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EDCI 253: Transforming Curriculum — Jelinek Cohort
3/12/20

Data Analysis Memo Round 1

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 in which ACT Aspire test scores have been rising for three years and strategic differentiation is regularly implemented, and Brookfield School in which ACT Aspire test scores have remained flat and classroom differentiation is rarely used.

I initially lead a training session with the teacher that outlined what self-regulated learning is and why it is valuable. I introduced the study and planed with the teacher how and when the student training in self-regulated learning takes place. The teachers are clear about their roles and what is required to successfully complete the study.

The training in self-regulated learning for the students began at the start of the semester. The students learned how to break larger goals into smaller tasks and how to track their progress in a journal. The students were asked to consider when, where and how they will accomplish each task. The teacher will have periodic celebrations for achieving short-term goals, especially recognizing the effort involved in arriving at each milestone. The students are periodically prompted to ask themselves whether they need help completing a goal or a task, and if so, what options may be available to provide that help. If the students did receive help, they record in their journals the questions they asked and where they received the help from. They are further prompted to reflect on whether there may have been other sources of help that could have been

found. Around the mid-point of the semester, the teacher will post lists of "help alerts" based on the student journals, which are reminders of situations in which students should ask for help and where they might find it. In their journals, students are asked to self-reflect upon major tests and assignments before the teacher assigns a grade and encouraged to ask why the task was difficult or easy for them. While the students will be encouraged to use the techniques in all classes, focus will be placed on using the journals and asking pertinent questions during the English language arts classes.

Data Collected:

The first section of data I have analyzed in round one consisted of initial observations, interviews, and survey analysis. I believe the data will provide a baseline with which to evaluate change that may occur once the students have been trained in the self-regulated learning techniques. Perceiving and recording any change will be important in order to understand self-regulated learning concepts that resonate with the students and may be enhancing the overall learning experience, but that requires a good understanding of where the students are when they begin.

The second section of data consisted of classroom observation and introduction to the major projects the students would be working on during the first part of the semester. When the projects were introduced, I tried to listen for clues as to how the students planned to accomplish their tasks, their motivation for doing so, and where they would look for help if they got stuck.

I am using a concurrent, mixed methods approach with surveys and grounded theory research from the Charmaz school. Although I am using surveys, there is a heavy qualitative emphasis. Observational data and written data from student journals are being collected throughout the semester at times both at specific and impromptu.

Quantitative data was derived from two surveys measured on the Likert scale. They will take the surveys again at the end of the semester in order to compare the results.

- The first is a version of the Self-Regulation Strategy Inventory created by Cleary (2006,) which was adjusted for third grade students.
- The second survey given was the Perceived Responsibility Scale by Zimmerman and Kitsantas (2005.) The Perceived Responsibility Scale survey was shortened to ten questions, and also adjusted for third grade students.

Qualitative data was derived from interviews with teachers and students, student journals and my observations.

- Interviews were structured with predetermined questions, however, there were also impromptu follow up questions depending on the responses. One teacher and four students from each class were interviewed, and I will interview the same people once more at the end of the semester in order to compare the answers. I have attempted to

choose a diverse group of students to interview based on previous ACT Aspire test scores, class grades and compliant behavior qualities as judged by the teacher.

- The student journals have several roles in the project, and so before the journals were given to the students, I divided them into three sections: Preparation, Help? and How did I do? Before, during and after significant class assignments or projects, the students have been asked to record corresponding information, based on their training, in each section. Data gleaned from the journals is providing insight into a student's level of strategic action and metacognitive knowledge.
- I am observing the classes occasionally as a passive observer and sometimes as a privileged, active observer. In both cases I am audio recording the class as well as taking field notes. The focus of my observations is on what is taking place during the English language arts classes.

Data Analysis:

I initially divided the qualitative data between that which came from the teachers and that which came from the students. I then transcribed the recordings and notes that I took using Trint, although I had to go over the transcriptions again while listening to the recordings so that I could make them more accurate.

Since I am examining qualities and changes in self-regulated learning, which I defined as consisting of qualities of adaptive motivation, strategic action and metacognitive knowledge, I decided to initially look for words and sentiments which fit into these themes. While I understand selective coding from the start is a bit backward from traditional grounded theory research, it did not make sense to me to ignore the qualities that I would be ultimately analyzing in my research. I decided that if I began by examining the data through the lens of self-regulated learning, I would filter out the extraneous information that was not pertinent to the study.

Within each broad category, however, there were many more specific categories which told a story of how the subject related to each theme. I reread the transcripts, and what I had coded already, in order to decide what the subject was communicating about each larger theme and assigned the code into more specific categories. When I begin to put the categories together, a picture begins to emerge of how the students are approaching their learning and what tendencies the have right now.

I analyzed the qualitative data by calculating an average number for each answer that was given in the surveys described earlier in this analysis. Between the two classes there were 40 students who took the surveys, and I combined the results since the classes are more similar than I originally thought when I proposed this study. I was also hoping that a larger number of students taking the surveys might give the surveys slightly more relevance. At the end of the semester, the students will take the same surveys again, and I will compare the difference.

Findings:

The qualitative data I collected during this round consisted of an initial inspection of the students' feelings toward learning and whether they displayed self-regulatory ability coming into the class. I found several common themes, but there was also a great deal of variability in the data.

When referencing how the students motivated themselves, the most common method was fear of a negative outcome if they did not complete the work. According to Winne and Hadwin (2008) this suggests that the students have begun the first phase of adaptive motivation in which they perceive the value in tasks and metacognitively asses its importance. However, if the students do not move into Phase 2 where they are able to create goals and plans, anxiety could create a negative effect on the student's efficacy. (Winne & Hadwin, 2008.) Being able to perceive the task as play was also motivating to many. If a task was perceived as "fun," "interesting," or if they were curious about it, the students were more motivated to complete the task. Since tasks needing to be completed will not always be interesting or fun, Wolters's (1998) work on strategies for regulating motivation depending on how a student characterizes the task could be helpful. Interestingly, hope for a future reward or benefit was only mentioned twice during the initial interviews and observations. I believe that introducing the idea of future benefits and training the students to consider them is a good opportunity with this student population to provide them with another strategy for self-motivation.

The primary strategy the students relied upon when considering how they would complete a task was to rely on adults in their lives to guide them. Although most of the students also had secondary strategies such as using calendars and lists to keep them on track, being sure that they had all necessary materials, and using internet resources, most of the students mentioned adults in their lives as a way for them to be sure the task was completed. While reliance on adults is hardly unusual for students of this age, the students had little to no discernment between tactics, which are potential tools, and strategy, which is how the tactics are used in order to attain the goals. Winne (2001) suggests that tactics only involve IF-THEN outcomes, while strategies add a third ELSE to the equation which allows for the use of different tactics if one does not work.

When the students were asked to consider how they would evaluate whether a task was done well or not, most thought that the most important factor was whether they applied an appropriate level of focus to the task. Qualities about the work itself, such as creating something that is interesting, consistent or complete were mentioned, but rarely compared to factors that were dependent upon the student themselves. Zimmerman (2008) attributes this to a lack of specific goals and forethought of outcome. Since goal setting is a specific part of the self-regulated learning training, it will be interesting to note whether the students' evaluation of outcome becomes more centered on the product.

The quantitative data for this round was a series of surveys to determine a baseline for how responsible the students felt about their learning results, and whether they showed self-regulated learning tendencies at the start of the semester. While it is difficult to judge what the results

mean without a comparison point, it is possible to make some analysis based on comparing the numbers to each other.

The Self-Regulatory strategy inventory suggests that the students are cognizant of the importance of finding a good place to work where they can minimize distractions. They are not afraid to ask questions in class and are not likely to give up when something is difficult. There could be opportunities for developing forethought and strategy. While the survey suggests that they are confident they can finish their work on time, the varied results on how they handle distractions suggests to me that the work may be completed at the last minute.

The Perceived Responsibility Scale suggested that the students feel largely responsible for their self-motivation and task completion. The students do not feel as responsible for whether or not the they can understand the teacher or class discussions. This result is interesting to me since they indicated also that they generally feel comfortable asking questions in class.

Planning Next Round:

The data gathered in the first round suggests that the students can benefit from training in self-regulated learning. When trying to motivate themselves they can learn to incorporate positive motivation through considering the long-term benefits of completing a project. Also, in order to become better self-regulated learners, they need to be able to create defined goals, strategize their tasks and increase their inventory of tactics. Once the goals the students strive for are clearer, it should inherently lead to a greater ability to reflect on the project outcome when analyzing whether or not the outcome was a success, rather than only considering their own state of mind.

While the training plan I have put together does teach positive motivation, specific planning and goal setting, and project analysis based on multiple factors, I have found that it will be difficult to train all the students at once effectively because of the limited class time I have and the varying abilities of the students. I am continuing to teach the broad subjects and strategies to the entire group but am adding more one-on-one sessions so that I can discuss specific issues and strategies with the students that are unique to their situation. This should also allow me to collect more qualitative data, as I will record and code the individual training sessions.

Literature Connections:

Winne, P. H. (2001). Self-regulated learning viewed from models of information processing. In B. J. Zimmerman & D. H. Schunk (Eds.), Self-regulated learning and academic achievement: Theoretical perspectives (p. 153–189). Lawrence Erlbaum Associates Publishers.

Winne's work helped me to consider the difference between tactics and strategy, and the importance of understanding the difference when considering how to teach students to create a plan for success.

Winne, P. H., & Hadwin, A. F. (2008). The weave of motivation and self-regulated learning. In D. H. Schunk & B. J. Zimmerman (Eds.), Motivation and self-regulated learning: Theory, research, and applications (p. 297–314). Lawrence Erlbaum Associates Publishers.

I turned to Winne and Hadwin to help me understand what it meant that the students' primary motivation to complete a project seemed to be fear of a negative result. The article explained that it could be viewed as the first phase of development in the strategic motivation part of self-regulated learning.

Wolters, C. A. (1998). Self-regulated learning and college students' regulation of motivation. Journal of Educational Psychology, 90(2), 224–235. https://doi.org/10.1037/0022-0663.90.2.224

This article explores the different ways that students used to motivate themselves when they perceived tasks as boring, irrelevant or difficult. It was helpful in considering how to adjust the training in order to help the students motivate themselves to do tasks that they did not find fun or interesting.

Zimmerman, B. J. (2008). Goal setting: A key proactive source of academic self-regulation. In D. H. Schunk & B. J. Zimmerman (Eds.), Motivation and self-regulated learning: Theory, research, and applications (p. 267–295). Lawrence Erlbaum Associates Publishers.

I used this article from Zimmerman to investigate what it meant that students were primarily judging their results on their own behavior, rather than the actual outcome of the project. It helped me to understand that the likely reason is that the students did not have a clear idea of what the outcome should be when they began the project.

Quantitative Results:

How often do you do these things when doing English?	**Likert Scale from one (almost never,) to five (almost always.)**			
	Beginning of Semester	**End of Semester**		
1. I tell myself to keep trying hard when I get confused.	3.93			
3. I try to study in a quiet place.	4.05			
4. I try to find out what will be on the next English test.	3.1			
5. I study hard even when there are more fun things to do at home.	3.33			

6. I quiz myself to see how much I am learing during studying.				3.58			
8. I make a schedule to help me organize my time.				3.33			
9. I think about what questions might be on an English test.				3.05			
12. I ask my teacher questions when I do not understand something.				4.15			
13. I finish my homework before I play video games or play with friends.				4.1			
Standard Deviation Positive Questions # 1,3,4,5,6,8,9,12,13				0.415962368			
Variance Positive Questions				0.194652778			
Mean				3.624444444			
Median				3.58			
2. I give up or quit when I do not understand something.				1.7			
7. I lose important worksheets that I need to study.				1.65			
10. I forget to ask my teacher questions about things that confuse me.				2.08			
11. I wait as long as I can before doing my homework.				1.88			
14. I do not ask questions in class about what I don't understand.				1.45			
Standard Deviation Negative Questions # 2,7,10,11,14				0.213672647			
Variance Negative Questions				0.05707			
Mean				1.752			
Median				1.7			
How well can you…				**Likert Scale from one (almost never,) to five (almost always.)**			
				Beginning of Semester	**End of Semester**		
1. Finish your English homework on time?				3.95			

2. Study your English when there are more interesting things to do?				3.29			
3. Concentrate when doing English language work?				3.93			
4. Participate in English Language discussions during class?				4.22			
5. Remember what you are taught in class?				4.05			
6. Find a place at home to study where you will not be distracted?				3.83			
7. Motivate yourself to do English work?				3.71			
Standard Deviation Positive Questions # 1,3,4,5,6,8,9,12,13				0.296302612			
Variance Positive Questions				0.087795238			
Mean				3.854285714			
Median				3.93			

Who is more **responsible** for the following things? The **student** or the **teacher**?	**Likert Scale from one (mainly the teacher,) to seven (mainly the student.)**	
	Beginning of Semester	**End of Semester**
1. Who is more responsible for a student being prepared on a test?	5.13	
2. Who is more responsible for a student wanting to do well in school?	6.07	
3. Who is more responsible for a student <u>not</u> finishing homework?	6.53	
4. Who is more responsible for a student doing well on a test?	5.7	
5. Who is more responsible for a student participating in class?	5.75	

6. Who is more responsible for a student being able to finish projects?						5.98	
7. Who is more responsible for understanding assigned reading?						5.3	
8. Who is more responsible for understanding class discussions?						4.8	
9. Who is more responsible for a student understanding the teacher?						3.8	
10. Who is more responsible for a student fooling around in class?						5.88	
Standard Deviation Positive Questions # 1,3,4,5,6,8,9,12,13						0.776004009	
Variance Positive Questions						0.602182222	
Mean						5.494	
Median						5.725	