**I Think, I Think I’m Learning: The Power of Dialogue and Metacognition in Learning**

Abstract

This paper will share the findings of a six-week study that focused on using discussions and metacognitive practices with a young learner. With the goal of positively influencing learner perception and awareness, the researcher implemented intervention activities once weekly with one student. One of these intervention activities was a questionnaire that the student used to evaluate his mood and reflect on his learning. The second intervention was brief conversations between the teacher and student regarding the student’s responses, his apparent mood, and his reactions to learning. On the questionnaire and discussions gave the student an opportunity to reflect on his thoughts and feelings towards learning in general as well as the specific content covered during that session. The processes and results of this study are described throughout the remainder of this paper.

Introduction

The inclusion of discussions and metacognitive strategies in early literacy instruction can give great insight into student perceptions and performance. With the goal of promoting student self-efficacy and early reading success, the researcher implemented dialogue and reflective activities for each academic session with one young learner over the course of six weeks. The participant in this study attended an academic tutoring program one day each week. The interventions implemented in this study were reflective activities that required the student to conduct a self-evaluation of his emotional outlook and performance both before and after the session. These self-evaluations were recorded by the student on a six-item questionnaire that incorporated an open reflection of learning. Observations and session summaries were recorded by the researcher during and following each academic session as well.  
After completing the questionnaire, the student and teacher proceeded with the academic lessons pre-planned for the day. These lessons were assigned automatically by the learning platform. The technology-based learning platform consists of individualized lessons organized by progression where students will complete pretests, guided practice, independent practice, and mastery tests. This method for academic teaching is implemented center-wide at the tutoring institution where the research took place. The researcher also recorded detailed notes about the child’s responses to the questionnaire in addition to note pertaining to specific lessons and supplemental hands-on activities.   
The results of this study show that metacognitive strategies help students become more aware of their ways of learning. This study also found that student self-efficacy increased with the student’s ability to analyze himself as a learner. In order to gain more information on the implementation of these strategies and how they affect student self-efficacy and early reading success, the length of the study should be extended to allow for additional data collection. Also, the sample size and implementation group size should be manipulated to determine if the same outcome can be generalized or applied to larger sample sizes. Modifying and extending the study in this way will ensure a more accurate depiction of student perception and academic performance over time.

Area of Focus Statement

The purpose of this study was to determine the impact of student-teacher discussions and metacognitive practices on student learning and perception. I have always felt passionate about the topic of metacognition. This type of teaching is not commonly practiced because of the vast amount of time it requires; however, it is a research backed strategy that can have a profound impact on student learning and self-efficacy. I wanted to gain insight by implementing my own study on the topic in my own teaching environment. In the future, I plan on conducting additional studies to investigate best practices and implications of this in the classroom.

Research Questions

* How does self-efficacy change over time with the implementation of reflective activities before and after learning experiences?
* How do metacognitive strategies equip students to better understand themselves as learners?

Review of Related Literature

Monitoring and controlling one’s own thoughts and actions is an essential skill that develops with age and life experience. This gives developed learners a powerful advantage because they have had time to think about and to target their learning based on how they learn best. Wouldn’t it be nice if young learners were able to do the same? Though it is said that children begin practicing metacognition naturally around the age of eight, it is possible for younger children to develop this attribute given the proper training (Bares, 2011). Consistent implementation of metacognitive activities and discussions can lead to greater introspect with young learners.   
A huge aspect of metacognition is self-awareness. Being aware of one’s own attitudes, feelings, thoughts, and actions is the first step towards being able to control those processes. Using dialogue to develop self-awareness has been proven to work (Järvelä & Määttä, 2013). These types of interactions provide an opportunity for students to think-aloud. This helps them with reasoning and reflection skills and allows for the exchange and consideration of teacher feedback. According to Marilyn Price-Mitchell, the continual implementation of open discussions will widen student learning potential (2015). As educators, our main goal is to determine best practices for our students to achieve their highest potential.

Data Collection

The data for this study was collected by student outlook and mood questionnaires and teacher notes. Similarly to a learning journal, the short questionnaires were administered quickly at the beginning and end of each academic session. Student response sheets and accompanying notes were kept together and analyzed as a “running” document. Anecdotal notes were recorded by the researcher during the completion of the student questionnaires. The purpose of this was to provide specific details about responses and other circumstantial notes.

Data Sources

*Questionnaires* – Student questionnaires consisted of six reflective items. The student completed twpo pre-session questions about his mood and outlook for the day. Following the session he completed four items. Again, two items required self-reflection. They focused on his mood and outlook while the other two required the student reflect on the lessons from the session.   
*Observational Notes* – Notes were kept for each session. They were recorded on the back or in the margins of the student questionnaire. Researcher notes included details related to the student, the academic session, and any contextual circumstances worthy of recording.

Data Analysis and Interpretation

The data for this study is displayed in Table 1. The student showed a clear development in the quality of his metacognition over the course of this six-week study. Participant responses for the first item on the questionnaire remained fairly consistent in their quality because the student answered how he honestly felt at that moment. For the second item, he selected “10” for each session. His selection initially lead the researcher to believe that he did not understand how to use the 1-10 scale to rate his confidence; however, as the study progressed, he verbally began to display confidence for the upcoming academic session.   
The third item reflects a consistent “happy face” response. I can attest that the participant truly did end each session on a high note. His responses to the fourth question remained consistent between sessions with a unanimous response of “10”. The researcher attributed this to the fact that the participant was not experienced with the 1-10 scale. The student was pleased at the end of each academic session nonetheless. Because the responses to this question are generic, they do not answer the guiding question of how dialogue and metacognitive practices reflect student self-efficacy. The final item on the questionnaire is the most revealing question of the six items. The question focuses mainly on the metacognitive processes of the participant. As detailed below, the student’s responses slowly developed into deeper and more revealing statements about his learning. This indicated that the intervention of student-teacher dialogue and the reflective questionnaire truly did have an impact on student metacognition and self-awareness.

Final Thoughts

Upon the completion of this research study, it is clear to see that teaching metacognition helps students to monitor their learning. The findings of this study prove that it is possible to see metacognitive processes develop in young learners. The student participating in this case study will be entering into the first grade during the upcoming 2017-2018 school year. He is six years of age at the present time, and though previous studies show that metacognitive abilities naturally develop around the age of eight, this study shows that it is possible to teach these behaviors sooner (Bares, 2011).   
This study was only implemented briefly with one individual student. Therefore, more research is needed to solidify this conclusion. Steps to complete this action include a plan to implement a similar study with a class of first grade students from the beginning of the 2017-2018 school year. Results from this study will be a greater indicator of the impact that these interventions have on young learners because they will apply to several students from the same age range and will be used in larger group settings. In order to gain the most valuable insight, the student questionnaire will be altered and additional metacognitive practices will be implemented at various times throughout the school day.

References

Bares, C. B. (2011). Emerging metacognitive processes during childhood: Implications for intervention   
 development with children. *Child Adolescent Social Work Journal,* 28, 291–299. DOI   
 10.1007/s10560-011-0233-1

Määttä, E. & Järvelä, S. (2013).Involving children in reflective discussions about their perceived self-  
 efficacy and learning experiences. *International Journal of Early Years Education*, 21(4), 309–  
 324. DOI 10.1080/09669760.2013.867836

Price-Mitchell, M. (2015). Metacognition: Nurturing self-awareness in the classroom. Brain Based   
 Learning. Retrieved from https://www.edutopia.org/blog/8-pathways-metacognition-in-  
 classroom-marilyn-price-mitchell

Appendix A

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Table 1  *Student Responses and Observational Notes* | | | | | | | |
|  | Date | 6/14 | 6/21 | 6/28 | 7/5 | 7/12 | 7/19 |
| Pre-session Questions | Item 1:  How are you feeling today? | ☺ | ☺ | ☹ | ☺ | ☺ |  |
| I explained the questionnaire to the participant and read him the questions. He seemed apprehensive, but complied with my request. | After I read the question to him, he replied, “really, really happy”. | The student expressed that he was “sleepy.” | When the question was asked, the student replied, “My head hurts, but I’m happy.” | The participant was excited to begin the lesson for the day. He said that he could not wait to see what he would learn. | I believe that he did not want to be separated from his mother to attend the session. She walked through the workroom on the way to the office for a conference, and his eyes immediately brightened. He said, “Mommy!” in a cheerful tone. |
| Item 2:  How well do you think you will do today? | 10 | 10 | 10 | 10 | 10 | 10 |
| The student did not understand how to use the 1-10 scale. I attempted to explain, but this concept was too advanced for him at that time. | The student did not fully understand how to use the 1-10 scale, but he said he thought he would do “really, really good”. | The student expressed that he would do “good” on the lessons for the day. | The student said that he would do “okay”, yet he still circled a 10. | The student told me that he would do “really good” on his lessons for the day. | The participant circled 8, then erased it and circled the 10. When asked to justify his change, he said “I think I can do better.” |
| Post-session Questions | Item 3:  How are you feeling now? | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ |
| Item 4:  How well do you think you did today? | 10 | 10 | 10 | 10 | 10 | 10 |
| Item 5: What did you learn today? | “my lattr” | “lattrs” | “trpic” “lattrs” | “story” | “cnnasons” | “rmwrs” |
| The student replied, “my letters”. The material covered for this session was the order of the letters in the alphabet. | The student replied that he learned his “letters.” The material covered for the day was beginning consonant blends. | The student responded that he learned about topic and letters. The actual material covered matched his reflection. Specific phonics concepts addressed were mixed consonant blends. | The participant responded by saying that he learned stories during the day’s lesson. During the session, we worked on identifying the setting of a story. | When  I asked the participant to say his response, he said “connections!” We worked on making personal connections with text during this academic session. | When asked what he learned during the lessons for the day, the participant replied “rhyming words.” We worked on rhyming words and word families during the day’s session. |
| Item 6:  How well do you think you understand what you learned? | 10 | 10 | 10 | 9 | 10 | 10 |
| The student circled 10, though I am unsure he understood the 1-10 scale. I explained the concept of the scale again regardless. | He mentioned that he “learned good.” | When asked this question, the student replied, “I understand the letters, but not the topic.” | After asking the participant this question he replied “not that much”. Then, he circled the number 9. | The student said, “I know how to make connections like I went to the zoo.” It should be noted that we read a passage about going to the zoo, and he demonstrated that he actually made a connection to that particular text. | He said that he thinks “rhyming words are easy”. He asked me during the lesson if I could give him a more challenging activity for rhyming words. |