Research Questions

Focus Question: What are the effects of using varied feedback styles on students’ understanding of sixth grade science concepts?

1. What are the effects of using varied feedback styles on students’ attitudes towards sixth grade science?
2. What specific forms of feedback might be more effective at enhancing student learning?
3. What are the effects of using varied feedback styles on my preparation time and teaching methods?

Methodology

Topic 1: Non-Treatment
- Study conducted with 87 sixth grade students in four different classes.
- During non-treatment phase students were only provided with a rubric highlighting their achievement status.
- During each phase, students were provided with proficient and extending proficient samples of work to use as references.
- During each phase, students completed a pre and post assessment to use as reference for content and conceptual improvements.
- After each phase, students complete a next steps checklist using a feedback template.

Topic 2: Treatment 1 Narrative Feedback
- Treatment 1 Narrative Feedback, Treatment 2 Video Feedback, Treatment 3 Oral Feedback

Topic 3: Treatment 2 Video Feedback

Topic 4: Treatment 3 Oral Feedback

Analysis and Interpretation

The two topics that had the lowest number of students with a proficient understanding of core ideas during the pre-assessment had the greatest percent increase in number of student with a proficient understanding on the post-assessment. The inexperience with core ideas from these topics provided the best opportunity for students to gain new knowledge and demonstrate improved comprehension of these core ideas.

Before the project began less than 67% of the students had at least one form of feedback they felt they strongly agreed could help them improve their learning this increased to nearly 80% of the class by the end of the project. This indicates a great comfort for most students in making use of feedback to improve learning.

All forms of feedback had an increase in student agreement that it helped them. Rising from as low as 9% and as much as 14%. All forms of feedback had a decrease in student disagreement of how it would not help them, from 2% to 10%. Experience with feedback seems to improve students ability to make use of suggestions and to reflect on questions posed.

Student Quotes

Narrative written feedback is a really helpful way to reflect on the things I should continue to do and also things I need to improve on to proceed and succeed in science class.

Oral feedback works best because Mr. N can show me directly on my test or survey and he can explain more on what I did wrong or how to improve it.

Video feedback shows what I have to do so I can be clear with my work on my test or survey and he can explain more on what I did wrong or how to improve it.

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Student responses and post assessment results indicate that varied feedback has a positive impact on student’s understanding of grade 6 science concepts. Class members find feedback helps them feel more confident and questions posed during feedback sessions help guide them to accurate answers on their own or to build on previous thoughts.

Conclusion

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