to take the classes [in the high school or online], I would have gotten a better understanding of the classes themselves and how the classes worked and how challenging the classes were, but as for the bigger picture of the teachers and if you can go to them for help, how friendly and kind and interested they are in helping you, how much they want you to succeed, is definitely something I could only get while being on campus. And also with the students – interacting with the students. That’s something I could only get while being on the campus.

Summary for RQ3: How Does the Delivery Mode Shape Students’ Socialization as Future College Students?

In exploring RQ3, “How does the delivery mode shape students’ socialization as future college students?,” the data shows that students in all delivery modes experienced mostly positive changes in their concepts of college students. The online delivery mode had the largest percentage of students who said they felt no change in their concepts of college students after their DE courses; students taking classes on the college campus had the lowest percentage of students who said they experienced no change in their concepts of college students after their DE courses. Therefore, students who take DE classes on the college campus are more likely to experience changes in their concepts of college students than those who take their DE classes in the other two delivery modes, especially online.

As for students’ perceptions of themselves while in their DE courses, none of the students in online classes felt like current college students during their DE classes. All of
the students taking classes in multiple modes perceived themselves as someone in-between high school and college during their DE courses. The majority of students who completed classes concurrently felt like high school students during their DE courses. Students in DE classes on the college campus were evenly split between seeing themselves as college students and as students in-between, with no students seeing themselves as only high school students. Most of the students in every delivery mode perceived themselves as future college students after completing their DE coursework. The four students who did not were evenly split between the delivery modes. Students who completed their DE courses in more than one mode directly compared the different formats and said they felt more like college students in the on-campus classes than the concurrent or online courses. For three students, attending classes on the college campus was a positive influence, increasing both their confidence and comfortableness as a future college student. For the remaining student, the on-campus experience was not positive as she felt she did not fit in because she was younger than the other students and missed the instructor support of her high school classes. In general, however, the DE classes on the college campus has a larger influence on students’ self-perceptions as future college students than the other two delivery modes. Concurrent classes have a stronger socializing influence when they provide opportunities for self-efficacy and autonomy.

The students’ perceptions stemmed from the coursework, teacher expectations, classmates, and the physical space of each delivery mode. These elements combined to create the “environment” of the delivery mode. Students recognized that the concurrent DE course environment differed from their other high school classes, but that it was still
not the same as college. They discussed that the coursework was harder in college, instructors were less involved in college, classmates were more serious and mature, and that the college campus was more “free” and “open” than a high school. Students who took classes on the college campus mentioned that being on the campus made them more comfortable when they became full-time college students. Several students who took classes concurrently in the high school and then subsequently went to college said they wished their DE experience would have included time on the college campus to allay some of their concerns and help them feel more comfortable on the campus. The online delivery mode seems to have had less influence on students’ perceptions than the concurrent or on-campus modes.

Summary of Chapter Four: Results of the Study

I interviewed 40 students one year after they completed DE coursework through GFC MSU in AY2015-2016. The students participated in DE in a variety of delivery modes: concurrently in the high school, online through the college, and on the college campus. Through their experiences, most DE students gained a more positive concept of college students and stronger perceptions of themselves as future college students. Some students who did not see themselves as future college students or who were unsure of their self-perceptions as future college students before taking DE classes changed and reported perceiving themselves as future college students after completing their DE coursework. One student, however, experienced the opposite and lost her self-perception as a future college student after several negative events while in DE classes. While they
were taking their DE courses, few students perceived themselves as current college students. Many of the students taking their DE courses concurrently in the high school reported perceiving themselves as high school students during that time. Others stated they perceived themselves as students in-between or both high school and college students. Students identified coursework, teachers, environment, and classmates as factors contributing to their concepts of college students in general and their self-perceptions as future college students.

Students commented on feeling prepared for college academically and socially through their DE experience and feeling more “confident” and “comfortable” about attending college because of their DE courses. These ideas combined into an emergent theme of building self-efficacy through the DE experience.

Another emergent theme came from students’ acknowledgement of the role autonomy played in their concepts of college students in general and of their self-perceptions as future college students. They recognized that part of being a college student was being “responsible,” having “freedom,” and being “independent.” These attributes contribute to a feeling of autonomy.

Many students discussed their DE experience as a “transition” between high school and college. During their DE coursework, they began to learn the skills, behaviors, values and motivations of college students. Students recognized their instructors as the primary source of learning skills, followed by their classmates. Their classmates were also the source of learning the behaviors and values they identified with college students. The students’ motivations for enrolling in college though were more individual and
stemmed from their own experiences. Students who completed their DE classes concurrently in the high school and enrolled in college after high school discussed the transition from high school to DE and then from DE to college. Students who participated in DE courses taught on the college campus, however, talked about only one transition – from high school to college.

Finally, more students in all delivery modes of DE tended to perceive themselves as future college students after completing their DE coursework than before their DE classes. Differences between the modes existed, however. All students in multiple delivery modes felt like students in-between or both high school and college. Those students in multiple modes acknowledged that they perceived themselves to be more like college students in their online and on-campus DE classes than in their concurrent courses. Of the three delivery modes, online seemed to have the smallest effect on students’ perceptions. The differences in the modes were due to varying levels of autonomy, rigor, diversity in classmates, and the physical space itself. Students associated having more autonomy and being more responsible with being a college student. In general, on-campus DE classes had a greater socializing influence than the other two delivery modes, with the online delivery mode having the least impact on students’ perceptions.
CHAPTER FIVE

DISCUSSION OF THE FINDINGS OF THIS STUDY

Introduction

This study explored the socializing influence of DE on high school students as future college students. Most of the research conducted to date has focused on college success outcomes for DE students: college enrollment, college performance, and college persistence. This study, however, examined DE as an experience with the goal of creating a theoretical model to illustrate the socialization influence on students. Chapter 1 provided background information for the study, including a discussion of how DE fits in the context of other accelerated learning options and credit-based transition programs, and definitions for commonly used terms related to DE. In addition, Chapter 1 presented a theoretical framework that combined student development, socialization, and role acquisition theories, and a research framework using a grounded theory approach.

Chapter 2 presented a review of the related literature, including a history of DE and types of DE programs. The chapter also compared and contrasted existing studies on DE. In Chapter 3, I described the methodology of the study, including the research design and rationale, my researcher positionality, the context of the study, the population and sample, and the procedures for data collection and analysis. I reported the findings of the study in Chapter 4. This chapter provides an overview of the study, includes a summary of the methodology, explores the conclusions from the study and related literature, makes recommendations for future research, and presents implications for practice. In addition,
a proposed model based on existing theories and the findings from this study illustrating the socializing influence of DE on high school students as future college students will be presented in this chapter.

**Overview of the Study**

As stated previously, this study set out to explore the socializing influence participation in DE has on high school students as future college students. The problem of people not earning postsecondary credentials, despite the positive individual and societal benefits of furthering their education, underlies the study. Legislators and educators view DE as a way to increase postsecondary participation and completion because research has shown that former DE students attend and perform better in college than their non-DE peers. However, few studies have moved beyond measuring DE students’ subsequent college enrollment and performance; researchers have not examined the phenomenon itself, in particular the possible socializing influence it has on students, nor spoken with DE students themselves to add a qualitative richness to the conversation surrounding DE. Therefore, this study employed a qualitative grounded theory approach to explore three specific research questions:

RQ1: How does the DE experience influence the socialization of high school students as future college students?

RQ2: What aspects of the DE experience influence the socialization of high school students as future college students?
RQ3: How does the DE delivery mode shape students’ socialization as future college students?

To explore these questions, I asked students about their concepts of college students in general, their perceptions of themselves as future college students, and their perceptions of themselves while in their DE courses. Examining these three different areas enabled me to compare data before, during and after the DE experience to see if any changes in the concepts or perceptions occurred. If they did, I could then explore those shifts to determine if they were influenced by participation in DE.

This study built on research previously conducted, as discussed in Chapter 2. The related literature review specifically examined studies on DE outcomes, such as college aspirations and enrollment, academic performance and persistence in college, completion of a college credential, and students’ self-perceptions as future college students. In addition, Chapter 2 discussed DE-related research regarding student characteristics, both as confounding variables and as research topics themselves, as well as self-efficacy and motivation. Finally, the chapter included literature on socialization, role acquisition, and transitions related to DE.

The findings of this study are found in Chapter 4 and organized by the three research questions. This study clearly demonstrates that DE influences the socialization of students to become future college students. I used numerical data tables and charts, vignettes, and direct student quotations to triangulate the results. The students’ comments about their concepts of college students before and after their DE courses; their perceptions of themselves as future college students before and after their DE courses;
their perceptions of themselves during their DE courses; their behaviors after high school graduation; and their future plans align with multiple socialization theories. The students learned skills, behaviors, values and motivations associated with being successful college students, which influenced their concepts of college students in general and of themselves as future college students. They then either moved towards or away from adopting the role of future college student by enrolling in college or choosing another path.

This study is limited in several ways: by the experiences of students taking DE classes at GFC MSU in AY 2015-2016; by participating in DE classes from a small, rural two-year college; by the type of DE courses offered; by the delivery modes available; by my ability to gather and analyze data; and by the students’ ability to recall and express aspects of the DE experience. However, the findings may be applied to help further understanding of the DE experience’s socializing influence on students in similar contexts.

Summary of the Methodology

As described in more detail in Chapter 3, the methodology for this study combined Charmaz’s constructivist grounded theory design and Glaser and Strauss’ more structured systematic approach. A few predetermined categories for analysis were used, as espoused by Glaser and Strauss (Creswell, 2012), but themes and categories were allowed to emerge from the students’ construction of the meaning (Charmaz, 2014) behind the influences they felt shaped their socialization as future college students. I selected GFC MSU as the site for the study because historically it has had one of the
largest DE student populations in the state, behind only Flathead Valley Community College (A. Williams, personal communication, January 28, 2016). In addition, GFC MSU offers a wide variety of DE classes, from general education, to pre-health science, to trades courses. It also provides DE classes in all three delivery modes being studied: concurrently in the high school, online from the college, and on the college campus (Great Falls College, n.d.). The diversity of the courses and the delivery modes increased opportunities to compare experiences which Maxwell said “contributes to the interpretability of the results” (2013, p. 129).

The sample for the study consisted of 40 former DE students who took DE courses from GFC MSU in AY 2015-16 so that they were within one year of taking those classes when interviewed. The purposeful sampling meant to make the DE participation fresh in students’ minds when they were asked to reflect on their experiences and discuss DE’s influence on their skills, behaviors, values, motivations, and self-perceptions as future college students. Interviewing students after they completed their DE coursework also enabled me to examine their subsequent behavior after high school graduation – did they enroll in college or not. The 40 students in the study represented 41% of the 97 students who met the criteria. GFC MSU’s data analyst provided a list of possible participants. The students in the study fell into four categories:

1. Passed DE and enrolled in college (25)
2. Passed DE but did not enroll in college (12)
3. Did not pass DE and enrolled in college, but withdrew (1)
4. Did not pass DE and did not enroll in college (2)
I contacted all 97 of the possible participants first by telephone and then via email to invite them to participate in the study. I then conducted intensive hour-long interviews in person when possible or via telephone when a face-to-face interview was not possible with the 40 students who agreed to participate in the study. One student’s interview was conducted via email. During the interview, I used a semi-structured set of questions to gather data from the students. Follow-up interviews were conducted over the telephone or through emails and texts. The interviews were recorded and transcribed.

The data was then analyzed using the constant comparative method supported by Bryant and Charmaz (2007). I used open coding and then focused coding, followed by theoretical coding for further analysis. “Incident with incident” coding was used to compare delivery modes, with the “incident” being the mode (Charmaz, 2014). In an iterative process in which data was constantly compared to existing theories, themes emerged. Memos were used to capture and analyze the themes. A few documents were also reviewed using a heuristic presented by Savin-Baden and Major (2012): Montana Board of Regents’ policies on DE;yllabi for several DE courses taught concurrently in the high schools and corresponding college syllabi for the same courses; promotional materials distributed to high school counselors, students, and their families; and DE webpages from the Office of the Commissioner of Higher Education and from GFC MSU.

To increase authenticity, trustworthiness, credibility and transferability, I used memo checking by having the participants review their transcripts and my analysis of their comments. I used peer review by having a colleague read portions of the study. I
also triangulated the findings and the subsequent theoretical implications by using data tables and charts, vignettes, and student quotations. I did include one key informant, a public school administrator, to help reach theoretical sufficiency for the group of students who did not successfully pass their DE classes because the number of students in that group was very small.

Conclusions and Related Literature

Chapter 4 presented the findings and results of this study in detail, including data tables and charts, vignettes, and student quotations. Some of the related literature was also discussed in conjunction with the results. In general, specific student input characteristics did not influence the findings. For example, differences in gender did not affect perceptions nor behaviors. This could be due to the fact that by participating in DE, students had already self-selected into a group that differed from the general high school population. Being a first-generation student did influence whether or not a student had a concept of college students in general, but not his or her own self-perception as a future college student nor subsequent college enrollment after high school graduation. A greater percentage of students with concepts of college students pre-DE had parents with postsecondary degrees than the group of students without concepts of college students before their DE coursework, however. In addition, the subject matter of the DE courses did not influence students’ perceptions. Students enrolled in a variety of DE classes, from math to music. The rigor of the coursework had a greater influence on students’
perceptions than the subject of the class. The most prominent conclusions of the study are offered below, supported by existing literature.

DE is a Socializing Influence

So much of this study aligned with various socialization models that DE’s role as a socializing influence on high school students cannot be ignored. The DE experience fulfills Maccoby’s (2015) basic definition of socialization: “processes whereby naïve individuals are taught the skills, behavior patterns, values and motivations needed for competent functioning in the culture” (p. 3). The students in the study were naïve about what it meant to be a college student before taking DE courses. Those who had a concept of college students were in what Thornton and Nardi (1975) called the “anticipatory” stage of role acquisition, meaning they had received some information from family, teachers/counselors, movies and older friends about the role of college student, but the information and perceptions about the role were generalized. Students could only define college students as “hard working,” “stressed” and “partying.” By enrolling in DE courses, students moved into the “formal” stage of role acquisition which Thornton and Nardi (1975) describe as follows:

…the individual, now in a social position, experiences the role as an incumbent and shifts from viewing it from an outside perspective to viewing it from the inside. In contrast to the anticipatory stage, when expectations arise from society at large predominate, expectations now arise characteristically from members of the role set (both others enacting the same role and others enacting strictly reciprocal roles) and from the incumbent himself, whose expectations for his performance are formed at least partially in response to those of others (p. 876).
Students experienced a shift in their concepts of college students and of themselves as future college students in all three delivery modes as they became “dually enrolled” as a college student, interacted with classmates, received college expectations from DE teachers, and set expectations for themselves. The expectations were stated in syllabi and spoken verbally, as students discussed. They recognized that their instructors were teaching them college expectations as demonstrated by the student comments below:

Like they [teachers] always say, ‘Well, when you’re in college your professors aren’t going to tolerate this,’ or...‘Oh, they’ll never tolerate you being late.’

With Mr. _______ he was of the opinion that a lot of college professors don’t care so he was like, ‘If you want to know, come ask me, but I’m not going to force you to learn. This on you. This is your choice. You choose to succeed in this class. I’ll help you if you want it.’

Explicit and direct instruction in the expectations of the role of college student is part of the formal stage as defined by Thornton and Nardi (1975).

In addition to being a part of role acquisition theory, learning the formal expectations fits with general socialization theory. Maccoby (2015) stated that individuals play an active part in building their own standards or expectations, not simply adopting those of others, which supports a constructivist perspective as acknowledged in this study. Students built their concepts of college students and of themselves as future college students from what role set models, mainly teachers and classmates once in the DE courses, did and said as well how they as individuals interpreted the words and actions. Thornton and Nardi (1975) defined role set models as people related to the role being learned, either as a “reciprocal” model – a person who defines patterns of
interactions, like a teacher, or a “similar-role” model – a person in a similar role, such as a classmate. Students who felt they and others saw themselves as future college students developed a self-perception as future college students. Those self-perceptions were largely based on their ability to accomplish the academic coursework:

I can’t really say what they [teachers] were doing was making me feel like a college student, but I can say that as I was understanding and doing it myself I was feeling more like a college student.

Yeah, I did [feel more like a college student after completing DE classes]. I felt pretty proud of myself that I was able to do the dual enrollment classes. And I got all A’s in them. No, I got a C in statistics I think. So I did pretty well in them being a college level course. So, I felt pretty good about that and that I was ready to go on to college. I was confident that I would do well.

Thornton and Nardi (1975) stated that in the formal stage, conformity and movement towards role acquisition and socialization comes from a “high degree of consensus and because individuals are only beginning psychologically to feel out the situation and what it may hold in store for them” (p. 877). Those students who did not cite specific examples of role supportive comments and actions by others responded that they were unsure of their self-perceptions as a future college student or said they did not believe they were future college students. Thornton and Nardi (1975) explained their behavior by stating:

In terms of the adjustment-adaptation feature of our scheme, people may be seen as postponing their own modes of meeting role expectations until they have become more familiar with them…Psychologically, adjustment occurs through postponement of reactions to roles and situations, often by playing at roles rather than truly enacting them (pp. 877-878).

Students who participate in DE on a college campus may actually move into the third state of role acquisition, the “informal” stage, in which individuals learn the
unofficial expectations from their peers – in this case their classmates who are actual college students. As Thornton and Nardi (1975) explained:

These informal features of the new role are not usually conveyed by the system itself... Often, however, informal expectations can be quite imperative, and the sanctions attached to them can be more severe than those attached to formal expectations... it is through everyday interaction that a neophyte learns the obscure nuances and subtleties of the enactment of the new role... an individual now has an opportunity to start shaping a role to fit himself, his past experiences and future objectives, and to work out an individual style of role performance. Final social adjustment thus commences and one begins to finalize his own techniques of handling the social requirements of the role (pp. 878-879).

Examples of learning these informal-stage expectations from completing a DE course on a college campus include students’ mention of attendance expectations and using study groups:

Attendance for the most part is fairly optional. A lot of teachers, I mean, they do hope you show up for class because it’s good, but if you can keep your grades up without attending lectures, then that’s up to you. I know several teachers do have graded attendance, but like with chemistry lab attendance is graded, but lecture attendance isn’t.

I mean before the involvement in dual credit, I was just doing my homework, passing by in high school, doing whatever. I didn’t expect to be this involved – you know, living in open lab, study groups and everything.

Once students have moved through the first three stages of role acquisition, some continue into the fourth “personal” stage by actually enrolling full-time in college and persisting to degree completion. At that point, the students “seek to impose personal conceptions and needs and to reconcile these with the demands of the situation. Incongruence of self and role often results in perfunctory role enactment and in problems of social and psychological adjustment” (Thornton & Nardi, 1975, p. 881). Students
either accept and adjust to the role and adjust their perceptions of the role to themselves, or they discontinue in that role.

Students may discontinue in a role because they no longer value it, as in the student who felt she could do better working than if she went to college, or because they do not think they can master the task, such as the student who failed her DE class. These findings for reasons to discontinue in college are supported by the Eccles et al. Expectancy-Value Model of Achievement-Related Choices and Behaviors in socialization theory, see Figure 5.1 below. The model recognizes that student characteristics, past achievements, perceptions, interpretations of experiences, goals, reactions and memories, ability and self-concepts, expectations for success, and views of the task ahead all affect a person’s choice to engage and persist in an achievement-related pursuit – such as enrolling in college. In explaining the model, Simpkins et al. (2015) tied the model to academic pursuits:

…people will select achievement-related pursuits (e.g., high school courses [or college enrollment]) that they value and think they can master. Individuals’ expectations for success depend on both their confidence in their abilities and their estimations of the difficulty of the various options they are considering (pp. 615-616).

The model fits this study in that students who did continue to accept the role of a future college student valued a postsecondary education and believed they could master the task, both parts of the “Subjective Task Value” in the Eccles et al.’s model. Students’ responses for perceiving themselves as future college students fell into the four categories associated with the Expectancy-Value Model for the subjective value of the task, in this
Figure 5.1. The Expectancy-Value Model of Achievement Choices. People make achievement-related choices based on the influences outlined in the model (taken from Simpkins et al., 2015, p. 615).
case continuing to college: interest/enjoyment, utility, attainment, and cost. Students were interested in the degree, occupational field, or enjoyed the challenge of the coursework; they believed a college education would be useful to them; they felt they could attain the goal because their self-perception as a future college student matched their academic performance; and they thought what they would be giving up – time, money, other pursuits – would be worth it. Although the Eccles et al. model includes gender role stereotypes, no gender differences existed in this study, as discussed previously.

Returning to Maccoby’s (2015) definition of socialization, DE did provide opportunities for students to learn the skills, behaviors, values and motivations of college students. Those students who successfully integrated aspects of these areas into their self-concepts and for whom the expected value of attending college was positive became socialized as future college students.

| Skills | Students specifically listed notetaking, studying, reading, writing, managing time, prioritizing tasks, doing homework, thinking critically, paying attention to details, communicating with instructors, seeking help, meeting deadlines, being independent, submitting work online, and taking tests as college skills they learned through their DE classes. These skills are associated with becoming socialized as future college students. Edmunds (2012) stated: |

A key component of college readiness is academic preparation: learning the content and academic skills that are necessary for success in college…Academic behaviors such as study skills, time management, and the ability to self-monitor the quality of work are other core components of college readiness. Nonacademic behaviors, which include the ability of students to interact successfully with college professors and with their college peers, are also beneficial (pp. 81-82).
Renn and Reason (2013) would call building these skills part of accumulating “capital” – knowledge and networks that help students succeed in college.

Behaviors. In addition to developing skills associated with being college students, DE students also learned behaviors of college students, such as being more independent for their learning, seeking tutoring help, communicating with faculty, studying before tests, participating in study groups, and attending open labs. Students reported learning these behaviors from their teachers and their classmates. From a socialization standpoint, Wentzel (2015) would add that the behaviors stemmed from positive relationships and would add to Renn and Reason’s (2013) idea of capital building:

Indeed, students who enjoy positive relationships with their peers also have greater access to resources and information to help them accomplish academic and social tasks than those who do not. These resources are viewed as adaptive forms of help when they take the form of information and advice, modeled behavior, or specific experiences that facilitate learning specific skills (p. 261).

Learning skills and learning behaviors go hand-in-hand, and both occur in DE in relation to students learning to become college students and perceiving themselves as future college students. In both instances, teachers and classmates are key role set models.

Values. As with skills and behaviors, students in the study reported learning values from their teachers and classmates. As has been mentioned, within a school setting, teachers and classmates are key role set models (Wentzel, 2015). She wrote, “First, competent students achieve goals that are personally valued, as well as those sanctioned by others. Second, the goals they pursue result in both social integration and positive developmental outcomes for themselves” (p. 252). Wentzel (2015) added that the
positive outcomes “are reflected in levels of social approval and social acceptance” (p. 252). For example, as DE students saw classmates value their education, they began to value their own education. This was true for students in concurrent classes and on the college campus. One concurrent student said the following:

Definitely being around the other students who were in the dual enrollment who were challenging themselves. It’s really nice to be in a class with the kids who don’t take school as a joke…So, it’s really cool to be in a classroom with students who are going to challenge themselves and have a respect for the teacher as much as you do. And being in that environment where everyone wants to challenge themselves and wants to learn really helps a lot.

Similarly, a student in a DE course on the college campus commented on classmates’ dedication to education:

It definitely shows the difference that it’s not high school anymore, but that you can keep learning, and it’s nice that there’s so much more variety versus in high school you still have everyone being like the same age and at the college it isn’t, and everyone has their own different schedule but they’re all there for the same thing.

**Motivations.** As discussed in Chapter 4, the students in this study had a variety of motivations for being in school and continuing their educations. The motivations were more intrinsic and personal to students rather than reasons they developed from interactions with others. Their motivations tended to revolve around either maintaining family patterns of going to college or breaking family precedents of not going to college. The family influence on the students’ motivations behind pursuing a postsecondary education aligns with Eccles’ sociological model of parents’ influence on children’s achievement related to self-perceptions, values and behaviors, as illustrated in Figure 5. 2 below (Simpkins et al, 2015). The model shows family and child characteristics, parents’
Figure 5.2. Eccles’ Model of Parents’ Influence on Children’s Achievement Related to Self-Perception, Values, and Behaviors. The model displays the strong effect family influences have on students’ achievement decisions (taken from Simpkins et al., 2015, p. 617).
beliefs, the family socio-emotional climate, parents’ role-modeling behaviors, and parents’ specific activity behaviors (in this case college-going) all influence a person’s outcomes of beliefs, values, goals, performance, and choice.

Coursework, Teachers, Environment, and Classmates Influence Socialization

Just as Weidman’s (1989) Theory of Undergraduate Socialization includes academic and social contexts, so do the findings of this study. The coursework itself acted as the strongest influencer in the academic context of this study, followed by teachers, environment, and classmates.

Coursework. Students identified coursework as the number one influencing aspect of the DE experience on their socialization as future college students. Students in all delivery modes discussed the increased rigor of the college-level work from their work in their high school-only classes. The rigor included aspects of difficulty, depth of content, amount of assignments, and the format of the work. Many of the students reported doing homework outside of the classroom, reading a textbook, taking notes, and studying for tests in their DE courses for the first time in their high school careers. As one concurrent student said:

I mean, I did take hard classes, but a lot of my other classes you could just kind of skate by; you didn’t need to do a whole lot of studying. So, I definitely had to read all of the information and study a lot more [in DE] than I did with my other classes. I think that prepared me for when I got to college.

Several students commented that they appreciated the challenge of the DE courses because they were bored before taking DE classes, had higher estimations of their own
abilities than were the reality, enjoyed being challenged, and felt more prepared for college. Revisiting Eccles et al.’s achievement expectations-value model (Simpkins et al., 2015), the researchers predicted that people would select achievement-relations pursuits that they valued and thought they could master. Eccles was talking about selecting high school courses in particular, but the idea can be extended into DE participation and college enrollment. Based on the students’ responses, the subjective task value they assigned to completing the coursework peaked their interest and increased their enjoyment, was seen as useful to fulfill another short- or long-range goal, had attainment value (“the link between the task and one’s sense of self and either personal or social identity”), and was worth the cost (“defined in terms of either what may be given up by making a specific choice or the negative experiences associated with each possible choice”) (Simpkins et al., 2015, p. 616). The challenge itself has been found to be important in engaging students and encouraging their educational persistence. Wentzel (2015) wrote:

> Classroom tasks that are challenging but can be accomplished with reasonable effort promote engagement. If the task is too easy, students do not have the opportunities to be deeply invested, and they may even disengage because they are bored. Conversely, if any of the aspects of the task are too difficult, students may give up because it is too hard (p. 625).

Wentzel (2015) examined “microsettings” nested within the school environment. She focused on ability-grouped classrooms in the K-12 system, but the underlying theory applies to DE as well. As a form of “curricular tracking,” DE has an opportunity to impact students’ motivation and engagement. This idea was supported by the findings of
this study that students in DE courses also reported performing better in their non-DE high school classes because they re-engaged with academics. Wentzel (2015) stated:

The best justification for curricular tracking derives from a person-environment fit perspective. Students are more motivated to learn if the material can be adapted to their current competence level...Indeed, engaging in an activity that is meaningful to one’s identity can reverse outcomes for students who otherwise were on the road to academic failure (pp. 627-628).

Thus, engaging in challenging but “doable” (as the students said) coursework, influences one’s identity and, according to Wentzel (2015), may even “reverse outcomes for students who were otherwise on the road to academic failure” (p. 628). This coursework-related influence has ramifications for reaching students at-risk of not pursuing postsecondary education or even not completing high school if a DE program were designed to reach those students and provide support structures. The trick would be identifying which students could handle the challenge and which could not. A failure to meet the challenge could have adverse effects on a student’s self-perception as a future college student, as warned by Speroni (2012) and as attested to by one participant of this study who failed her DE class and said it confirmed her doubts that she could be a successful college student. Even though she did enroll in college after high school graduation, she withdrew during her first semester.

**Teachers.** Following coursework, teachers were the second largest influencer on students’ socialization in DE. Teachers as a role set model aligns with socialization theory. Maccoby (2015) stated that socialization occurs throughout life as people enter new social settings. A person’s family is first and usually the most enduring influence,
followed by peer groups and schools. However, Wentzel (2015) proposed that in a school setting teachers and classmates are the most influencing factors and shape students’ development in ways that go beyond academic content:

During the course of instruction, teachers also promote the development of student competencies by organizing and structuring learning environments in ways that make expectations and goals for behavioral and learning outcomes more salient to students...It is reasonable to assume that the degree to which students pursue goals valued by teachers is dependent on whether teachers communicate clearly and consistently their values and expectations...These expectations can then become self-fulfilling prophecies, with student performance changing to conform to teachers’ expectations...teachers who communicate high expectations can bring about positive changes in performance: Teachers’ overestimations of ability seem to have a somewhat stronger effect in raising levels of achievement than teachers’ underestimations have on lowering achievement, especially for low-performing students (p.p. 260-261).

Examples of both the positive and negative influence teachers’ words and beliefs about students have on students were found in this study. Several students mentioned enrolling in DE or believing they could be future college students because of comments made by teachers. Both of the students below successfully passed their DE courses and enrolled in college after high school graduation:

As I got closer to being able to take them, they [teachers] showed me, the school was like, ‘You should do this if you’re willing to. You’re smart, so you should do this.’

Counselors at [high school] promote them [DE classes]. Your teachers, if they think you will be a good fit for them, will promote them.

Another student though suffered the negative effect of a teacher’s comment when her DE teacher said she would not be able to understand an assignment because she was only in high school. She subsequently did not pass the class and did not enroll in college. She said:
He told me in one of his emails when I asked him for help with something, he told me I was a high school student and that’s why I wasn’t understanding. And I thought, ‘Okay. I guess I’m done here.’

Both the positive and the negative examples of teacher-student interactions demonstrate Simpkins et al.’s (2015) assertion that students’ perceptions of their teachers are paramount to their success:

Students who perceive their teacher to be supportive and caring are more likely to develop positive attitudes toward school, take intellectual risks, and persist in the face of difficulty. Teachers who are trusting, caring, and respectful of students provide the kinds of socioemotional support students need to approach, engage in, and persist with academic learning tasks (pp. 623-624).

Wentzel (2015) would agree: “There is a growing consensus that the quality of students’ relationships with their teachers plays a critical role in enhancing motivation and engagement” (p. 624). The student in the study who disengaged from her DE class after perceiving an instructor’s comment as negative is an example of the withdrawal and decreased motivation that can be caused by instructors. In contrast, many students in the study praised their instructors and identified them as a reason they enrolled in a DE course, perceived themselves capable of college-level work, and learned skills needed to be successful in college. As Wentzel (2015) wrote:

Adolescents’ perceptions that teachers are emotionally supportive and caring have been related most often to positive motivational outcomes, including the pursuit of goals to learn and to behave prosocially and responsibly; academic interest; educational aspirations and values; and positive self-concept (p. 263).

This “positive self-concept” could be extended to one’s self-perception as a future college student. Furthermore, Weidman (1989) included student-faculty interactions as part of the in-college normative pressures that influence the socialization of undergraduate students,
which he defined as “either change or reinforcement of values” (p. 310). However, in this study, as discussed previously, the conferring of values derived mostly from classmates, rather than teachers.

Environment. The environment was identified by students in this study as the third of four most influential aspects of the DE experience. The environment of the DE classes involved the teacher, classmates, expectations, and the actual location. The delivery mode – concurrently in the high school, online through the college, and on a college campus – comprised part of the environment students experienced. More about these modes is discussed below in the section “Delivery Modes Shape Students’ Socialization.” However, it should be noted that socialization and role acquisition theories stress the importance of an “authentic” experience because that enables students to truly “try on” and learn a role, such as that of a college student (Thornton & Nardi, 1975). Thus, it could be proposed that the more authentic the environment, the stronger the socialization influence. In that case, the most authentic environment is the college classroom itself. Concurrent students identified differences between their high school class environments and their concurrent DE class environments, and students on a college campus identified differences between their high school class environments and their college classroom environments. Online students, however, did not notice a difference in the environments. Often DE students completed their online DE classes on the high school campus in the library or in a computer lab, so their actual location did not change.

In addition to the actual location, the environment was created by the make-up of the students and the expectations of the teachers. Students reported more diversity in
classmates on the college campus, but students in both concurrent and college campus
DE classes commented on the increased level of their classmates’ focus on and interest in
education. They also felt DE teachers expected the students to be more independent than
in regular high school classes. This increased sense of autonomy is discussed below in
the section “The Level of Perceived Autonomy Shapes Perceptions.”

Classmates. Classmates were the final aspect of DE that students identified as
influencing their socialization as future college students. The effect was stronger for
students participating in DE courses on the college campus, but it did exist for concurrent
students as well. Classmates were not a factor discussed by online students. This is
probably due to the lack of interactions between students in many online classes.
Including classmates/peers as an influencing factor aligns with socialization theories.
Simpkins et al. (2015) stated:

Peers are especially important during adolescence, when youth have an
increased need for relatedness outside of the family…Students self-select
into peer groups that have similar motivation and engagement levels, and
this clustering provides opportunities for peer socialization that strengthen
existing differences in engagement over time. Affiliating with a highly
engaged peer group is related to higher engagement over time, whereas
spending time with peers who are disengaged and low-achievers is
predictive of lower engagement over time (p. 624-625).

The peer effect was evident in the study even before students enrolled in DE. Several
students enrolled in DE because of the influence of their friends. A group of students at
one of the high schools participated in the same sport and referred to each other when
discussing DE. A student at a different high school said, “Most of friends were doing it
[DE] too. We’re a little bit smarter than most people so we joined it.”
Once in DE, students reported learning skills, behaviors and values from their classmates. Wentzel (2015) confirmed that peers impact many aspects of students’ socialization:

Peers also have an impact on students’ goals and expectations for performance by influencing perceptions of ability. This is important for understanding academic competence because students’ efficacy beliefs are powerful predictors of academic performance. Children utilize their peers for comparative purposes as early as 4 years of age. As children work on academic tasks that require fairly specific skills and are evaluated with respect to clearly defined standards, they use each other to monitor and evaluate their own abilities (p. 262).

Students in the study did compare themselves to their peers. As one student who completed a DE course on the college campus said:

I know especially with the [DE] class, going through it and saying, ‘I’m doing decent; I’m actually doing kind of good,’ and seeing the other high school students struggling and kind of helping them out, I felt, ‘Hey, I can do this. I’m actually going to be the [career]. I’m going to do this.’

Perceived negative interactions with classmates can have adverse effects on students though. One student in the study who also participated in a DE class on the college campus felt she did not fit in with the college-aged classmates because she was younger than they were. She reported not seeing herself as a future college student after her DE classes and did not enroll in college after her high school graduation. The influences can be positive or negative. As stated by Wentzel (2015):

The extant literature supports the notion that structural features, social interactions with teachers and peers, and the provisions of responsiveness and warmth by teachers and peers have the potential to provide tangible resources, opportunities, and experiences that support competence development at school (p. 264).
DE is a Transition to College

In addition to identifying aspects of DE that influenced their socialization as future college students, many students referred to DE as a “transition.” This in vivo theme that emerged from the study’s data is supported by theory; DE fits transition theory – students move in, move through, and move out of the experience. Transition has been defined as “any event, or non-event, that results in changed relationships, routines, assumptions, and roles” (Goodman, Schlossberg, Anderson, 2006, p. 33). DE changes relationships as students move away from family influences and towards teacher and classmates as role set models. DE students also change routines – literally if they are attending DE classes on a college campus and by incorporating behaviors of college students, such as studying more, reading their textbooks, taking notes, doing homework at night, etc. In general, the students’ assumptions about college students changed as they passed through the DE experience. In multiple cases their assumptions and the effect of those assumptions on their self-perceptions as future college students changed. The students in the study also began to acquire the role of a college student or reject the role in favor of an action that better matched their fit based on their perceptions of their abilities, the difficulty of the tasks ahead, and the perceived cost of the choice. Simpkins et al. (2015) explained this decision model in the Expectancy-Value Model as discussed previously.

This study found that the four “S’s” of Transition Theory apply to the DE experience. The first “S” is “situation.” Situation includes the timing. As Evans et al. (2010) asks, “Is the transition considered ‘on time’ or ‘off time’ in terms of one’s social
clock?” (p. 216). If students enter DE too early, especially on a college campus, is it “off
time?” For example, a couple students in the study mentioned feeling younger than the
other students in their DE class on the college campus. One student who did not perceive
herself as a future college student after the DE experience and who did not enter college
said she felt she did not fit in with the college students because she was younger. She was
a junior at the time. For her, perhaps it would have been better to wait a year or start her
in a concurrent class instead of enrolling her in a DE course on the college campus.
Situation includes more than timing, however. It also includes a trigger, control, role
change, duration, previous experience, concurrent stress, and assessment (Evans et al.,
2010). Not only did this student feel younger and out of place, but she did not feel she
had “control” as evidenced by her comments about the instructors’ expectations and her
desire to work at her own pace:

The in-class one was very [paused], I feel like that was the most stressful
because you had to be at a certain place at a certain time, and they didn’t
have like a material list or anything so everyone kind of showed up with
extra materials, or missing things, or [paused], it was a little more
unpreparedwise.

The student was also required to commit a “role change” as a college student on a college
campus, which she may not have been ready for. Lastly, under “situation,” “assessment”
in the transition theory refers to whom or what is seen as responsible for the transition.

From the student’s comments, it was clear that she viewed the instructor and the college
as responsible for the transition and felt they failed her in transitioning to college:

I had an [subject] teacher – my [subject] class was online – and he was very
uninterested in helping students and very, like, I went to all of my teachers
with all my questions because he wouldn’t answer them and even my
teachers couldn’t help me answer them. So, I did fail that class. I stopped doing it.

I mean, no one at the college ever kind of helped me...And so then when I was at the college talking to them about how I didn’t know what else I wanted to do, none of them were like, no one helped provide options to do anything else. They were like, ‘Oh, okay, since you can’t do that, like, I guess you can go.’

A different student who failed her DE class and has since chosen to work instead of go to college demonstrated the remaining component of “situation” in Schlossberg’s transition theory. The student had “concurrent stress” because she was working multiple jobs. In addition to concurrent stress, “assessment” also figured negatively into this second student’s transition to college. Unlike the previous student, this student did not find the instructor or the college accountable but believed herself responsible for the transition and decided that because she failed the DE class, she failed the transition and would not do well in college.

The second “S” is “self,” which consists of personal and demographic characteristics, and psychological resources. These combine to create a self-efficacy in students. In this study, students who believed they would be successful in college because they had a history of strong academic performance perceived themselves as future college students. As one student who had a strong self-efficacy said:

I think I was probably ready. I got mostly A’s, maybe a couple of B’s throughout high school, but mostly I worked really hard, got my work done, and got good grades.

The next “S” is “support.” Students with a self-perception as future college students in this study seemed to have received affirmation and positive, honest feedback as support from family and teachers/counselors. The following two students quoted
successfully passed their DE classes, saw themselves as future college students, and enrolled in college after high school:

My mother made it very well known that I was going to college after high school…They [parents] wanted me to go to college. They knew that I was smart enough and prepared to go to college.

I know [the teacher] tries to be harder on all of us in his class because his theory is that if he’s harder on us it will be a lot easier for us in college, which I always appreciated…He tried to find something that each of the students struggled with and tried to give each of them enough feedback to improve that effectively, not just tell us we were doing it wrong, but how we were doing it wrong and how we could fix it.

“Strategies” is the final “S.” Students may modify the situation, in this case leave education or seek support from teachers, classmates, tutoring centers, etc., if they are struggling. They may also strive to control meaning, deciding it is their fault or someone else’s fault if they fail or attribute their success to their ability (Evans et al., 2010).

Viewing DE as a transition mechanism shifts the dialogue surrounding DE. If its purpose is to aid transition, then including student supports becomes important. In the context of aiding student transition to college, Venezia and Jaeger (2013) compared DE to other programs. They found DE lacking the support measures of other transition programs, such as TRiO, Early College High School, and Middle College High School. They stated DE lacked supports in three areas of student need: increased psychological and behavioral support, better information about college and financial aid, and development of appropriate habits of mind. DE, however, has the potential to address these areas of need if supports are built into DE courses and programs. This study found teachers to be an influencing aspect of the DE experience. In addition to teaching the academic content, they could also explicitly teach curriculum addressing psychological
and behavioral support. Some instructors already are. Students gave examples of DE teachers addressing these needs; such instruction is not an integrated part of the DE courses though. One student said the following about her DE instructor’s efforts to provide psychological supports and teach habits of mind:

She mostly kept us on an open mind, to make sure we’re always putting on a positive face and we’re always encouraging ourselves to do better because in college I know a lot of kids get down on themselves because, yeah, you’re going to get a bad grade on your first test because you’re trying to get used to the teacher, and the new environment, and new kids around you [paused] but, I feel she definitely always told us to keep positive even though we might do bad that’s okay because you’ll get it the next time.

**Students Build Self-Efficacy through DE**

This study found students gained confidence and reported feeling prepared for college through their DE courses. Confidence and feeling prepared lead to self-efficacy. Gore (2006) found that self-efficacy predicts college outcomes. As he said, “A growing body of literature supports the relationship between students’ self-efficacy beliefs for academic tasks and milestones and their academic performance” (p. 92). Ben-Avie et al. (2012) mirrors Gore’s self-efficacy definition with a psychological-educational factor called “future orientation.” Ben-Avie et al. described the concept as “the ability to conceive of one’s own development and take actions in the here-and-now to achieve one’s hoped-for future” (p. 144). One student who took classes concurrently in the high school and then enrolled in college full-time exemplified the development of self-efficacy or future orientation through DE:

Well, just the fact that I was in a college [DE] class made me feel really smart, especially compared to some of my peers that were struggling their normal classes. I have to admit, the ego wasn’t very good for me, but I did
feel really successful. I felt like I actually had a chance of becoming a doctor or a veterinarian or a dental hygienist, which I wanted to be for a while. But, it did make me feel like I really could succeed at it.

In addition, some students mentioned specific skills they learned that contributed to their feelings of self-efficacy, such as being able to form study groups. One student discussed what she felt might have happened had she not taken DE classes:

I think that I probably would not have done as well in my classes. I probably would have been pretty lost in what to do, where to go next, talking to people. I was a little bit shyer then, so it definitely gave me more confidence to find a study group. I don’t think that I would have gone full-time my first semester at college had I not taken some classes before.

Even students who did not enroll in college after their high school graduation said they felt they were more prepared to be successful future college students because of the skills they learned and the experience as a whole if they did decide to enter college in the future. One student who entered the military instead of enrolling in college said:

I kind of feel like [without DE] I would be walking into it [college] not knowing what was going to happen. And this way, I got a little bit of a heads-up on what college is going to be like.

DE helps students feel prepared and confident, and builds self-efficacy because it meets what Simpkins et al. (2015) calls “person-environment fit.” In person-environment fit, beneficial learning settings meet students’ psychological needs in three areas: experiencing competency (completing college-level coursework), connecting to other people (teachers and classmates), and finding autonomy (seeing themselves as the source of action). Ozmun (2013) studied students in Southeast Texas before and after DE and found that although students in DE had higher motivation than their non-DE peers before taking DE courses, they did not exhibit increased feelings of self-efficacy until after their
DE classes. Lewis (2009) also found students reported increased feelings of confidence after their DE classes. DE provides a vehicle for students to gain college-related experience, build confidence and self-efficacy, and then develop a self-perception as a future college student that can increase the likelihood of a student enrolling in college. Hughes et al. (2012) speculated a connection existed between gaining a concept of college students in general and gaining confidence in one’s own ability, and then a student’s decision to enroll in college. From this study, a student who was homeschooled and then took DE classes on the college campus summed up the influence of DE expressed by other students when she said the following:

I think dual enrollment changed the way I saw college as more of a possible thing and not something foreign or scary or whatever. I don’t know if I would have pursued a degree without dual enrollment; it could have gone either way. But dual enrollment really helped me see what college is really about and gave me the want for a degree.

The Level of Perceived Autonomy Shapes Perceptions

As discussed above, Simpkins et al. (2015) listed autonomy as a component of person-environment fit and part of a good learning setting. Students in this study also included autonomy in their concepts of college students and discussed how the level of autonomy they felt in their DE classes influenced their own self-perceptions as future college students. Simpkins et al. (2015) stated, “Instructional practices that support student autonomy are critical for fostering intrinsic motivation to learn. Support for this hypothesis has been found in both laboratory and field-based students” (p. 625). Being responsible for one’s self could be considered part of the normative context presented by Weidman (1989) in his theory of socialization of undergraduate students. Students in all
three delivery modes mentioned the “freedom,” “independence” or “self-responsibility”
that indicate autonomy. For example, one concurrent student who attended college after
graduation said:

I feel like the other classes [non-DE] they just kind of gave you the stuff
and just kind of walked you through it versus the dual enrollment classes or
the higher level classes, they kind of expected you to go ahead of it more
and do stuff on your own. They wouldn’t even cover some of it in class;
they would just expect you to do it outside of class and they would talk
about it the next day or have a quiz on it or something.

In addition, a student who took her DE class on the college campus and then attended
college after graduation said the following:

You know, we were these high school students, but we were able to stop
at the coffee shop. If we didn’t go to class, nobody was going to chase us
down. You know what I mean? Nobody was going to chase us down and
be like, ‘You’re truant.’ You’re just simply not there and you get a zero.
So, it’s a big responsibility. And that freedom is important.

A student who completed his DE course online through the college and then subsequently
enrolled in the military but who plans to attend college in the future contributed the
following comment regarding autonomy when asked if he started to feel more like a
college student through the experience: “Yes, in the sense that it was more self-motivated
rather than teacher-motivated.”

**Delivery Modes Shape Students’ Socialization**

Weidman (1989) recognized that different college settings affect a student’s
socialization. Much discussion in this study has revolved around the three different
delivery modes – concurrently in the high school, online through the college, and on a
college campus. Hughes et al. (2012) encouraged DE classes be taught on the college
campus. They discussed the pros and cons of on-campus DE classes and concurrent DE classes. Students in DE classes on a college campus obviously do have a more authentic experience because they are with college faculty and college classmates, and in a college setting. They also have access to support services such as the tutoring center, library, etc. However, according to Hughes et al., DE classes taught concurrently in the high school enable greater integration and alignment with the high school courses and remove transportation barriers. Hughes et al. (2012) said students in the concurrent DE courses told evaluators “the high school location did not negatively influence the degree to which they were building confidence about their ability to succeed in college” (p. 28).

In this study, a higher percentage of students in DE classes on the college campus reported feeling like college students while in the DE classes than in any other mode. This finding speaks to the on-a-college-campus mode as being more authentic as a college experience. Students in DE courses on the college campus also talked about only one transition, from high school to college, instead of two transitions, high school to DE and then DE to college. Students who had experience in multiple modes, including concurrent and on a college campus, stated the on-a-college-campus DE classes had a greater impact on their concepts of college students and on their self-perceptions as future college students than the concurrent classes. One student who completed DE classes both concurrently in the high school and on the college campus compared the two modes this way:

As far as the [concurrent] class, it felt more like high school. It was, with the way [instructor] taught it, but it was in the high school. It was more homey. It was tougher than other classes, and I surprisingly did really well in it. It was just [paused], I don’t know how to explain it really well.
Of all three delivery modes, online seemed to have the least influence on students’ concepts of college students in general and of themselves as future college students. As discussed previously, the students often completed the online courses in the high school, thus the location and environment did not really change. Students also commented that the online classes were similar to their high school online classes through the Montana Digital Academy. Often online classes involve less teacher and classmate interactions, which means less interaction with two main influencers of socialization identified by the students – the teachers and the classmates. Barnett and Stamm (2010) discussed online DE courses specifically. Providing online DE courses does expand access to students, particularly for rural students and for students in districts without funds or ready access to postsecondary partners. However, they stated that students should be enrolled in online DE classes with caution:

Successful participation in online courses requires students to be more motivated, organized, independent, and technologically adept than students in traditional courses. Thus, there is a possibility that less academically capable high school students could be attempting to succeed in college while also trying to overcome the challenges associated with online learning formats (p. 19).

This caution is exemplified by one student in this study who registered for an online DE class, was not successful and, therefore, felt she was not a future college student because she had failed in the class. The online delivery mode may not have been the best option for her because of her time constraints. She was working after school, which limited her time to complete her coursework. In addition, she said she experienced problems getting started in the class which put her behind from the beginning. Other students who took DE classes online had a mix of opinions; some felt the courses were unengaging and others
stated the courses were fine and very similar to other online high school classes they had taken through the Montana Digital Academy. However, none of the students in online DE classes commented on the influence of classmates or the online environment as factors contributing to their concepts of college students in general or of themselves as future college students like students in the other two modes did. One student who did take a DE class online said the experience still helped her feel prepared for college though because she came to campus to register for the course and experienced college-level coursework:

I think because I had to go in for registration and stuff, I was already familiar with the building and where everything was. That was a big help. I knew a few people at the college already because of that and they helped the transition be a lot easier because I had a connection with them previously. And, just knowing what to expect in a college course rather than just in a high school.

This student’s experience demonstrates that with thoughtful and purposeful planning, such as creating transition opportunities like visiting the campus, any delivery mode could aid in a student’s transition to college. Conversely, one student commented that the online DE class only prepared her for the coursework, not any other aspect of college. When asked if her online DE class helped her understand more about what it meant to be a college student, she answered, “Well, kind of, not really what it would be like to go to college but what the classes would be like.” She made the distinction between college-level coursework and experiencing the other socializing influences of teachers, classmates, and an authentic environment. She also distinguished between academic and social contexts, as included in Weidman’s (1989) model of undergraduate socialization and Tinto’s (1993) model of student departure.
Perhaps the debate about which DE delivery mode is “best” for students depends on one’s opinion about the purpose of DE. Should DE be an immersion experience or a transition experience? Each approach contains rewards and risks. A student jumping into a DE class on a college campus gets the full college experience – almost. Not leaving home lessens the authenticity, as does still taking some high school courses. However, the student has several opportunities not duplicated in a concurrent classroom: interacting with college students who are often more diverse than high school classmates, reducing a fear of college faculty, feeling more mature, enjoying more freedom and autonomy, meeting the rigor of classes, learning college processes, expanding social skills, becoming familiar with the college environment, and accessing support services (tutoring, library, advising, disability services, etc.). The transition from DE to college-only would then be easier for students participating in DE on the college campus than for concurrent DE students in the high school. However, risks for DE students on a college campus exist too: not being ready academically, socially, or emotionally for the college environment; failing and then losing self-efficacy; encountering a negative experience with college classmates and/or instructors; not feeling as if one fit in the environment; feeling overwhelmed by the new environment; not being ready to navigate college processes, such as registration; and experiencing a greater risk of failure. Students taking classes concurrently have the following advantages: learning the rigor and expectations of college in a familiar environment, receiving comfort and support from known high school teachers who are more likely to provide nurturing because of the nature of K-12 and the "no child left behind" philosophy, improving performance in all high school
subjects, and increasing confidence and improving self-efficacy by completing college-level work in a known environment. Fewer changes are required of concurrent DE students when compared to DE students who attend classes on the college campus. Some risks for concurrent DE classes follow: building false impressions that college will be the same as their concurrent class as far as rigor and expectations, overestimating their ability to perform well in college, receiving credit for college classes that are not comparable to non-DE college classes, failing to separate from family and friends and beginning to transition to college, remaining fearful of college instructors, and not becoming familiar with college environments and processes. A student who takes a DE class on a college campus seems to adopt the identity of a future college student more thoroughly and quickly, but is that necessarily the desired outcome? What are the pros and cons to creating a semi-authentic college experience in the concurrent classroom? Perhaps DE should be viewed as a transition or a step towards college rather than as a 100 percent college experience.

**A Proposed Theoretical Model**

So, how do all of these findings, conclusions, related literature, and theories relate? In Chapter 1, I explained that I purposefully used the word “experience” in conjunction with DE in this study because I felt DE’s impact on students extended beyond the number of credits earned or the money saved through discounted tuition. I thought perhaps taking DE classes could have a socializing influence on students because of their interactions with teachers, other students, and college-level coursework; possible
shifts in expectations; and a possible change in concepts of college students in general and of themselves as future college students as they gained information about the role of being a future college student through their DE classes. I started this study with a theoretical model about DE based on Astin’s (1993) I-E-O student development model, Weidman’s (1989) model for the socialization of undergraduate students, and Thornton and Nardi’s (1975) role acquisition theory. Because of the emerging themes of this grounded theory study, I have added concepts from other socialization theories, specifically the Expectancy-Value Model of Achievement Choices (Simpkins et al., 2015). Because of the reoccurring theme of DE being a transition to college, I have also included ideas from Schlossberg’s Transition Theory (Evans et al., 2010). Figure 5.3 below attempts to pull together the results of this study, the related literature, and existing theories to illustrate a proposed model for the socializing influence of DE on high school students as future college students. An explanation of the model follows the figure.

The model follows Astin’s I-E-O model (Renn & Reason, 2013) of student development in that it recognizes students move through a process of development and bring personal “input” characteristics with them to the experience. The model also recognizes the importance of the environment and that the combination of input characteristics and the environment influence the student outcomes. Applicable stages of role acquisition theory are also included in the model, specifically anticipatory socialization that helps form concepts of college students in general and self-perceptions as future college students before students enter the actual experience or formal stage of role acquisition (Thornton & Nardi, 1975). In the pre-DE anticipatory socialization stage,
Figure 5.3. A Proposed Model for the Socializing Influence of DE on High School Students as Future College Students. The model incorporates student development, socialization, role acquisition, and transition theories.
students develop reasons for enrolling in DE, may or may not form concepts of college students in general, and may or may not build self-perceptions as future college students. The initial concept of college students in general is influenced by family, teachers/counselors, friends/peer groups, and the media. Students have a combination of these concepts and perceptions or a lack of these concepts and perceptions when they enter DE. Based on this study, students fall into one of the following five categories:

1. No concept of college students in general, and no perception of self as a future college student
2. No concept of college students in general, but a perception of self as a future college student
3. A concept of college students in general, and a perception of self as a future college student
4. A concept of college students in general, but unsure of perception of self as a future college student
5. A concept of college students in general, but no perception of self as a future college student

All of these different types of students then enter DE. DE acts as a formal stage of role acquisition in that students begin to learn the formal rules and expectations of being a college student. The model recognizes both academic contexts and social contexts and their interactions within the DE experience, as in Weidman’s (1989) theory of undergraduate socialization, as students in the study identified both academic and social aspects of DE. Two of the influencers act as role set models (Thornton & Nardi, 1975):
teachers and classmates. These two influencers create social interactions that particularly influence the student in a social context. The other two influencers, coursework and environment, are part of the academic context within which the DE student resides. The environment could also be included in the social aspect though because the environment is comprised of more than the setting. It is also the teacher, teacher’s expectations, classmates, and the delivery mode. The degree of authenticity, which is important in role acquisition theory, varies by the environment, of which the delivery mode is a factor.

While in DE, the four influencers are shaping the students’ socialization as future college students and contributing to their concepts of college students in general. Students acquire college-related skills, behaviors, values and motivations during DE. These items contribute to the students’ perceived levels of autonomy and self-efficacy. At the same time, the students perceived levels of autonomy and self-efficacy affect the skills, behaviors, values and motivations developed by students through DE. The students’ perceived levels of autonomy and self-efficacy influence their concepts of college students in general and of themselves as future college students. Their perceptions which are shaped during DE then influence their role acquisition of a future college student.

After completing the DE experience, students enter a space in which they will either move further towards becoming a future college student or make a choice that will take them away from becoming a future college student. Students make decisions about their future based on how the perceptions they formed and the skills, behaviors, values and motivations they developed fit their anticipated future behavior. As demonstrated in
the Expectancy-Value model, students assess their interest and enjoyment of college-level work, expectations, social interactions, and fit in the environment; determine if an alignment between the role as future college student and their self-identity exists; decide if a college education will help them attain their short- and long-term goals; and estimate if the cost, which includes non-monetary factors of time and giving up other options, is worth the value expected (Simpkins et al., 2015). If they decide becoming a future college student has an expected value, they strengthen their self-perception as a future college student, further their acceptance of the role of a college student, and either enroll in college or plan to enroll in college in the future. If they decide becoming a future college student does not have an expected value, they move away from creating a self-perception as a future college student, lessen their acceptance of the role of a college student, do not enroll in college, and do not plan to attend college in the future.

This model provides a basic outline of a theory for the influence of DE on the socialization of high school students as future college students. It is not exhaustive nor rigid. The model serves as a starting point for more research to be conducted on the socialization of students through the DE experience.

**Recommendations for Future Research**

From the findings and conclusions of this study arose several recommendations for future research. Namely these recommendations include further research on connections between the DE experience and students who enlist in the military, impacts on students who do not successfully pass their DE classes, influences of the different
delivery modes on students, and exploration of DE as a transition. These recommendations are discussed individually below.

Explore Military Connections and Implications

One unanticipated finding of this study was a seemingly possible connection between students taking DE courses and planning to go into the military. As discussed in Chapter 4, six of the 40 students in the study enlisted in the military, and all six planned to pursue a college education either during or after their service in the military. The students commented on how DE related to their military plans. Participation in DE was an intentional part of their planning process. This connection could be explored more fully to see if it is unique to this study or if the connection occurs in other sites and populations. If a connection is evident between students who plan to attend college, enroll in DE, and then enlist in the military as a mechanism for earning a degree, the paradigm behind offering DE courses and who those courses are designed for could substantially shift. Reaching out to students who plan to enroll in the military and using or designing DE programs to help them accumulate college credits while learning skills beneficial to college and the military, such as being responsible and working hard, before leaving high school would be a new direction for DE.

Study Those Who Do Not Pass their DE Coursework

In addition to studying more about students who participate in DE and then enlist in the military, more research needs to be conducted on students who do not pass their DE courses. How does not passing their DE classes influence them? What do they do
after high school graduation? As demonstrated in Chapter 2, most of the existing research has focused on former DE students who graduate from high school and then enroll in college. Much is known about their outcomes despite the fact that many of those students would be enrolling in college anyway. They were on the “college track” in high school. As found in this study, Eimers and Mullen (2003), and O’Keefe et al. (2010), many students participating in DE are also in AP classes. Given that crossover, without intentional planning DE does not become a force for equity – it does not help more students achieve a postsecondary education. DE would only provide another avenue for college-bound students to accumulate credits before entering college. Furthermore, even though An (2013) and Hughes et al. (2012) studied programs in California aimed at underserved populations who historically were not likely to enroll in college, they still focused on the outcomes of those who went to college and did well. So, again, what about the students who did not pass their DE classes? Speroni (2012) is one of the few researchers who has expressed concerns about the effect that not meeting the expectations of a DE course may have on students. From this study, one student in particular who did not pass her DE class said not passing that class confirmed her doubts about herself as a future college student. Much more research needs to be done on this unsuccessful segment of DE students in order to understand how a DE failure influences their socialization, affects their self-perceptions, and shapes their subsequent decisions about enrolling in college or not. If research finds that not passing a DE class has an adverse effect, as one would assume it does, then DE educators and administrators need to
develop and implement measures both during DE and after DE to counsel and support these students.

Because I felt I had not reached theoretical saturation, or even theoretical adequacy, for the group of students who did not pass their DE classes, I interviewed a public school administrator who works with such students. He said when a student fails a DE class, he and the high school counselor talk with the student and deconstruct the experience. They discuss what worked, what did not work, and help the student develop a plan that may or may not involve attempting another DE class and that may or may not include future college attendance. Sometimes the student and the counselor decide that the student should enroll in another DE class because the student has more experience now or tools to overcome previous obstacles. The administrator said that even for students who do not register for another DE class or who do not enroll in college immediately after high school graduation, the students still learned something from the experience and often attempt college a few years later better prepared for the experience. An empirical study should be conducted to further explore these situations and occurrences, and to address the question, “How does not passing a DE course influence the socialization of students as future college students?”

Focus Research on Comparing Delivery Modes

Although this study included an exploration of delivery modes as part of its third research question, the study was not designed to thoroughly compare and contrast each of the three delivery modes for DE: concurrently in the high school, online through the college, and on the college campus. Clearly differences in the experiences exist. This
study identified differences in the instructors, classmates, coursework, and environment—all aspects DE students reported influencing their socialization as future college students. Both quantitative and qualitative research on the delivery modes is needed. Smith (2007) conducted a study that correlated students’ aspirations to attend college to the location of their DE classes: concurrently in the high school or on the college campus. She found significantly more of the students taking their DE classes on the college campus planned to go to college when compared to the number of students taking their DE classes concurrently in the high school who planned to go to college. The study was correlational, not causal, however. D’Amico et al. (2013) also found that students enrolled in DE classes on the college campus, compared to students enrolled concurrently in the high school, were 1.32 times more likely to persist in college. Hughes et al. (2012) and the CCRC (2012) also advocated for DE courses to be taught on college campuses because they create a more “authentic” college experience for students. However, studies have not been designed to specifically explore the delivery modes, their components, and their influences. In the studies mentioned, the delivery mode was one of several possible confounding variables included in a study measuring either aspirations or persistence. More research is needed to understand all of the ramifications associated with the variety of delivery modes.

Barnett and Stamm (2010) noted the proliferation of online classes in particular and called for more research on that specific delivery mode. They reported that colleges and universities are the largest providers of online education for K-12 students. Whether or not all of those classes are DE courses is unclear, but Barnett and Stamm suggest this
is the case. As providers of DE courses, 96% of community colleges reported offering classes online. In fact, they reported online course enrollment grew faster than overall postsecondary enrollment, 17% to 1.2% respectively in 2008. The study cited both regular and homeschooled students seeking to earn college credits through online DE courses. In discussing both high school and college online courses, Barnett and Stamm (2010) wrote:

Clearly, there exists a significant information gap in the extent to which online learning in these two educational systems overlaps in the form of dual enrollment…While data do not exist to determine whether the courses provided by colleges and universities to K-12 school districts are college-level courses, researchers compiling these data suggest that this is indeed the case (p. 17).

They also listed four states with programs aimed at expanding online DE offerings: Florida, North Carolina, Massachusetts, and Virginia. Yet, all of these plans to expand and increase online DE offerings are being undertaken without research on or information about the effects on students. The push to increase online DE courses, especially for underprepared students, worried Barnett and Stamm (2010). I echo their sentiment:

As we have seen, traditionally underserved students can benefit from dual enrollment experiences, but often need extra assistance. With online college courses, students have been found to be at greater risk of failure than students who take the same courses in a traditional, face-to-face format…there is no national level data on online dual enrollment. While policymakers and educators have expanded access to dual enrollment to a broad range of students based on a number of premises about the benefits of this educational model, additional methodologically-rigorous research is needed to more fully document these benefits for all students (p. 19).

Additionally, this study found the socializing influence of DE on students’ concepts of college students in general and on themselves as future college
students was lowest in the online delivery mode, compared to concurrently or on
the college campus.

**Study DE as a Transition to College**

As discussed by Renn and Reason (2013), much research has focused on students’
transitions into college and during the first-year. However, little research has studied DE
as a transition itself even though it holds much promise as a way to smooth the way for
students moving from high school to college. Bailey et al. (2002), Bragg et al. (2006),
and others specifically list DE as a transition mechanism. Stated Renn and Reason
(2013):

…academic preparation, in terms of both quality of high school coursework
and student performance in those courses, might be the most important
predictor of student success in college. High school preparation, particularly
for students who receive positive messages about the quality of their work
or who are ‘tracked’ into college preparatory courses, often positively
affects students’ aspirations and academic self-efficacy, providing them
with an added benefit (pp. 63-64).

DE provides an opportunity for that academic preparation espoused by Renn and
Reason and also social preparation as this study has shown DE to have a socializing
influence. All of the college student development theories – cognitive, moral and
psychosocial – could apply to DE students. DE students are simply encountering the
normative contexts and expectations identified by Weidman (1989) earlier than
traditional college students. Examining DE as a phenomenon within those contexts
could shed light on the students’ experiences as they move through DE, and for some,
subsequently into college. The information learned could be purposefully used to
incorporate opportunities for student growth in DE programs and ease the transition into college.

**Implications for Practice**

Several implications for practice can be derived from this study. Because of my pragmatic lens, I found the following applications of the research findings to be important in the hopes that the results will lead to improved programs and experiences for students:

- apply student development theories to DE students, explicitly teach college skills,
- increase autonomy in concurrent classes, recognize the importance of the teacher,
- consider student characteristics and readiness when placing students in DE, and develop DE programs to increase equity. Each of these implications is presented below.

**Apply Student Development Theories to DE Students**

Because DE clearly has a socializing influence on high school students as future college students, student development theories should be applied to DE students with the goal of fostering academic and social integration (Tinto, 1993). For DE students, the process of becoming a college student begins before the traditional freshman year of college because DE students encounter college-level expectations, college-related behaviors from instructors and classmates, college-level coursework, and college or college-like environments while still in high school. For DE students, college acculturation begins when they enter DE or even before when they are considering enrolling in DE courses. In addition, DE students learn college-related skills while in DE and move further towards accepting the role of successful college student or away from it.
before they ever enter college. Recognizing this early socialization provides an opportunity to plan for it, for example by creating orientations specifically for DE students and fostering opportunities for engagement, such as campus visits for concurrent students. First-year-experience type activities aimed at increasing student integration into the social and academic contexts of college could be implemented for DE students. Those administering DE programs are missing an opportunity to increase college attainment by ignoring the socializing influence of DE on students as future college students.

Explicitly Teach Skills Needed in College

Instruction to teach college skills as well as the subject content should be included in trainings for DE instructors and in DE program and curriculum development. Supporting the findings of socialization experts, all of the students in this study identified learning skills associated with being a college student as an important aspect of their DE experience. Even those who did not perceive themselves as future college students or who did not enroll in college said they learned skills that would have helped them had they decided to attend college. Learning the skills associated with being a member of a group is part of socialization, as defined by Maccoby (2015). Additionally, Wentzel (2015) stated that schools have a unique socializing influence because of their focus on teaching specific skills and competencies. Both teachers and counselors were found to influence students’ enrollment in DE courses and their development of a self-perception as a future college student before they engaged in DE courses. Thus, both teachers and counselors have the potential to teach college-related skills, behaviors, values and motivations.
Edmunds (2012) listed specific skills DE students learn in preparation for becoming college students: notetaking, reading a textbook, studying for tests, spending time outside of class doing homework, writing papers, etc. Students in this study identified having learned these same skills through their DE experience. The students in this study were able to identify the instructors who taught those skills, the impact that learning those skills had on their feeling confident and prepared for college, and how feeling confident and prepared influenced their self-perceptions as future college students and helped increase their self-efficacy. Therefore, efforts need to be made by DE instructors to explicitly teach those skills needed by college students to be successful, especially because students recognized their DE classes as a transition to college, a preparatory time. Hughes et al. (2012) recommended providing professional development and training for DE instructors to help them create authentic environments, and I would add to teach skills needed to be successful in college.

**Increase Autonomy in the Concurrent DE Classroom**

In addition to teaching skills needed in college, DE instructors in concurrent classrooms need to increase the autonomy of students in those classrooms. Autonomy, including the perceived ability to make choices and be responsible for their own actions, was identified by students in this study and other studies as a characteristic of being a college student. As Hughes et al. (2012) wrote:

The instructor, whether a college faculty member or high school teacher, can strongly influence whether a college environment is created in the classroom, regardless of the location of that classroom…being treated as adults in the classroom is what most distinguished college classes from high school classes. This entailed focusing less on rules in the classroom and
giving students greater freedom and greater responsibility for their own work (p. 28).

Fostering autonomy is especially important as students progress in their development. As part of the socialization process in schools in particular, Simpkins et al. (2015) wrote:

The optimal balance between structure and autonomy support changes as students grow older and desire more opportunities for autonomy…One reason for the decline in achievement motivation over time is that many students do not experience changes in the balance between structure and opportunities for autonomy as they pass through K-12 school years (p. 626).

They added specific ways teachers can increase autonomy: “Autonomy-supportive teachers use noncontrolling and informational language, allow students to work in their own ways, encourage students to take greater responsibility for their own learning, and give students opportunities to have input and make decisions” (Simpkins et al., 2015, p. 626). DE provides an opportunity to move towards autonomy, thus preparing students for college and increasing their motivation by meeting their need for increasing autonomy.

**Recognize the Influencing Role of Teachers and Counselors**

Teachers and counselors should take special care to build a strong, encouraging relationship with DE students so that they will continue to engage and persist in their academic work to gain the skills, behaviors, values and motivations of college students and foster a positive self-perception as future college students. Teachers and counselors were recognized by students as influencers in their enrollment in DE and development of self-perceptions as future college students. Teachers in particular were identified by students in this study as major influencers in each step of the DE progression: in students’ decisions to enroll in DE courses, as a source of information for their concepts of college
students, as a shaping force during the DE experience, and in their perceptions of themselves as future college students. Their presence as an influencing factor was more consistent through the phases of the DE experience than family or friends. Therefore, teachers need to be aware of that influence and pay attention to what they say, how they act, and the impact both their words and actions can have on students. Wentzel (2015) concurred, “In studies of perceived support from teachers, parents and peers, perceived support from teachers was unique in its relation to students’ pursuit of goals to learn” (p. 263).

The impact of teachers’ words and actions is magnified because student-teacher interactions create a two-way relationship that feeds on itself, growing stronger if it is positive, or leading to withdrawal if it is negative. As Simpkins et al. (2015) wrote:

> High quality relationships with teachers serve to bolster students’ perceptions of their competence, autonomy, and relatedness, which in turn elicit further teacher support. In contrast, unsupportive interactions between teachers and students makes it more likely that students will perceive themselves as unwelcome, incompetent, and pressured. In turn, these negative self-perceptions lead to further withdrawal of support from the teacher (p. 624).

**Consider Students’ Characteristics and Readiness for DE**

Recognizing DE as a transition from high school to college means those who recommend or register students for DE courses need to consider the readiness of the student – not just academically, but socially and developmentally as well. Students stated that teachers and counselors were major influencers on their decisions to engage in DE courses and sources of information about the DE options available. The transition itself, the individual, and the environment “determine the degree of impact a given situation
will have at a particular time” (Evans, 2010, p. 213). Using the 4 S’s in transition theory – situation, self, support and strategies – provides a framework teachers and counselors can use to determine if a student is ready to enter the transition from high school to college through DE or not, and even what delivery mode would be best for the student. Basically, is the student ready for the change? Is the timing right for the student to engage in college-level work and experience college-level expectations? Does the student have concurrent stress, such as working or an unstable family situation? What is the student’s background? What aids does the student have for coping? What is his or her self-efficacy level? What does the student have as far as social support – family and friends? What institutional supports are available? Which delivery mode would be best for the student given all of the other considerations and the different impacts the mode has on students? If a student does not pass a DE class, teachers, counselors, and administrators need to plan ways to help students use strategies to manage and process the failure.

Develop DE Programs to Purposefully Increase Equity

Although considerations to ensure the optimal chance of student success should be made when placing students into DE courses, students not traditionally in the “college track” could greatly benefit from participation in DE. Renn and Reason (2013), Welsh et al. (2005), Museus et al. (2007), An (2013), Taylor (2015), and Haskell (2016) acknowledged that opportunities for academic preparation are not the same for all students, including within DE programs. Underserved students, especially those with low SES backgrounds, could benefit from the skills, behaviors, and values learned through DE that create academic and social capital and lead to role acquisition and self-
perceptions as future college students if DE programs and courses were designed and implemented with an equity-minded purpose. Teachers and counselors have an opportunity to be institutional agents that help create a network for students to gain such needed capital. A few programs have targeted underserved students, such as CCI in California (Hughes et al., 2012) and CAP in Oklahoma (Foster, 2010), with positive results. However, nationally that focus is still lacking. Barnett and Stamm (2010) point to different state policies that bar access for some students, such as funding models, location, and entrance criteria. As presented in Chapter 3, this study is situated in state and local conversations as well as a national discourse. State and local DE decision-makers need to examine their policies and practices regarding DE to look for ways to remove barriers and increase access for underserved students, thus making DE a force for equity – providing all students with an opportunity to increase college attainment with its corresponding individual and societal benefits.

Chapter Summary

All of the existing theories, the findings of this study, and the conclusions and related literature presented in this chapter culminated in a proposed theory and model illustrating the socializing influence of DE on high school students as future college students. The theory includes characteristics, influences and perceptions students possess before entering the DE experience. Once in the DE experience, high schools students’ concepts of college students and themselves as future college students are influenced by the coursework, teachers, environment, and classmates. The delivery mode contributes to
the environment and shapes the socialization of students in different ways depending on the mode – concurrently in the high school, online through the college, or on a college campus. Also while in DE courses, students are influenced by their perceived levels of autonomy and self-efficacy based on the skills, behaviors, values and motivations they acquire through the experience. After they complete their DE courses, they decide whether to continue towards becoming a future college student or away from becoming a future college student depending on the expected value they perceive they will gain from the choice. Students determine the value based on their interest or enjoyment of college-related aspects of DE, their estimation of college’s value in attaining their short- and long-term goals, their perceived alignment of becoming a future college student with their own self-identity, and their perceived cost of becoming a future college student. Their decision will lead to college enrollment after high school graduation or future college attendance, or non-enrollment in college with no plans for future college attendance.

After discussing the theoretical model, the chapter presented recommendations for future research and implications for practice. Both the recommendations for future research and the implications for practice stem from the results of this study and related literature. Future research included recommended studies on connections between the DE experience and students who enlist in the military, the impact on students who do not successfully pass their DE classes, the influence of different delivery modes, and viewing DE as a transition. Implications for practice encompassed applying student development theories to DE students, explicitly teaching college skills, increasing autonomy in
concurrent classes, recognizing the importance of the teacher and counselors, considering student characteristics and readiness when placing students in DE, and developing DE programs to increase equity.

**Final Conclusion**

This study contributes to the conversation swirling around DE by moving beyond a discussion of college-related outcomes and focusing instead on the psycho-social influence of the DE experience on students, thus opening a dialogue about DE as a transitional experience that socializes students as future college students and encompasses student development theories, role acquisition theories, and transition theories. The essence of this entire study condenses into the fact that DE aligns with theories of role acquisition and socialization, and the phenomenon needs to be recognized for its influence on high school students’ perceptions of themselves as future college students and behaviors towards becoming future college students. As a transition mechanism, DE holds the potential to be a force for equity, reaching students who might otherwise not pursue a postsecondary education and, therefore, possibly remove themselves from a path that leads to an improved life with individual and societal benefits. Thus, those planning and implementing DE courses and programs need to consider the factors found to influence the students’ socialization and perceptions – the coursework; the teacher; classmates; and the environment, including the delivery mode; and teacher expectations that lead to perceived autonomy, perceived levels of confidence, and the acquisition of skills related to being a successful college student. All of these
factors possess the potential to influence students’ perceptions of themselves as future college students or not, and then to attend college or not.

For some students, the choice between attending college or not is the difference between a life of poverty or not. Fully embracing the methodology of Charmaz (2014) and exercising my own constructivist methodological belief to let the students speak for themselves, I conclude with this final quote from a student who recognized both the influence of DE and the impact of a college education on her life as well as on her family:

Honestly, I think the dual credit classes helped out SO much. They really did make me think I could handle college, especially after most of my family decided college was too hard…they always said you didn’t need it, but all of the career options I was thinking about did need it, but they pretty much [paused] I always saw them getting entry level jobs and always struggling with money, so I wanted to prove that I could change it and make sure we’re not a struggling family anymore.


APPENDIX A

SUMMARY TABLE OF EMPIRICAL STUDIES EXAMINING DUAL ENROLLMENT STUDENT OUTCOMES
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Publication</th>
<th>Date</th>
<th>Research Design</th>
<th>Sample</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen, D. &amp; Dadgar, M.</td>
<td>Does dual enrollment increase students’ success in college? Evidence from a quasi-experimental analysis of dual enrollment in New York City</td>
<td>New Directions for Higher Education, 2012(158)</td>
<td>2012</td>
<td>Quantitative – regression analysis and difference in differences approach on data provided by CUNY and the NYC Department of Education</td>
<td>Fall 2009 first-time freshmen at CUNY’s 17 campuses who enrolled within 15 months of graduating from a NYC public school. n=22,962</td>
<td>DE students are more likely, take more courses, and have higher GPAs</td>
</tr>
<tr>
<td>An, B.P.</td>
<td>The impact of dual enrollment on college degree attainments: Do low-SES students benefit?</td>
<td>Educational Evaluation and Policy Analysis, 35(1)</td>
<td>2013</td>
<td>Quantitative – data from the National Education Longitudinal Study survey, propensity score matching, sensitivity analysis</td>
<td>Students who were 8th graders in 1988 but enrolled in postsecondary education at the time the fourth NELS:88 survey was administered in 1994. n=8,800</td>
<td>The positive effects of DE, specifically college attainment, were stronger for students with lower-SES than more affluent peers</td>
</tr>
<tr>
<td>An, B.P.</td>
<td>The role of academic motivation and engagement on the relationship between dual enrollment and academic performance</td>
<td>The Journal of Higher Education, 86(1)</td>
<td>2015</td>
<td>Quantitative – Structural equation modeling on 2008 data from the Wabash National Study of Liberal Arts Education (WNSLAE)</td>
<td>Fall 2008 first-time freshmen from 19 campuses part of the WNSLAE. n=3,779</td>
<td>Motivation and engagement accounted for 20% of the increased performance for DE students</td>
</tr>
<tr>
<td>Crouse, J.D. &amp; Allen, J.</td>
<td>College course grades for dual enrollment students</td>
<td>Community College Journal of Research and</td>
<td>2014</td>
<td>Quantitative – regression analysis</td>
<td>Students enrolled in 14 community colleges in Iowa between AY</td>
<td>DE students achieved about the same as non-DE students at community colleges but</td>
</tr>
<tr>
<td>Authors</td>
<td>Title</td>
<td>Journal</td>
<td>Year</td>
<td>Methodology</td>
<td>Findings</td>
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<tr>
<td>Eimers, M.T. &amp; Mullen, R.</td>
<td>Dual credit and advanced placement: Do they help prepare students for success in college?</td>
<td>Presentatio n at the 43rd Annual AIR Conference</td>
<td>2003</td>
<td>Quantitative – linear and logistic regression</td>
<td>AP students have higher first-year GPAs than DE students; both AP and DE students persist better</td>
<td></td>
</tr>
<tr>
<td>Foster, R.</td>
<td>Cooperative and concurrent enrollment and college retention</td>
<td>Journal of Career and Technical Education, 25(2)</td>
<td>2010</td>
<td>Quantitative – correlated data from institutional records</td>
<td>Students in the Cooperative Alliance Program (CAP) – a DE pathway focused on technology programs – earned more credits, retained, and had higher GPAs than non-CAP students</td>
<td></td>
</tr>
<tr>
<td>Gore, P.</td>
<td>Academic self-efficacy as a predictor of college outcomes: Two incremental validity studies</td>
<td>Journal of Career Assessment, 14(1)</td>
<td>2006</td>
<td>Quantitative - Hierarchical linear regression on data from the</td>
<td>Freshmen enrolled in a 3-credit transition course at a large, public Midwestern Academic self-efficacy beliefs predict college outcomes but the relationship depends on</td>
<td></td>
</tr>
<tr>
<td>Haskell, R.E.</td>
<td>The effects of dual-credit enrollment on underrepresented students: The Utah case</td>
<td>Internation Journal of Economics and Finance, 8(1)</td>
<td>2016</td>
<td>Quantitative - Utah Data Alliance longitudinal dataset, Propensity Score Matching method (PMS) with Receiving Operator Characteristic (ROC) Analysis applied to variations on the PMS models</td>
<td>Utah public high school graduates from AY 2008 and 2009. n=90,642</td>
<td>Found positive effects for each of the examined student populations differentiated by gender, race, income and English Language Learner status. Strong economic effects also found for underrepresented DE students.</td>
</tr>
</tbody>
</table>
| Hughes, K.L., Rodriguez, O., Edwards, L., & Belfield, C. | Broadening the benefits of dual enrollment: Reaching underachieving and underrepresented students with career-focused programs | Community College Research Center | 2012 | Mixed method – qualitative interviews, quantitative surveys | Students participating in 8 Concurrent Courses Initiative programs in California Fall 2008, Spring 2009, and Spring 2010. n=1,131 AY 2008 and 1,515 AY 2009 | DE participants were more likely when compared to similar students who did not participate to graduate from high school, enroll in a four-year college and persist in postsecondary education. They also accrued more college credits than comparison students and were less likely to enroll.

<p>|  | ACT, and national self-efficacy scales (CSEI and ASC) | university in AY 2000 to 2003. n=629 | when efficacy beliefs are measured, the types of efficacy beliefs measured, and the nature of the criteria used. |</p>
<table>
<thead>
<tr>
<th>Jones, S. J.</th>
<th>Student participation in dual enrollment and college success</th>
<th>Community College Journal of Research and Practice, 38(1)</th>
<th>2014</th>
<th>Quantitative – causal-comparative, multivariate analysis of variances</th>
<th>First-time, full-time students at a comprehensive 2-year college and a research university in Texas during AY 2002 to 2005 who had completed dual credit classes between AY 2001 and 2003. n=576</th>
<th>DE students do have higher first-year GPAs; no difference in persistence at community colleges, but better persistence at 4-year research university</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lewis, T.L.</td>
<td>Student reflections: The impact of dual enrollment on transitions to a state university</td>
<td>University of South Florida Scholar Commons</td>
<td>2009</td>
<td>Qualitative - survey</td>
<td>First-time freshmen at a large, metropolitan research university Summer 2007 and Fall 2008 who had previously completed DE</td>
<td>Identified several themes students described about DE and its effects on their transition to a university</td>
</tr>
<tr>
<td>Author</td>
<td>Study Title</td>
<td>Journal/Institution</td>
<td>Year</td>
<td>Methodology</td>
<td>Data Description</td>
<td>Findings</td>
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<tr>
<td>O’Keefe, L., Hayes, D., Easton-Brooks, D., &amp; Johnson, T.</td>
<td>Advanced placement, dual credit, and four-year college graduation</td>
<td>Enrollment Management Journal</td>
<td>2010</td>
<td>Quantitative — ANOVA, Levene’s test of homogeneity, and a Scheffe post-hoc analysis on institutional data</td>
<td>Fall 2004 first-time freshmen at a large public university in Texas. n=3,566</td>
<td>Students in AP programs achieved the highest graduation rates, followed by DE students and then non-AP and non-DE students.</td>
</tr>
<tr>
<td>Rodriguez, O., Hughes, K.L., &amp; Belfield, C.</td>
<td>Bridging college and careers: Using dual enrollment to enhance career and technical education pathways</td>
<td>National Center for Postsecondary Research</td>
<td>2012</td>
<td>Quantitative — ordinary least squares and probit regression models, propensity score model to reduce selection effects</td>
<td>Students in the Concurrent Courses Initiative in California AY 2008 and 2009. No sample size reported.</td>
<td>DE students had higher high school graduation rates. College enrollment in general was neutral; however, DE students were more likely to enroll in a 4-year university, earn more credits, and persist more.</td>
</tr>
<tr>
<td>Smith, D.</td>
<td>Why expand dual-credit programs?</td>
<td>Community College Journal of Research and Practice, 31(5)</td>
<td>2007</td>
<td>Quantitative — self-reported survey data, multiple regression analysis</td>
<td>DE students in 5 rural Kansas high schools in January 2005. n=304</td>
<td>There is a significant relationship between DE and college aspirations; the effect was greater for students taking DE classes on a college campus compared to concurrently in the high school. Participation in DE was even a higher predictor of college aspirations than grades or</td>
</tr>
<tr>
<td>Author</td>
<td>Title</td>
<td>Institution</td>
<td>Year</td>
<td>Methodology</td>
<td>Results</td>
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<td>Speroni, C.</td>
<td>High school dual enrollment programs: Are we fast-tracking students too fast?</td>
<td>National Center for Postsecondary Research</td>
<td>2012</td>
<td>Quantitative – regression discontinuity on data from the Florida Department of Education</td>
<td>Florida public high school seniors in AY 2000 and 2001. No sample size reported. DE did not affect high school graduation, effect of DE on college enrollment negligible; however, positive effects for students in DE-college algebra specifically</td>
<td></td>
</tr>
<tr>
<td>Spurling, S. &amp; Gabriner, R.</td>
<td>The effect of concurrent enrollment programs upon student success at City College of San Francisco: Findings</td>
<td>City College of San Francisco</td>
<td>2002</td>
<td>Quantitative</td>
<td>Fall 1998-2000 CCSF freshman, 2,274 students. DE students earned more credits and higher GPAs than non-DE students</td>
<td></td>
</tr>
<tr>
<td>Struhl, B. &amp; Vargas, J.</td>
<td>Taking college courses in high school: A strategy for college readiness – The college outcomes of dual enrollment in Texas</td>
<td>Jobs for the Future</td>
<td>2012</td>
<td>Quantitative – propensity scoring matching model and logistic regression</td>
<td>High school seniors in Texas AY 2003 matched by DE participation and students with similar characteristics who were not DE students. n=32,908. DE students more likely to enroll, retain, and complete</td>
<td></td>
</tr>
<tr>
<td>Swanson, J.</td>
<td>An analysis of the impact of high school dual enrollment course participation on post-secondary academic success, persistence and degree completion</td>
<td>University of Iowa</td>
<td>2008</td>
<td>Quantitative – logistic regression</td>
<td>National NELS: 88/2000 and PETS:2000 data sets. DE students more likely to enroll, persist and complete college than non-DE students</td>
<td></td>
</tr>
<tr>
<td>Author(s)</td>
<td>Title</td>
<td>Journal</td>
<td>Year</td>
<td>Methodology</td>
<td>Population</td>
<td>Findings</td>
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<tr>
<td>Taylor, J.L.</td>
<td>Accelerating pathways to college: The (in)equitable effects of community college dual credit</td>
<td>Community College Review, 43(4), 355–379</td>
<td>2015</td>
<td>Quantitative – propensity scoring matching on data in Illinois</td>
<td>Illinois high school seniors who graduated in 2003. n=41,727</td>
<td>Dual credit policies positively affect all students, but less for low-income students and students of color suggesting that existing dual credit policies are inequitable.</td>
</tr>
<tr>
<td>Welsh, J.F., Brake, N., &amp; Choi, N.</td>
<td>Student participation and performance in dual-credit courses in a reform environment</td>
<td>Community College Journal of Research and Practice, 29(3)</td>
<td>2005</td>
<td>Quantitative – regression analysis on Kentucky Community and Technical College System data</td>
<td>Students enrolled in Kentucky community and technical colleges Fall 2000 and Fall 2001. n=1,914</td>
<td>DE participation increasing, underserved students increasing</td>
</tr>
</tbody>
</table>
APPENDIX B

SUMMARY TABLE OF EMPIRICAL STUDIES EXAMINING DUAL ENROLLMENT STUDENT INPUTS OR POSSIBLE CONFOUNDING VARIABLES
<table>
<thead>
<tr>
<th>Author/Authors</th>
<th>Title</th>
<th>Publication</th>
<th>Date</th>
<th>Research Design</th>
<th>Sample</th>
<th>Findings</th>
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</thead>
<tbody>
<tr>
<td>An, B.P.</td>
<td>The impact of dual enrollment on college degree attainment: Do low-SES students benefit?</td>
<td>Educational Evaluation and Policy Analysis, 35(1)</td>
<td>2013</td>
<td>Quantitative – data from the National Education Longitudinal Study survey, propensity score matching, sensitivity analysis</td>
<td>Students who were 8th graders in 1988 but enrolled in postsecondary education at the time the fourth NELS:88 survey was administered in 1994, n=8,800</td>
<td>The positive effects of DE, specifically college attainment, were stronger for students with lower-SES than more affluent peers</td>
</tr>
<tr>
<td>An, B.P.</td>
<td>The role of academic motivation and engagement on the relationship between dual enrollment and academic performance</td>
<td>The Journal of Higher Education, 86(1)</td>
<td>2015</td>
<td>Quantitative – Structural equation modeling on 2008 data from the Wabash National Study of Liberal Arts Education (WNSLAE)</td>
<td>Fall 2008 first-time freshmen from 19 campuses part of the WNSLAE, n=3,779</td>
<td>Motivation and engagement accounted for 20% of the increased performance for DE students</td>
</tr>
<tr>
<td>Edmunds, J.A.</td>
<td>Early colleges: A new model of schooling focusing on college readiness</td>
<td>New Directions for Higher Education, 158</td>
<td>2012</td>
<td>Qualitative – case study, interviews</td>
<td>9th and 10th graders in North Carolina’s early college models beginning in AY</td>
<td>Students in early colleges in North Carolina describe positive indicators of college readiness</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Title</td>
<td>Journal</td>
<td>Year</td>
<td>Methodology</td>
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<td>Haskell, R.E.</td>
<td>The effects of dual-credit enrollment on underrepresented students: The Utah case</td>
<td>International Journal of Economics and Finance, 8(1)</td>
<td>2016</td>
<td>Quantitative - Utah Data Alliance longitudinal dataset, Propensity Score Matching method (PMS) with Receiving Operator Characteristic (ROC) Analysis applied to variations on the PMS models</td>
<td>Utah public high school graduates from AY 2008 and 2009. n=90,642</td>
<td>Found positive effects for each of the examined student populations differentiated by gender, race, income and English Language Learner status. Strong economic effects also found for underrepresented DE students.</td>
</tr>
<tr>
<td>Johnson, T.E. &amp; Brophy, M.</td>
<td>Dual enrollment: Measuring factors for rural high school student participation</td>
<td>The Rural Educator, 28(1)</td>
<td>2006</td>
<td>Quantitative – survey, factor analysis</td>
<td>Conveniences sample of Running Start students in 2 rural counties in Washington. No date was given. n=162</td>
<td>Four factors were found to be related to students enrolling in DE: academics, financial, social, and choice reasons</td>
</tr>
<tr>
<td>Museus, S.D., Lutovsky, B.R. &amp; Colbeck, C.L.</td>
<td>Access and equity in dual enrollment programs: Implications for policy formation</td>
<td>Higher Education in Review, 4</td>
<td>2007</td>
<td>Quantitative – survey, descriptive statistics</td>
<td>Higher education institutions in Pennsylvania who offered DE courses AY 2003. n=42</td>
<td>Inequities in student participation exist in DE. Specifically, DE students were predominantly White or Asian and from higher income brackets.</td>
</tr>
<tr>
<td>Ozmun, C.D.</td>
<td>College and academic self-</td>
<td>Community College</td>
<td>2013</td>
<td>Quantitative – surveys: College Juniors and seniors</td>
<td>Before taking DE classes, students reported high motivation but not college</td>
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<tr>
<td>Study</td>
<td>Title</td>
<td>Journal/Subtitle</td>
<td>Year</td>
<td>Methodology</td>
<td>Population</td>
<td>Findings</td>
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<tr>
<td>Smith, D.</td>
<td>Why expand dual-credit programs?</td>
<td>Community College Journal of Research and Practice</td>
<td>2007</td>
<td>Quantitative self-reported survey data, multiple regression analysis</td>
<td>DE students in 5 rural Kansas high schools in January 2005. n=304</td>
<td>There is a significant relationship between DE and college aspirations; the effect was greater for students taking DE classes on a college campus compared to concurrently in the high school. Participation in DE was even a higher predictor of college aspirations than grades or parents’ education level.</td>
</tr>
<tr>
<td>Taylor, J.L.</td>
<td>Accelerating pathways to college: The (in)equitable effects of community college dual credit</td>
<td>Community College Review</td>
<td>2015</td>
<td>Quantitative propensity scoring matching on data in Illinois</td>
<td>Illinois high school seniors who graduated in 2003. n=41,727</td>
<td>Dual credit policies positively affect all students, but less for low-income students and students of color suggesting that existing dual credit policies are inequitable.</td>
</tr>
<tr>
<td>Young, R.D., Slate, J.R., Moore, G.W., &amp; Barnes, W.</td>
<td>Dual credit enrollment: A multiyear study of gender and ethnic differences</td>
<td>Urban Studies Research</td>
<td>2013</td>
<td>Quantitative chi-squares with a Bonferroni correction on institutional data</td>
<td>Students enrolled in a Southwestern Texas community college AY 2004 through 2011.</td>
<td>DE students are more likely to be female, Asian and White</td>
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<td>n=164,43</td>
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APPENDIX C

SUMMARY TABLE OF EMPIRICAL STUDIES EXAMINING THE RELATIONSHIP BETWEEN DE AND SOCIALIZATION OR ROLE ACQUISITION THEORIES
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Publication</th>
<th>Date</th>
<th>Research Design</th>
<th>Sample</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karp, M.M.</td>
<td>“I don’t know, I’ve never been to college!” Dual enrollment as a college readiness strategy</td>
<td>New Directions for Higher Education, 158</td>
<td>2012</td>
<td>Qualitative case study - semi-structured interviews and classroom observations</td>
<td>Students enrolled in DE courses at 2 community colleges in New York City. n=26</td>
<td>Students are better able to articulate what it means to be a college student after the DE experience</td>
</tr>
<tr>
<td>Lewis, T. L.</td>
<td>Student reflections: The impact of dual enrollment on transitions to a state university</td>
<td>Graduate Theses and Dissertations</td>
<td>2009</td>
<td>Qualitative case study – interviews</td>
<td>Former DE students enrolled as first-time freshmen at a large, metropolitan university Summer 2007 and Fall 2008. n=21</td>
<td>Students reported mixed results as to the influence DE had on their intention to attend college; however, they expressed more confidence in themselves as college students after DE</td>
</tr>
<tr>
<td>Philpott-Skilton, L.</td>
<td>High school/college transitions: A case study examining the impact of a dual credit program at Fleming College</td>
<td>Graduate Theses and Dissertations</td>
<td>2013</td>
<td>Mixed methods – survey and interviews</td>
<td>Former DE students enrolled at Fleming College in Ontario AY Fall 2010. n=16</td>
<td>Students reported DE aided in the transition to college by providing insight into the expectations of college life</td>
</tr>
</tbody>
</table>
APPENDIX D

INTERVIEW GUIDE AND TABLE OF SPECIFICATIONS
<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Interview Questions</th>
<th>Justification</th>
</tr>
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</table>
| **RQ1:** 1. How do students describe their DE experiences’ influence on their socialization as future college students? | Q1. Tell me about your dual enrollment courses: which ones you took, when, why you chose them.  
Q2: Tell me about how you would have described a college student before you took a dual credit class.  
Q3: Tell me about how you would describe a college student now.  
Q4: Tell me about some of the differences you noticed between being a high school student and a college student.  
Q5: Tell me about how you saw yourself in terms of being a college student before you took the dual credit class.  
Q6: Tell me about how you describe how you saw yourself as a college student after the dual credit class?  
Q7: Tell me about how taking dual credit classes influence how you saw yourself as a college student? | Question 1 gathers information about the context of the participant’s experience.  
Questions 2-4 gather data about the perceived differences between being a high school student and a college student.  
Questions 5 and 6 are asked to gather information about students’ pre- and post-DE self-perceptions about themselves as college students so that comparisons and contrasts can be made between the before and after of the experience.  
Question 7 gathers data about how the students’ perceive the effects of the DE experience on their self-perceptions as college students and is being used to see if students can identify a transition in their acceptance of their role as a college student or socialization as a future college student. |
| **RQ2:** What aspects of the DE experience do students | Q8: Tell me about any parts of your dual credit | Questions 8-10 ask the student to identify specific aspects of the DE experience. |
say influenced their attitudes towards, behaviors as, and perceptions of themselves as future college students?

experience that influenced how you felt about yourself as a future college student.

Q9: Tell me about any types of things you did in your dual credit class that helped you prepare for college.

Q10: Tell me about any parts of your dual credit experience that affected how you saw yourself as a future college student.

components of the DE experience that influenced their attitudes, behaviors, and perceptions of themselves as future college students.

Parts of the experience could include the location (in a high school, on campus, or online), the types of assignments, the registration process, more self-directed learning, the relationship with faculty, peer interactions, etc.

RQ3. How do students say the delivery mode of their courses shaped their DE experiences (online, on campus, and concurrently in the high school)?

Data from the above questions will be compared and contrasted to examine similarities and differences in the experiences based on delivery mode. If students participated in more than one mode, students will be asked Q11: Tell me about how the different settings influenced how you saw yourself as a college student.

The literature proposed that the more “authentic” the DE experience is to college, the more benefit there is to students. On campus classes would be the most authentic location. In addition, students in the pilot study identified the setting as an influence on their self-perceptions of themselves as college students. Therefore, the location or delivery mode has been identified as an aspect of the experience that warrants further research.

Demographic Questions

At the end of the interview students will be asked to self-report certain information: age, gender, ethnicity, income level, GPA, first-generation status, parental expectations, high school

This information will be used for comparative purposes and included in the Sample Characteristics table.
they attended while taking DE courses
APPENDIX E

TELEPHONE INVITATION SCRIPT
Telephone Invitation Script

Hello, _______________________. This is Leanne Frost. I am working on my doctorate at MSU. I am doing a research study on dual credit, and you were referred to me because you have completed dual credits at Great Falls College MSU.

As part of the research study, I'm meeting with former dual credit students to ask them about their experiences in the courses. You do need to be at least 18 years old and have completed credits as a dual enrollment student at Great Falls College. Do you meet those qualifications?

YES - If so, I would like to invite you to be part of the study. Participation is completely voluntary. If you agree, I'd like to set up a day and time to meet with you in a classroom on campus and ask you some questions. It will probably take about an hour. You can choose to not answer any of the questions and can end the discussion at any time. Participating or not participating will not affect your grades or class standing. Would you be willing to participate in the study and meet with me to answer some questions?

NO - Okay. Thank you for taking a few minutes to talk with me. Enjoy the rest of your day.
APPENDIX F

CONSENT FORM
Consent Form
SUBJECT CONSENT FORM FOR PARTICIPATION IN HUMAN RESEARCH AT MONTANA STATE UNIVERSITY

Dual Enrollment’s Influence on the Socialization of Future College Students: A Grounded Theory Study

You are being asked to participate in a research study about dual credit. This may help us better understand how the dual credit experience affects students. You were referred to me because you earned dual enrollment credits through GFC MSU.

Participation is voluntary. If you agree to participate you will be asked to answer some questions about yourself. You can choose to not answer any questions you do not want to answer and/or you can stop at any time. Participation or non-participation in the study will not affect your grades or class standing.

It will probably take about an hour to answer the questions. I will be taking notes of your answers and also recording the conversation on a digital recorder and on my iPad. After I transcribe our conversation, I will give you a copy to review. You can make any changes you feel better reflect your feelings, thoughts, and answers to the questions.

There are no foreseen risks for you. This study is of no direct benefit to you. If don’t want to participate, another student will be included in the study instead. This study is not being funded by any group or organization. There is no cost to you.

Please feel free to ask questions at any time. Your name will not be used in the study. A fake name will be used when discussing your responses. The recordings and transcriptions will be kept on password-protected devices – my laptop computer and iPad. Any printed copies will be kept in a locked filing drawer in my home office.

If you have any questions about the study, you can call me at 406-671-7233 or email me at leanne.frost@gfcmsu.edu. If you have any questions about the rights of human subjects in research studies, you can contact the Chair of the Institutional Review Board, Mark Quinn, at 406-994-4707 or mquinn@montana.edu.

______________________________

AUTHORIZATION: I have read the above and understand the discomforts, inconvenience and risk of this study. I, ________________________________, agree to participate in this research. I understand that I may later refuse to participate and that I may withdraw from the study at any time. I have received a copy of this consent form for my own records.

Signed: ____________________________________________

Investigator: ____________________________________________

Leanne Frost

Date: ____________________________________________