Erik Boice
EDCI 253: Transforming Curriculum — Jelinek Cohort
4/7/20

Data Analysis Memo Round 2

Research Questions:

The study ultimately is seeking to discover whether training in self-regulated learning techniques taught to a third-grade class in an accelerated school will lead to increases in traits that have been shown to be indicators of educational success.

- Will training the teacher and students in self-regulated learning techniques encourage the students to have a greater willingness or desire to engage in learning and display effort and persistence?
- Can the students understand and begin to use the self-regulated learning tactics and procedures they learned, and do so in a purposeful and intentional way throughout the semester?
- Will encouraging the students to plan, monitor and self-evaluate their learning lead them to a greater self-awareness of how they learn more effectively?

Intervention/Innovation:

The project is examining the efficacy of instruction in an accelerated classroom on how to become a self-regulated learner. It is taking place in two third-grade classes at accelerated schools, Hilldale School and Brookfield School.

Round one of the study focused on broad training sessions with the entire class which outlined what self-regulated learning is and why it is valuable. In round two, the focus shifted more to one on one training with individual students and discussions with them. The discussions focused on how their projects were coming along, and within that context what sort of self-regulated learning techniques they were using and what was or was not working for them.

Since the students had been introduced to the idea of how to break larger goals into smaller tasks and how to track their progress in a journal, we examined how closely they were following their self-created timelines and if they were not, what was holding them back. We examined whether distractions were in their control, and if it made a difference when and where they chose to complete their work We considered what help they needed in order to complete different parts of their projects, and how effective that help was for them. We brainstormed together about what other options that might be available to assist them and how they could tap into those resources. Brookfield was able to complete their Black History Month project, so the students were able to consider how well they achieved their goals that were created at the beginning of

the project and why. I asked them to think about why certain tasks on the assignment were difficult or easy for them and what they might be able to do next time in order to improve the result. During each individual discussion with the students we examined their journals and talked about what they had written and why.

Data Collected:

All of the data collected during this round was qualitative, consisting of recordings of individual conversations I had with the students about their work, and classroom observations. The individual conversations were with both voluntary and arbitrarily chosen students. The same students tended to volunteer to speak with me during any given session, which did offer the advantage of being able to track their progress more closely, but I also wanted to get information from students who were not as interested in learning self-regulation methods, so I randomly chose other students to supplement the data pool. Classroom observations were not specifically planned but were always during the English language time period.

In this round I did not have preconceived interview questions, rather I tried to allow the students to lead the discussion by explaining to me about what they had written in their journals. From there, I would ask questions which gave me project data, and then offer suggestions which hopefully would provide them with techniques that they could use to improve their self-regulated learning ability. The journals are divided into three sections labeled Preparation, Help, and How Did I Do? Since one school was finished with a large project and another was halfway complete, I was able to get collect good data regarding the first two sections and a little about the third.

I did not act as an active observer during any of the classroom observation sessions this round. I only listened and took notes, attempting to perceive whether self-regulated learning techniques were being used or not. The teachers did not modify any lesson plans during the observed classes.

Data Analysis:

Recordings and notes were transcribed by hand and using Trint and then coded. I listened to the recordings again while reading the transcripts and coding in order to ensure accuracy. The study is examining qualities and changes in students' traits after training in self-regulated learning. I defined these traits as consisting of qualities of adaptive motivation, strategic action and metacognitive knowledge, so I initially categorized words and sentiments into these themes.

Once the data was categorized within each broad theme, I continued to code the data into more specific categories which elucidated the codes and helped to explain how the students were progressing in each area of self-regulated learning. By comparing my findings to those at the beginning of the semester I hope to understand how the training is working compared to the student's initial tendencies.

Findings:

As the students became more involved with their large projects, the ways they motivated themselves seemed to change from the methods they were using at the beginning of the semester. Before they began the projects, there were references to looking forward to the project and beginning work on it because it might be fun, they were curious, and it was new subject matter. Once the students were halfway through the projects, these references tended to change to more general ideas about the importance of learning. In fact, the importance of learning for its own sake was the most common code I found in my transcription. For example, rather than being curious about the prospect of learning about a significant person in black history, the students now explained that it was valuable to have this knowledge in order to be a more informed individual in society. In the class working on their Young Author Project, I no longer heard the students talk about the fun of experimenting with a new story, but instead they explained why it was valuable to be a good writer and that it was important to be able to communicate their ideas clearly through writing. The students' assignments involved a great deal of concentration and effort, and once the assignment was no longer fresh and new, those ways of motivating themselves would no longer work, therefore they needed to turn to another form of motivation.

It is possible that the reason they often adopted the importance of learning for its own sake can be attributed to the influence of parents and teachers. I considered more than once how interesting it was that third graders, 8 and 9 years old, were explaining to me that it was important to know about black history so that we would not repeat the mistakes of the past, or that someone who can communicate their ideas well through writing feels more satisfied with themselves than someone who cannot. Future financial reward was also mentioned fairly often, although not as much as the importance of being well educated. Although I am working with accelerated students, I doubt that they came up with these motivating ideas on their own. It could be that when the assignment became difficult, they began to look elsewhere for motivation, and the natural place to look was to those in authority around them who could give them new reasons to keep working. I did hear several times about teachers and parents pressuring them to complete the assignment as a motivator, but not as often as other motivating ideas, perhaps because if the student accepted the motivational tactic, they then adopted the ideas as their own. In fact, fear of consequence as a motivator came up far less often than at the beginning of the semester and seemed to be replaced with an idea of a reward for having completed the project.

The fact that the students are using varying methods to motivate themselves is a step toward self-regulated learning. Cleary (2018) outlines five different types of motivation: self-efficacy, value, interest, growth mindset, and autonomy. He then goes on to suggest that educators should attempt to concurrently target multiple motivational beliefs rather than one or two in isolation. Schunk & Zimmerman (2008) also suggest that there are many parts to the motivational puzzle, and Linnenbrink-Garcia & Patall (2016) suggest that you will probably have greater success motivating students when you are knowledgeable about the different sources of motivation, and are able to concurrently target several of them. During the SRL training we did discuss learning for its own sake as a motivator, and students shared other motivational ideas in class, but the

frequency with which the students used the value of learning later on as a motivator compared to the other ideas we discussed causes me to doubt whether there is a correlation between the training sessions and this motivational adaptation. It does seem, however, that since the students are demonstrating varying ways of motivating themselves according to the situation, they are demonstrating adaptive motivation.

Since the students were in the midst of their projects during this round, the majority of codes came from discussion about what strategies they were using in order to complete their projects. There was direction given by the teachers in class to find specific books to help them with their projects, so it was not surprising that using books and libraries came up often as strategies. Using parent, teacher and siblings for help to complete the projects were also mentioned with similar frequency compared to the beginning of the semester.

I did find it interesting, however, that there was a dramatic increase in the mention of using lists and calendars, as well as establishing deadlines for themselves. I believe this speaks directly to the training because although there was occasional mention of breaking projects down into steps and creating deadlines at the beginning of the semester, after the training the articulation of such plans were far more clear and more often referenced. Several of the students even acknowledged that they were behind on some areas of their plan and told me what they were going to do in order to catch up. Devising a task-specific strategic plan is one of the hallmarks of self-regulated learning, and the fact that so many students were setting their own goals with clear steps to attain them is promising. Allowing students to set learning goals can enhance their commitment to attaining them, which is necessary for goals to affect performance (Locke & Latham, 1990.) Schunk (1985) found that self-set goals promoted self-efficacy. I especially appreciated that they broke the projects into steps, because they would be achieving smaller goals along the way to the larger goal of completing the project. Schunk (2001) suggests that goals that incorporate specific performance standards raise self-efficacy because progress toward an explicit goal is easy to gauge.

I also was interested in how many students in this round mentioned some form of brainstorming in order to overcome hurdles or to begin new phases of their projects. There seemed to be a greater confidence in their own ability to complete the assignment than before, possibly because at this point they had already completed several sections of the project and so they had greater confidence that they would be able to successfully finish the rest. I am hopeful that this is the case, because students who perceive themselves as competent are more likely to persist when they confront difficulties and to use abilities and strategies that they possess (Harter, 1990; Pintrich & Schrauben, 1992,) which is a hallmark of self-regulated learning. I believe it would be beneficial for me to study and further explore the connections between proper goal setting, goal achievement, self-concept, and self-regulation ability.

.The two other strategies that were in the SRL training that were mentioned by students during this round but not much at all during round one were to be rested and fresh before starting work, and to be sure that the necessary tools were assembled before beginning. The frequency of these codes was not dramatically greater, however so I am not sure that there was a connection.

I had hoped to conclude this round by gathering the reflections of students at both schools on how they did with their projects, and then for round three observe how they prepared for their next big assignment, but unfortunately only one of the schools was finished with their first large project when the Covid 19 crisis hit. Therefore, my data on metacognitive knowledge is not as well rounded as the other two areas, but I was still able to glean some insight.

When the semester began, the students speculated that hard work, listening carefully, and focus would be the most important factors in determining whether a project would be successful. After completing their Black History Month project, the students at Brookfield shifted their priorities and overwhelmingly decided that time management was one of the most important factors in order to complete a successful project. Interestingly, since so many of them had created steps for completing their project and plans for when they would finish each step, most were quite aware of where and when they had gotten off track. After giving themselves more time during each step, the second most mentioned strategy that they would change for the next project was to follow the steps they had created more carefully.

There were two students who were particularly adept at creating and following their plans, and so it was interesting for me to see what they would do differently on the next project. Both mentioned new sources of information that had helped them in their projects that they were not aware of before but that they would make use of again – a teacher from an older grade and a type of book that the student felt gave information in a more understandable way. (DK Smithsonian books.) One mentioned that being flexible with the execution of her project had helped her at a critical juncture, and the other reflected that being sure to have all the appropriate tools before work began was more important than she had thought.

It seemed that the SRL training was encouraging most of the students to consider their learning more strategically than before. However, there were exceptions. One student was dejected and worried he did not have the ability to do well on a similar project again, and also was not thinking specifically in terms of what he could do in order to improve his situation. Several others were not interested in the training at all, and while I could not work with them individually since they were not interested, they did not seem to be influenced much by the group training.

Planning Next Round:

Ordinarily, in round three I would be looking more closely at the students' metacognitive analysis of their projects as well as deeply considering how their approach has changed to the next big project assigned to them. I would be collecting more data from the journals than I had before and attempting to understand and define whether the training and suggestions I gave them made a difference in their learning tactics over time. Because the schools have been closed, instead I will instead examine the data I already have more closely and consider any trends I can perceive in their learning tactics leading toward or away from self-regulated learning. I would like to consider what parts of the training have been the most effective, whether the age of the

participants may have been a factor and hypothesize about what results I might see if the SRL training was successful.

I may be able to procure some of the journals from Brookfield school if the students have left them in their desks, which may give me some additional data to work with. I would like to examine the difference in journal writing from students that I know took the training seriously verses those that did not. I have also set up online versions of the Self-Regulation Strategy Inventory created by Cleary (2006,) and the Perceived Responsibility Scale by Zimmerman and Kitsantas (2005.) I have asked the teachers to suggest that the students take these surveys, and if I get enough responses there may be some value in comparing the initial results to those reported at the end of the semester.

Literature Connections:

Cleary, T. J. (2018). *The self-regulated learning guide: Teaching students to think in the language of strategies*. New York, NY: Routledge.

This book outlined different types of motivation, and why it is important to encourage students to use more than one.

Linnenbrink-Garcia, L., & Patall, E. A. (2016). Motivation. In L. Corno & E. M. Anderman (Eds.), Handbook of educational psychology (p. 91–103). Routledge/Taylor & Francis Group.

Information about different types of motivation and why it is valuable to target several types at once when educating students.

Locke, E. A., & Latham, G. P. (1990) *A Theory of Goal Setting and Task Performance*. Englewood Cliffs, NJ: Prentice Hall.

A study about goal setting and why it is valuable to have a student set their own goals.

Pintrich, P.R., & Schrauben, B. (1992). Students' motivational beliefs and their cognitive engagement in classroom academic tasks. In D. H. Schunk & J. L. Meece (Eds.), *Student perception in the classroom* (pp. 247-266). Hillsdale, NJ: Lawrence Erlbaum Associates.

A study about students' motivational beliefs and how they correlate with the idea of self-competence.

Schunk, D.H. (1985). Participation in goal setting: Effects on self-efficacy and skills of learning-disabled children. *Journal of Special Education*, 19, 307-317

A study which help to reinforce the idea that goals set by students promoted self-efficacy.

Schunk, D.H. (2001). Social cognitive theory and self-regulated learning. In B.J. Zimmerman & D.H. Schunk (Eds.), *Self-regulated learning and academic achievement: Theoretical perspectives* (2nd ed., pp. 125-151). Mahwah, NJ: Erlbaum.

A study which suggests that incorporating specific performance standards into goals will raise self-efficacy in students.

Schunk, D. H., & Zimmerman, B. J. (2008). *Motivation and self-regulated learning: Theory, research, and applications*. New York, NY: Routledge.

General information about motivation and how its part in self-regulated learning.