

METACOGNITION IN THE COMPOSITION CLASSROOM: WHAT ARE  
INSTRUCTORS DOING TO HELP STUDENTS REGULATE THEIR USE OF  
METACOGNITIVE STRATEGIES

A Project

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by

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Abstract  
of  
METACOGNITION IN THE COMPOSITION CLASSROOM: WHAT ARE  
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In the fall of the 2016 academic year, I conducted a study that examined what composition instructors were doing to teach students to regulate their use of metacognitive strategies. I explored the level of training and method of teaching of the instructors as well as the types of metacognitive activities used in their classroom in relation to the teaching of metacognitive strategies. I discovered that a large proportion of the instructors lacked any formal training when it came to teaching students to be metacognitively aware. I also found that the instructors used numerous metacognitive activities during the planning, monitoring, and evaluating phase of a writing assignment, but they did not explicitly teach the students how to regulate their use of metacognitive strategies. I recommend staff development training with regards to teaching students to monitor and regulate their use of metacognitive strategies.

\_\_\_\_\_, Committee Chair  
Amy Heckathorn Ph.D.

\_\_\_\_\_  
Date

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## Chapter One

### COVER ESSAY

There I was, walking down the hallway to teach my first composition class. I could hear my footsteps echoing off the walls. I was nervous. I was going to be in charge of a class for the entire semester. I rounded the corner, got to the door and reality sunk in, there were going to be twenty-five students waiting for me on the other side. My heart was pounding. My stomach was a hive of butterflies. I didn't know what was going to happen, but I was excited. I had an irrepressible smile on my face. I couldn't wait. I knew it was going to be a long semester. I knew I was going to make mistakes, but I also knew I was prepared. But I didn't get there on my own; I had help, lots of help. Everything I had done in my graduate Rhetoric and Composition classes readied me for that moment. Whether it was from my instructors or my peers, I learned how to approach learning. I learned about praxis, about the power of language, about what works in a classroom and why. I learned about doing research, about the process of writing, and about critical self-reflection. In fact, as I look back on that moment I realize there are two things that have not changed, my excitement when I walk into a classroom and the feeling of being prepared. It is the documents in this project that will show not only why, but how I am prepared for the next step in this journey.

Chapter two of my project is my teaching philosophy. It is within this document that I set down my core principles on teaching and demonstrate my working knowledge of the ways Rhetoric and Composition theory and practice inform one another. My teaching pedagogy draws on both social epistemic and critical theory to create a



classroom community where inquiry is encouraged and meaning making happens in multiple ways and from multiple perspectives. I believe that reading and writing are social activities. Activities where thoughts are explored and meaning is made as a group. I ask my students to work collaboratively to dissect and interpret readings, to explore each other's thoughts through peer reviews, and then to reflect on not only what, but how they did. I ask my students to create discussion questions that their peers will answer; I have them ask questions about the readings in their online posts and then have their peers answer those questions. I challenge my students to think critically. I often ask my students to reflect on why I am having them engage in an activity. I want them to know what they are doing, but also why they are doing it. I incorporate a literacy narrative assignment into my classes to have them think about who they are and how they got here. I ask them to think about and incorporate the many different languages they think, talk, and write in. I do this while at the same time engaging them to think about their writing process.

Writing as a process is another theory important to my pedagogy. Writing is a skill that can be broken down, that can be taught, and can be learned. This is something that I personally learned reading process theory scholars in my graduate courses. I never knew I had a writing process, I never knew there were multiple ways of writing. I had my way and I was practically oblivious to it. Learning that there are numerous ways to write, learning that there is no one way to go about it has changed the way I write and has had an enormous impact on the way I go about teaching. I incorporate process-focused readings at the beginning of my classes. I ask my students to break down and analyze

their own writing process. I have them do multiple peer reviews for each assignment. I have them reflect on their process before, during, and after the assignment. I do this through metacognitive free writes, group discussions, and cover letters. I ask them to do this by looking not only at their home discourse but also through an academic discourse lens to show that all types of language can be meaning making.

Chapter three of my project is an annotated bibliography that focuses on research regarding the concept of teaching metacognition in the composition classroom. This collection of scholarly articles has helped me to learn and integrate appropriate teaching strategies for students who speak and write in a variety of English languages and dialects as well as improve the way I approach teaching the process of writing. One of the focal points of this document was finding what strategies most helped students to become better writers, not only in my class but in their future classes as well. Through reading such scholars as Hamman, Ku, and Ho I have discovered the importance of using and teaching multiple kinds of strategies to foster student success in writing. These scholars discuss how students from all backgrounds, regardless of the language they use, can benefit from engaging in diverse activities that promote self-reflection. El Hindi and Pacello take this a step further when they discuss the specific strategy of using journals to help students of all abilities become better readers and writers. Since reading these articles I have incorporated metacognitive journals in my class. This gives students a place to write about their experiences with writing; a place for them to explore their writing and themselves as writers. Leat and Lin discuss another strategy that I have found useful in helping students from all backgrounds become more confident in their learning

and writing, debriefing. Taking the time at the end of a class activity to allow students to reflect on what was learned, how they learned it, and what they could do better or different allows them to process their role in how they learn. Whether it is through class discussions, free writes, or questionnaires, allowing the students to reflect on what and how they learned gives students the confidence they need to succeed in an academic setting. It is through scholars such as Wilson and Bai as well as Flavell that have helped me focus how I teach the process of writing. These scholars discuss the importance of focusing on the three different phases of a task, planning, monitoring, and evaluating, that help students succeed in completing that task. Whether it is through journaling, free writes, or class discussions, allowing students time to reflect on how they are doing during each phase gives them a chance to connect to the different stages within their writing process. Not only have these articles enlightened the way I teach they have also been integral in creating my research article.

Chapter four of my project is my research article. This document demonstrates my ability to conduct research in Composition and Rhetoric using appropriate methods and methodological frameworks. I used a mixed method approach to research what composition instructors were doing to teach their students to regulate their use of metacognitive strategies. The impetus to research the concept of metacognition came from a desire to explore something I did not fully understand. I wanted to know what metacognition was; I wanted to know how it could benefit my students; I wanted to know what thinking about thinking really meant. These inquiries led me to wonder what other instructors were doing to teach their students to be metacognitively aware. This in turn

led me to the Wilson and Bai article that focused on pre-service teachers' metacognitive knowledge and how that aligned with activities they would use in their classroom. With that as my jumping off point I set off to see what composition instructors here at CSU Sacramento were doing to teach their students to be metacognitively aware. I created a questionnaire that consisted of both open-ended questions as well as Likert scale questions then sent an invitation to all composition instructors to participate in the study. The questionnaire focused on three things: instructors' knowledge of metacognition, specific strategies used to teach metacognition, and whether they taught those strategies explicitly. I received twenty responses, which accounted for a third of the instructors who were currently working at the university, and after coding the data I found I was not alone in not knowing what or how to teach my students to be metacognitively aware.

I also found out what it truly means to engage in writing as a process. In creating the research article I learned how to break up a writing task. I learned that conclusions are not made without multiple drafts of a questionnaire. I learned that just because you revise something three times that does not mean there is not a fourth revision on the way. Writing the article has been a process, a process of trial and error. I wish I could say there were more successes than there were near successes, but in the end I learned a great deal about writing and about myself. It is through critical self-reflection that I was able to finalize the article. By pausing and pondering what my goals were for each section, by reflecting on the critical feedback I received, by grappling with my thoughts I was able to accomplish this task. And it is not lost on me the irony of the fact that I had to do a lot of critical self-reflection on a topic about critical self-reflection.

As this project comes to a close and I look back at all of the hard work done, not just by me but by everyone who has helped me along the way, I cannot help but feel a sense of accomplishment. I have learned a lot about the subject of writing and a lot about myself. I learned that I enjoy teaching. I learned that I enjoy talking, reading, and practicing the skill of writing. I learned that learning is never done. I consider myself a lifelong learner and I cannot wait to share and learn with peers and students alike. I find myself again standing at a door, a little nervous, my stomach a hive of butterflies, but that smile is still there and I cannot wait to see what is on the other side.

## Chapter Two

### TEACHING PHILOSOPHY

Teaching for me is often the best part of my day. Walking into a classroom tasked with the job of creating an environment where everyone is not only a student but also a teacher is both challenging and rewarding. My reading of Kenneth Bruffee and Paulo Freire has taught me to emphasize the importance of creating a writing community within the classroom. I enact a social constructivist approach to emphasize that reading and writing are social activities. I want my students to realize that learning is not a one-way street. Learning can happen from student to student, student to teacher, and from teacher to student. It is important for them to learn that there is not one ‘right’ way to do things, but rather multiple ways to accomplish their goals. This is emphasized throughout the use of small group discussions, multiple peer review sessions, and lectures. Although I do seek a balance in my classroom between lecturing and asking students to make discoveries, ultimately good teaching for me depends upon an intellectual exchange of ideas.

As a composition teacher, I want my students to develop problem-solving skills by engaging with the material and thinking reflectively. Reading John Flavell’s and Nance Wilson’s research has shown a convincing correlation between student’s metacognitive awareness and their reading and writing aptitude. That is why I challenge them to make decisions on their own, to grapple with the concepts discussed in class. I design classroom activities and writing assignments that give the students options, that

require them to make decisions, that get them involved. There is nothing more gratifying than watching students actively engaged in their own learning. One of the most rewarding lessons for both the students and I, is having them create and then answer their own discussion questions. I want them to ask questions not only about the ideas discussed in class, but also about themselves. With every reading and with every assignment I ask them to take a moment and reflect on their reading, writing, and study strategies.

I believe in a flexible approach to teaching, one that is conscious of the unique atmosphere within a given class. From reading process movement authors such as Donald Murray and Peter Elbow I strongly believe that writing is a process. I also believe that learning how to write is a process. Every student, regardless of their background, has the ability to improve not only their writing but also how they think of themselves as writers. In order to help students understand their composing processes I ask them to complete a personal literacy narrative, analyze and discuss writing strategies, and read texts on the writing process. I strive to enhance the student's abilities to think, discuss, and write with a new kind of awareness. And though I do not always get it right, I am always willing to work hard because it is what I love to do.

### Chapter Three

#### ANNOTATED BIBLIOGRAPHY

Denton, D. (2011). "Reflection And Learning: Characteristics, Obstacles, And Implications." *Educational Philosophy And Theory* 43.8, 838-852.

“The purpose of this article is to examine the concept of reflection in educational settings” (839). This article also tries to connect reflection with educational practices and preservice teacher education. Denton looks to discuss factors of reflection related to: instructional practice, depth of understanding and the integration of metacognition. Denton also examines the obstacles to reflection being used in the classroom. He cites the fact that reflection requires more effort, resources and time and that class size is also a hindrance to reflection. The findings in this article show that there needs to be a change in the way teachers teach. Instructors need to incorporate more metacognitive teaching styles and focus on general concepts that transfer to other settings. Another intriguing finding from this article is the fact that “learners can improve their reflective thinking in post-secondary environments” (849).

This article will be useful in multiple ways. It discusses what teachers are doing now and how students could benefit from having more time to reflect. It also hits on the topics of transfer and metacognition and how these concepts should be integrated into preservice teacher education. There are also a few quotes that can help define and explain what metacognition is: “Metacognition is distinguished



from other principles because it is not tied to any particular discipline or content” (844), “Metacognitive thinking is not an independent activity, it depends on elements of interaction” (844). The one drawback to this article is the fact that it seems to focus more on primary and secondary educators.

El-Hindi, A. E. (1997). "Connecting Reading and Writing: College Learners' Metacognitive Awareness." *Journal of Developmental Education*, vol. 21.2, 10.

The purpose of this study was to look at the effects of using metacognitive reading journals to help students improve their reading and writing in first year composition classes. The researcher used case studies that relied on both qualitative research as well as questionnaires. The qualitative research involved analyzing the student’s reading logs to see if the student’s metacognitive awareness increased and what role that played in their development as readers and writers. Through analysis of both the qualitative research and the questionnaires, the researcher concluded that the metacognitive reading logs were integral in helping the students become more effective readers and writers. The researcher emphasizes using journals to assist students in discussing their metacognitive processes.

This study, though a little dated, looks at a similar demographic that my study is focused on, first year composition classes. The articles findings are helpful in that it discusses the usefulness of a specific metacognitive strategy, namely journals.

This could be helpful when I discuss what kinds of activities instructors are using to help their students monitor their metacognitive strategies.

Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive–developmental inquiry. *American Psychologist*, 34(10), 906-911.

This is one of the seminal articles within the area of metacognition. This article is one of the first to discuss and use the term metacognition. The main purpose of this article is to answer the question of how children learn through the use of metacognition. The author begins by discussing how young children lack the ability to monitor their metacognition, which leads to cognitive errors. He then goes on to state the important role metacognition plays within many different activities, with writing being one of them. The author then moves to discussing four different phenomena that interact when a person is monitoring their use of metacognition. These four phenomena are: metacognitive knowledge, metacognitive experiences, tasks, and strategies. Each phenomenon plays a role in helping the individual toward accomplishing a specific goal. The article primarily is focused on discussing metacognitive knowledge and metacognitive experiences and the effects they have for the individual related to learning. The article concludes with a call for more research within the field of metacognition and discusses the implications this new area will have within the education community.

This article will be useful in my paper by giving me good examples in which to explain what metacognition is and how it can help students learn. It also gives specific strategies and explains how they are metacognitive rather than just cognitive. I will also use it as a source to define the term metacognition. It will also be useful in that it discusses possible implications metacognition has for helping students learn.

Garcia, T., & Pintrich, P. R., and Ann Arbor, MI. (1992). National Center for Research to Improve Postsecondary Teaching and Learning. "Critical Thinking And Its Relationship To Motivation, Learning Strategies, And Classroom Experience." *ERIC*.

In this study, Garcia and Pintrich, look at the questionnaire results of 758 college students related to critical thinking within different disciplines. The disciplines this study focused on were English composition, math, natural sciences and social sciences. One of the questions this study proposes to answer is how learning strategies, classroom experience, and critical thinking vary by subject domain (pg 6). Another question this study attempts to answer is, "What is the relationship between classroom experiences and critical thinking?" (pg 6). This second question looks at the connection between metacognition and critical thinking. The authors conclude that, "the most powerful predictor of critical thinking in composition classes was the use of metacognitive self regulatory strategies" (pg 15).

This study will be useful to lay the foundation between the use of metacognition and its usefulness in the composition classroom. Though this study is a bit dated, it is one of the few that focuses on college English composition specifically.

Another positive of this study is that it asks students who are currently in the composition class at the time. This study will be used to show the importance for instructors to know how to teach metacognition in the classroom.

Hamman, D., et al. (2000). "Teachers' Coaching Of Learning And Its Relation To Students' Strategic Learning." *Journal Of Educational Psychology* 92.2, 342-348.

This article by Douglas Hamman concentrates on how teachers teach learning strategies to their students. The article looks to answer two questions: how often and what kind of learning strategies do teachers provide and how are students' strategic learning related to the teachers' coaching of learning. Hamman found in this study that coaching of learning strategies happened only 9% of the time.

These findings supported earlier research that many teachers do not include strategy instruction in their classroom. This study also found that students' learning of strategies was closely related to the teacher's ability to teach the learning strategies. These findings imply that teachers need to include learning strategy instruction in their classrooms. Another interesting finding from this study is the fact that there needs to be more coaching of learning as students become better self-regulating learners.

This study is useful in that it focuses on the teaching of learning strategies, which is an important tenant in teaching metacognition. This study also calls for an increase in pre-service training for instructing teachers on how to include strategy instruction methods. This article also gives some specific methods to coach learning strategies (Table 2 and the appendix). The downside of this study, like so many of the others, is that it does not focus on college level students; it focuses on middle school students.

Kistner, S., et al. (2010). "Promotion Of Self-Regulated Learning In Classrooms: Investigating Frequency, Quality, And Consequences For Student Performance." *Metacognition & Learning* 5.2, 157-171.

The focus of this study by Kistner et al. was to get insight into how teachers promote self-regulated learning in the classroom. This study observed 40 ninth grade math teachers in the hopes of answering specific questions related to self-regulated learning. The questions this study looked to answer related to what kinds of strategies the teachers used, how much strategy instruction the teachers provided and whether the instruction was implicit or explicit. The results from this study found that all teachers provided strategy instruction to varying degrees, that most of the strategies the teachers focused on were cognitive strategies pertaining to elaboration and organization and that explicit teaching of these

strategies is rare. The conclusion this study finds is that instructors need to be trained to teach self-regulated learning.

This article ties into my research in that it looked at what instructors are actually doing in the classroom in relation to metacognitive teaching. Though this article focuses on self-regulated learning, the aim of the study is closely related to the aim of my study. The questions and hypotheses of this article are also closely aligned to mine. This article also brings up an interesting point on data collection regarding instructors self-reporting information. The drawbacks to this study are that it focuses on 9<sup>th</sup> grade math teachers.

Ku, K. Y. L., & Ho, I. T. (2010). "Metacognitive Strategies That Enhance Critical Thinking." *Metacognition & Learning* 5.3, 251-267.

This article by Ku and Ho looks to find a link between critical thinking and metacognition. Ku and Ho discuss the importance of metacognition in critical thinking and breaks down metacognition into two components: knowledge and regulation. They go on to explain how there is little research on the link between metacognition and critical thinking. Their study compares how students with different levels of critical thinking performance use metacognitive strategies. This study focuses on ten Chinese students working through six different tasks while the researchers note how many metacognitive thinking strategies each student used. The results of this study show that the high performance group spent more

time on task, used more metacognitive thinking strategies and applied more critical thinking than the lower performance group.

The usefulness of this article is in its ability to show the connection to metacognition and critical thinking. This will go to show the importance of knowing what composition teachers are doing in the classroom to promote the use of metacognition. The findings will back up the importance of instructing teachers to teach metacognitive thinking strategies to their students.

Leat, D., & Lin, M. (2003). "Developing A Pedagogy Of Metacognition And Transfer: Some Signposts For The Generation And Use Of Knowledge And The Creation Of Research Partnerships." *British Educational Research Journal* 29.3, 383.

In this study, Leat and Lin, focus on debriefing as a way of teaching metacognitive strategies as well as promoting the transfer of knowledge. In this study the researchers visited multiple high school classes and recorded the instructors as they held small group or whole class discussions after the learning activity of that day. After these classes the researchers interviewed a small number of students about the debriefing session and how it helped them extend their knowledge. The researchers aim was to look into the question of how to teach a pedagogy that makes metacognition and transfer a reality. They also wanted to look into ways that teachers and researchers could work together to

create this new pedagogy. Leat and Lin conclude the article by listing ten different ways teachers can help students learn metacognitive strategies, which lead to a transfer of knowledge within the debriefing portion of a class. They also discuss tips on how to make research more user friendly for practitioners.

This article will be useful in my research because it discusses the need to train teachers the practical application of metacognition in the classroom. It also does a good job of discussing the role of teachers and students in learning metacognitive learning strategies. The authors also bring up a very interesting point about the disconnect between research findings and how those findings are applied in the classroom. This is interesting because of the lack of research that focuses on how exactly instructors are teaching metacognition in the composition classroom. The drawbacks to this study are that it focuses on high school students in a geography class and concerns itself with teaching metacognitive strategies within the debriefing stage only.

Negretti, R. (2012). "Metacognition in Student Academic Writing: A Longitudinal Study of Metacognitive Awareness and Its Relation to Task Perception, Self-Regulations and Evaluation of Performance." *Written Communication*, 29.2, 42-179.

This study looked at beginning academic writers in relation to their metacognitive awareness strategies. This study took place at a community college and looked at



journal entries of freshman composition students. The journal prompts looked to elicit the student's metacognitive awareness by having them reflect on specific aspects of tasks they were asked to perform. The findings in this study point to a correlation between the student's perception of the task and their metacognitive awareness with an increase in writing initiative and self-regulation in their writing process.

The findings in this study parallel findings in other studies that relate metacognitive awareness to increased performance in academic writing. This study took an in depth look at some of the activities college students are currently doing in the classroom that relate to metacognition and the impact they had on their writing. One idea that can be extrapolated from this study is the importance of writing instructors explicit teaching of metacognitive strategies and the effects it has on the students. This study also gives great background information about metacognition in writing and discusses when and how to implement it in a classroom.

Nielson, K. (2014) "Self-assessment methods in writing instruction: a conceptual framework, successful practices and essential strategies." *Journal of Research in Reading*, 37.1, 1-16.

The author of this article compiled an extensive list of the topics and studies related to the idea of metacognition and self-assessment. This article takes a

comprehensive look at all of the current theoretical frameworks that involve metacognition which include: transfer and learner autonomy, self-efficacy, developing a writing process, classroom collaboration, and student voice. The author then goes on to provide a glossary of self-assessment terminology and give definitions of each. The article also provides an exhaustive list of self-assessment and classroom strategies for effective teaching. This list consists of twelve different strategies to assist instructors to implement student self-assessment methods.

This article is most useful as an overview of the many different studies surrounding metacognition and college students. The glossary of terms is an invaluable resource as is the list of strategies that instructors can use to implement metacognitive awareness. The list of different strategies is also accompanied with a list of studies that match the findings with the specific strategy proposed which will be useful when expanding on the research that needs to be done.

O'Brien-Moran, M. L., & Soiferman, K. (2010). "How An Understanding Of Cognition And Metacognition Translates Into More Effective Writing Instruction." *Online Submission ERIC*.

This article looks to answer the question of how an instructor can, “move inexperienced writers to the point at which they begin to engage in the decision making practices used by expert writers” (pg 3). The authors begin by giving

background information related to what novice writers do in comparison to experienced writers. They do this within the context of showing how experienced writers are more metacognitively aware during their writing process. The article then turns its focus to teachers' instructional practice related to teaching metacognitive strategies in the classroom. The article gives practical suggestions on what instructors can do to foster the learning of metacognitive strategies. These include the use of modeling, asking higher order questions, analyzing problems and scaffolding the learning of these strategies. The article concludes by stating that novice writers need explicit instructions of metacognitive strategies to become experienced writers.

This article will help in my project because it gives specific suggestions of what teachers can do to help their students become more metacognitively aware within their writing process. This can be used to show what kind of teacher training will be helpful for preservice instructor meetings. This article is also one of the few that focuses on writing specifically as it relates to the teaching of metacognition. The drawback to this article is that it is a little cursory in its background information dealing with metacognition and writing.

Pacello, J. (2014). "Integrating Metacognition Into A Developmental Reading And Writing Course To Promote Skill Transfer: An Examination Of Student Perceptions And Experiences." *Journal Of College Reading & Learning (College Reading & Learning Association)* 44.2, 119-140.

This article focuses on how students perceive a class that focuses on metacognitive strategies as it connects to their academic, professional, and personal lives. The author looks into the role of metacognition in reading, writing, and learning and the student's own perceptions of learning. This study looked at three students in a developmental reading and writing class and how they perceived the metacognitive aspect of the class in relation to their learning both in the class and outside of the class. The primary metacognitive activity the students engaged in were writing blogs that focused on the metacognitive aspect of their reading and writing. The results of this study found that the metacognitive focus of the class helped them connect readings from one class to other classes as well as help them utilize a writing process approach to their other classes. One thing that the researcher found that was intriguing was the fact that the students were unsure of just how their learning in this class would transfer to other classes because of the uncertainty of what other classes require.

The usefulness of this article lies in the fact that it focuses on teaching metacognitive strategies in a college level reading and writing course. This article also has a section that deals with metacognition strategies and their implication for teaching and learning. It discusses explicitly that some transfer does happen and that the teaching of metacognitive strategies needs to be implemented in reading and writing courses. I believe this article would be a good model for my future article.

Pintrich, P. R. (2002). "The Role Of Metacognitive Knowledge In Learning, Teaching, And Assessing." *Theory Into Practice* 41.4, 219-225.

This article examines the role of metacognitive knowledge within classrooms. Pintrich begins by introducing the concept of metacognition focusing on the processes of monitoring, controlling, and regulating ones cognition. The article then delves deeper into metacognitive knowledge by discussing three specific types: strategic knowledge, knowledge about cognitive tasks, and self-knowledge. With this background information fully explained the author then explains the importance of metacognitive knowledge for both teachers and students. "Metacognitive knowledge can play an important role in student learning and, by implication, in the ways students are taught and assessed in the classroom" (222). Pintrich also brings up how teaching metacognitive knowledge relates to student transferring their knowledge from one class to another. "In addition, metacognitive knowledge of all these different strategies seems to be related to the transfer of learning..." (222). The conclusion this article reaches is that, "In terms of instruction, there is a need to teach for metacognitive knowledge explicitly" (222).

This article will be extremely useful to my research due to the fact that it discusses the implications of metacognition in learning and teaching. The primary conclusion this article arrives at is similar to what I will possible be calling for;

more explicit teaching of metacognitive strategies. This article also references the benefits of metacognition within English classrooms specifically.

Wilson, N. S., & Bai, H. (2010). "The relationships and impact of teachers' metacognitive knowledge and pedagogical understandings of metacognition." *Metacognition Learning*, 5.3, 269-288.

Nance and Bai look into the metacognitive understanding of 105 graduate students as it relates to their teaching in grades K-12. This study looked to answer three pertinent questions as it relates to the teaching of metacognition in the classroom. The first question looked to see how the teachers' understanding of metacognition related to their perceptions of the kinds of strategies that would help students become metacognitively aware. The second question looked at what kind of instruction the teachers would find valuable when teaching metacognition. The final question looked into the teachers' relationship between the different kinds of metacognitive knowledge and how each one influenced the other.

This is the study I plan on replicating. This is one of the few studies I found that looks directly at teachers and their concepts about teaching metacognition in the classroom. Though this study focuses on teachers in primary and secondary schools, I plan on replicating the study to see how college level instructors view the teaching of metacognition in composition classrooms. This study does not ask

what the teachers explicitly do in their classrooms to teach metacognition, a deficiency I plan on ameliorating.

Zohar, A. (1999). "Teachers' Metacognitive Knowledge And The Instruction Of Higher Order Thinking." *Teaching And Teacher Education* 15.4, 413-429.

This qualitative study conducted by Zohar focuses on teaching instructors how to incorporate higher order thinking strategies into their class activities. This study focuses on junior high science teachers who participate in staff development classes on how to teach higher order thinking. This study uses interviews as well as recordings from the workshops the teachers were in to investigate the teachers' metacognitive knowledge regarding higher order thinking. "The goal of this article is to explore the relationship between teachers metacognitive declarative knowledge of thinking skills and their pedagogical knowledge of thinking skills." The findings of this article show that transforming the teachers' instructional practices to include metacognitive thinking skills in the classroom is a challenge for many of them.

Although this study is a bit dated it could be useful in that the questions asked in this study are similar to mine. This also makes me wonder if the findings of this article are going to be similar to the ones I will find. The fact that this article focuses on teachers specifically is something that will also benefit my research.

The drawbacks to this study are its age and the group of teachers it focuses on, which are junior high science teachers. Overall I think this article will be useful in showing the benefits that metacognitive workshops will have for possible staff development purposes.



## Chapter Four

### RESEARCH ARTICLE

Metacognition in the Composition Classroom: What are instructors doing to help students regulate their use of metacognitive strategies

#### **Introduction**

Metacognition plays an important role in the academic lives of college students. Metacognition is often defined as thinking about thinking, but it is more than that. Metacognition is a person's knowledge about the cognitive processes necessary for comprehension and learning (Flavell, 1976). Research has shown that students who are metacognitively aware do better in college (Ku & Ho, 2010). Metacognitively aware students are capable of adapting to the demands of college through the regulation of their cognitive processes. The reason for this is that metacognition helps students to become critical thinkers who can solve new and difficult problems by giving them specific strategies they can use in different situations (Garcia & Pintrich, 1992, Ku & Ho, 2010). While metacognition is not discipline specific, it plays an integral part in helping students become better writers.

Strong writing skills are essential for student success not only while in college but also when they enter the workforce. Writing analytically to multiple audiences and in multiple ways are attributes that one is not simply born with, they must be learned. They are skills introduced in primary and secondary classrooms which are more fully developed in college composition classrooms. One way for students to hone their writing skills is for them to become metacognitively aware when it comes to their writing.

Metacognition is not only about the strategies that students use, but also about students' knowing when and how to use them. Developing students' metacognitive knowledge is something writing instructors can, and should be doing (Denton, 2011).

Metacognition is a skill that can be taught, but too often students are coming to college unaware of their cognitive processes and the potential impact that has on their academic success (El-Hindi, 1997). That is why it is important for composition instructors to teach their students to be aware of and to regulate their use of metacognitive strategies. Despite the importance of the role metacognition plays in creating successful students, little research has been done to explore instructors' knowledge and use of metacognition in the classroom (Kistner et al., 2010, Wilson & Bai, 2010). This is especially true when it comes to composition instructors. While there have been numerous studies that look at what students are doing in relation to metacognition, there has been a dearth of research that looks at what instructors are doing to teach it. Therefore, it is necessary to study what composition instructors are doing to promote the learning of metacognition in their composition classrooms. The present study investigates what composition instructors are actually doing to implement the use of metacognition strategies with their students. This study looks at what instructors are doing to promote student metacognition before, during, and after a major writing assignment. Knowing what composition instructors are doing in the classroom could improve a composition department's ability to plan staff development and teacher education programs.

## **The concept of metacognition**

The concept of metacognition has been around since the mid 1970's with the work of John Flavell. Metacognition has been defined as having the ability to reflect on, monitor, and control one's knowledge and thoughts (Flavell, 1979). Metacognition involves both the conscious awareness and the conscious regulation of one's learning. Although it is widely applied across multiple subjects, the concept is used in two different senses, which may cause some confusion. The first component is metacognitive knowledge, also called metacognitive awareness. The second component, and the one I will be focusing on, is metacognitive regulation.

Metacognitive knowledge refers to the learner's awareness of their thinking strategies. This is knowledge that can be used to control one's cognitive processes. There are three different aspects to metacognitive knowledge: strategy knowledge, also called conditional knowledge, refers to one's awareness of when and why to apply certain knowledge and strategies. Task knowledge, also referred to as procedural knowledge, is an awareness of how to apply concepts and strategies to the specific task. And declarative knowledge, also referenced as content knowledge, deals with the learner's awareness of what strategies and concepts are important in relation to a specific task (Negretti, 2012). Having metacognitive knowledge leads one to being metacognitively aware, which is the first step in being a metacognitive learner. While it is important to know about metacognitive strategies, it is also vital to regulate the use of these strategies.

The second component of metacognition is metacognitive regulation, and it deals with the *use* of metacognitive strategies. Metacognitive strategies are sequential

processes that learners use to control cognitive activities and ensure a cognitive goal is reached. These strategies consist of three different aspects: planning, which refers to the appropriate selection of strategies and the correct allocation of resources that affect task performance; monitoring is one's awareness of comprehension and task performance; and evaluating is the appraising of the final product of a task and the efficiency with which it was performed (Ku & Ho, 2009). Whereas knowledge of metacognitive strategies makes one metacognitively aware, metacognitive regulation is where learners make use of those strategies to adapt and improve intellectual performance. Therefore, for learners to benefit from metacognitive instruction, both components, knowledge and regulation, must be used in tandem (Ku & Ho, 2009).

### **Metacognition and writing**

Writing is a set of distinctive thinking acts, which writers orchestrate and organize during their writing processes. Writing, especially at the college level, requires students to write in multiple genres and to multiple audiences and, more often than not, students get to college underprepared for the demands of college writing courses (O'Brien-Moran & Soiferman, 2010). These novice writers have yet to attain the necessary skills to make them experienced writers. All of them have writing processes, but they were primarily accumulated without much conscious thought. For students to bridge the gap from novice writers to experienced writers, they need to be metacognitively aware of their writing processes (O'Brien-Moran & Soiferman, 2010).

Being metacognitively aware aids writers in multiple ways, not only by helping them become better critical thinkers (Garcia & Pintrich, 1992, Ku & Ho, 2010) but also by allowing them to transfer what they have learned from one setting or class to another setting or class (Pacello, 2014). A critical thinker is one who employs the proper skills and strategies to achieve a desirable ending (Ku & Ho, 2010). Critical thinking involves strategic use of cognitive skills that particularly suit a specific situation. It also involves the control of one's own thinking processes in order to create well-founded conclusions. Ku and Ho (2010) advocate that the use of metacognitive strategies is a crucial aspect to creating critical thinkers. Garcia and Pintrich (1992) relate critical thinking to college composition when they state that, "for students in English [college composition], multivariate analyses showed that the most powerful predictor of critical thinking in composition classes was the use of metacognitive self-regulatory strategies" (p. 15). Being metacognitively aware results in the proper knowledge of when and where to use metacognitive strategies. Using the proper strategies at the proper times is associated with higher student academic performance (Hamman et al., 2000). Being metacognitively aware is beneficial in not only creating better critical thinkers, it also aids in students being able to transfer their knowledge from one setting to another.

Transfer is the ability to use knowledge attained from prior experiences in a new setting or situation (Pintrich, 2002). While there are different types of transfer, the one that has shown the most promise in helping students is the metacognitive control of general and specific skills (Leat & Lin, 2003). Students who are aware of strategies for thinking and problem solving are more likely to use them when facing different or new

classroom tasks (Pintrich, 2002). College composition classes serve an important role in teaching students the skills necessary to not only succeed in their composition classes, but in all of their future academic writing. And the idea of transfer is an important part of that equation.

While there have been a few studies done on the impact of students' metacognitive regulation of learning strategies, the results are somewhat similar to studies exploring students' metacognitive knowledge. Ku and Ho (2010) looked at the three different aspects related to metacognitive regulation: planning, monitoring, and evaluating, and found that students who spent more time on each aspect performed better in their academic studies. Skilled thinkers, or those who were able to regulate their use of metacognitive strategies, displayed strengths in their ability to plan and evaluate their work (Ku & Ho, 2010). This relates to writing in that novice writers tended to do more restating of information, whereas more skilled writers adopted a problem-solving pattern of writing (Ku & Ho, 2010). It is this problem-solving pattern, which is positively influenced by being metacognitively aware, that aids students in critically thinking about their writing.

### **Metacognition and instruction**

Metacognition plays an important role in creating successful college students, but all too often college students are lacking metacognitive skills (Pacello, 2014). This means that instructors need to teach their students about metacognitive strategies and how to properly use those strategies. In the field of writing, this falls to their composition

instructors. Writing is a multifaceted process that requires students to manage a complicated structure of decisions. Each decision builds off of a previous decision; therefore, it is important for students to develop procedures for managing those decisions (Moran & Soiferman, 2010). This is where metacognitive knowledge and regulation become important skills to command.

Becoming a metacognitive thinker within an academic setting rarely happens on its own; it requires knowledgeable instruction (Denton, 2011). Teaching students to be metacognitively aware is not something that happens merely through exposure, rather it is an activity that needs to be taught explicitly (Kistner et al., 2009, Pacello, 2014, Pintrich, 2002, Zohar, 1999). While it is possible for students to engage in some metacognitive activities through passively using specific strategies, it does not lead to long-term changes in student behavior. The explicit teaching of metacognitive strategies is what leads to the use of those strategies in future academic settings (Pacello, 2014).

Yet, instructors struggle to teach students to be metacognitively aware (Leat & Lin, 2002, Wilson & Bai, 2010). It has been found that most instructors implicitly teach metacognitive strategies (Kistner et al., 2009), expecting their students to ‘pick it up’ throughout the course. An example of this is when an instructor models the use of a strategy but does not mention that this behavior could be an effective learning strategy. Not informing the students about the importance or uses of a strategy requires them to extrapolate the significance of the modeling exercise themselves.

While there has been quite a lot written about metacognition over the years, very little has been focused on college composition classes, even though writing courses are

great places to create a foundation for self monitoring, reflection, and transfer (Pacello, 2014). Of those studies that have focused on college composition, almost none have studied what the instructors are doing to teach their students to regulate the use of metacognitive strategies. This dearth of information has lead researchers to the conclusion that more studies need to look into what instructors are doing to teach metacognitive regulation in the classroom (Pacello, 2014, Wilson & Bai, 2010). This study looks at just that, what college composition instructors are doing to teach their students to regulate their use of metacognitive strategies.

The research questions being investigated with this study are:

1. What kind of training are instructors receiving for teaching metacognitive strategies?
2. Are instructors explicitly teaching their students to regulate their use of metacognitive strategies?
3. What activities are composition instructors using to teach their students to regulate their use of metacognitive strategies?

## **Methods**

This study was based on a 2010 study done by Nance S. Wilson and Haiyan Bai. Their study consisted of grammar school teachers who were in the process of getting their masters degree. Wilson and Bai focused on these teachers' understanding of metacognition, as well as their pedagogical understanding of metacognition, and how they relate to teaching students to be metacognitive. Their study consisted of the graduate students answering a questionnaire that looked at what they would do to teach students to



become metacognitive thinkers. While their study looked at what the graduate students would do, they did not ask what they were actually doing. This was something that was prevalent throughout my initial research, a focus on what teachers should do, but not on what they were actually doing. Another gap that this article, as well as my preliminary research, made me aware of was a lack of studies that focused on college composition instructors. As an aspiring college composition instructor, I was curious to see what my peers were doing to teach the concept of metacognition to their students.

This study primarily explored how current composition instructors teach students to regulate their use of metacognitive strategies. The study utilized a questionnaire, which involved both open-ended questions as well as Likert scale questions to explore the composition instructors' knowledge and training in teaching their students to regulate the use of metacognitive strategies. This study was conducted on a large university campus that required the teaching of metacognitive strategies to first year composition students. One of the learning outcomes for the first-year writing class, which all the participants have taught at one point, is to "help students develop a metacognitive understanding of processes of reading, writing and thinking." This distinction is relevant due to the fact that in order to teach students to regulate the use of their metacognitive strategies, instructors need to have knowledge of those strategies. By doing this study in a composition department that requires the teaching of metacognitive strategies, it was hoped that the instructors would already have the required metacognitive knowledge, thereby allowing the focus of the study to be on the regulating aspect of metacognition.

### *Participants*

The participants of this study consisted of composition instructors from a large, comprehensive, West Coast University. The questionnaire was sent to sixty composition instructors currently teaching at the university during the fall of 2016. Out of the sixty, twenty responses were received. The amount of teaching experience of the twenty respondents ranged from one to 23 years, of which 40% had ten or more years of teaching experience, while 60% had five years or less of teaching experience. The instructors surveyed had taught composition classes ranging from undergraduate to graduate, but the focus of this study was on the first year composition requirement.

### *Materials*

The data collected for this study came from a thirteen-part questionnaire (See Appendix A). There were nine open-ended questions, which focused on two different kinds of information. The first set of questions surveyed the instructor's teaching background. These questions explored the instructor's teaching experience and training to teach metacognitive strategies to their students. The second set of open-ended questions looked at what specific strategies they used to teach students to regulate their use of metacognitive strategies.

The four Likert scale questions primarily focused on how the instructors taught their students to regulate their use of metacognitive strategies. These questions relied on a five point system with possible answers ranging from 'to a large extent' to 'not at all'.

These questions were used to look at how explicitly they taught students to regulate their metacognitive strategies. The questionnaire was distributed through an online survey provider during the Fall Semester of 2016.

## **Findings**

### *Explicit Training Data*

The first question explored the amount of explicit training the instructors had received in metacognition. Out of the twenty participants, 30% had either received or undertaken explicit training to teach metacognitive strategies. 50% had some sort of training, and 20% reported having neither received nor undertaken any explicit training. Of the 30% who had received or undertaken explicit training, only one of the participants had received training, the rest had taken it upon themselves to learn how to appropriately teach the use of metacognitive strategies to their students. The 50% who had some sort of training reported that the extent of this training consisted of discussing it in one or more of the graduate level classes they took when working toward their MA.

To further analyze this data it can be broken down by the amount of teaching experience each group has attained. The 30% group had an average of fifteen years of experience. The 50% group had an average of three years of experience. While the 20% group had an average of three and a half years of experience, it is interesting to note that three out of the four teachers averaged just over one year of classroom experience.

### *Explicit Training Analysis*

Very few students come to college with the necessary skills to regulate their use of metacognitive strategies. And research shows that students who are able to regulate their use of metacognitive strategies have proven to be more accomplished writers than their peers who are not able to regulate these strategies. In order for students to attain the ability to regulate their use of metacognitive strategies, they need to be taught how to do so. For that to happen, the students need instructors who are knowledgeable about metacognition. The findings from this study show that 70% of the instructors have had either limited or no training when it comes to metacognition in general. A majority of the respondents cited receiving minimal training during their graduate level classwork: “This was discussed in my classes during my MA program,” “It was a small topic in two of my graduate classes.” While it is difficult to teach a concept that one has had only a surface level introduction to, it is even more difficult if one has had no introduction at all.

Almost a quarter of the respondents had no training on the subject of metacognition. When these respondents were asked about the level of explicit training they received their responses were, “None,” “I have never had explicit training,” and “None that I can think of.” From these responses it is not difficult to see why researchers have called for more professional development and training in regards to teaching metacognition (Kistner et al., 2010, Leat & Lin, 2003, Moran & Soiferman, 2010, Wilson & Bai, 2010, Zohar, 1999). What is interesting is that these responses are happening at an institution that has an undergraduate learning goal related to metacognition. This begs

the question, what is happening at universities where being metacognitively knowledgeable is not required of the students?

*Data on extent of explicit teaching of metacognitive strategies*

The second question looked into whether instructors were explicitly teaching their students to regulate their use of metacognitive strategies. The data for this question was analyzed within the three types of strategies used to regulate one's metacognition: planning, monitoring, and evaluating.

When the instructors were asked how explicitly they taught the strategies they used in their class in terms of their metacognitive purpose as it relates to the planning phase, 40% responded that they did so to a large extent. 20% responded that they did to a moderate extent, while 15% did to some extent, and 25% not at all or to a small extent. It is clear that less than half of the respondents failed to explicitly teach their students to regulate the use of metacognitive strategies to a large extent. These numbers were similar to what was found with regards to the monitoring phase.

The responses from the instructors in relation to explicitly teaching strategies in relation to the monitoring phase found that 40% taught them to a large extent, 25% taught them to a moderate extent, 10% to some extent, and 25% to a small extent or not at all. The number of instructors explicitly teaching these strategies is the same as those in the planning phase, though the number goes up slightly for those that teach them to a moderate extent. However, a quarter of the instructors are still only teaching these strategies for their metacognitive purpose to a small extent or not at all.

The final aspect dealing with the explicit teaching of strategies for their metacognitive purpose deals with the evaluating phase. Here the number of instructors teaching this to a large extent goes up to 50%, with 15% teaching it to a moderate extent, 20% to some extent and 15% to a small extent or not at all. Here there is a slight improvement in the numbers, with 65% teaching these strategies either to a large extent or to a moderate extent while only 15% do it to a small extent or not at all.

*Analysis on explicit teaching of metacognitive strategies*

“I guess I just hope that it ‘happens’.” This quote from one of the participants in this study is indicative of how many instructors imagine their students’ learning to be metacognitively aware. Instructors in this study are not alone. Research has shown that a majority of instructors implicitly teach metacognitive strategies, which aligns with the findings in this study (Kistner et al., 2009). Only 40% of the respondents in this study explicitly teach their students to a large extent about metacognitive strategies in the planning and monitoring phase. This means that 60% teach these strategies either not at all or to a moderate extent. The numbers improve slightly when looking at the evaluating phase with 50% teaching it to a large extent while the other 50% teach it either not at all or only to a moderate extent. But this is not good enough.

Hoping that it ‘just happens’ is not what students need. Students need to be taught explicitly how to monitor and regulate their metacognitive strategies (Kistner et al., 2009, Pacello, 2014, Pintrich, 2002, Zohar, 1999). Instructors need to explain the metacognitive purpose of class activities. When an instructor models a behavior, they need to mention

the metacognitive aspect explicitly. The numbers for instructors explicitly teaching the use of metacognitive strategies needs to be much higher. The reason these numbers are low may have something to do with the lack of explicit training referenced in the previous section. It is difficult to expect instructors to properly teach a concept when they have not been thoroughly trained to do so. The data from this section once again calls for more professional development and training when it comes to teaching metacognition.

*Data related to activities being used in the classroom*

The final question looked into what activities these composition instructors use to encourage their students to regulate their use of metacognitive strategies. The data for this question was analyzed within the three types of strategies used to regulate one's metacognition: planning, monitoring, and evaluating.

The activities that were most often used in the planning phase were class/group discussions, free-writes, and journaling. Class/group discussions were stated in almost half of the responses with free-writes being mentioned just below that, and journaling being found in a quarter of the responses. Other activities that were mentioned only once consisted of: readings, goal setting, writing for invention, and project planning. Reflection was mentioned multiple times when describing some of the activities in this section.

As for the monitoring phase, the activities mentioned were nearly the same as the planning phase. The activities most often reported were class/group discussions and free-writes. These two activities were mentioned the same number of times and were found in

nearly half of the responses. The next most prolific activities used during this phase were journaling and creating revision plans. Another response that appeared often was the activity of doing check-in's.

Activities the instructors used most for the reflective phase were cover letters and revision plans. These two activities received the same number of responses, with journaling being mentioned the third most. Free-writes and class/group discussion were also mentioned multiple times. The term 'reflection' appeared in a significantly higher number of responses than they did for either the planning or monitoring phase. The overall number of activities reported was highest in this phase with over 40 activities being recorded.

#### *Analysis related to activities being used in the classroom*

The activities instructors use is an important factor when it comes to helping students regulate the use of metacognitive strategies. While there is no definitive research into what specific activities will help students regulate the use of metacognitive strategies, there is agreement on the goal of those activities: reflection (Negretti, 2012). Having the students reflect at any point during the planning, monitoring or evaluating stage helps them learn to regulate their metacognitive strategies (Negretti, 2012).

Looking at the activities the instructors used in the planning phase, we can see that there are plenty of opportunities for students to do reflection. Class/group discussion, free-writes, and journaling all offer chances for students to reflect on how they are planning their writing. Some of the respondents were very specific about the reflective



nature of the activities. They mentioned doing reflective journals, reflective blogging, and reflecting on past assignments. However, some responses could use some clarifying in relation to their reflective purposes, such as, reading, goal setting, or project planning. While these activities could promote the regulation of one's metacognitive strategies, it would require the instructor to explicitly teach them as such and, as we saw from the previous section, not all instructors do so.

The activities used to help students monitor their use of metacognitive strategies ended up being very similar to what was used during the planning phase. Again, the majority of the activities recorded have the potential to be reflective in nature, but that would ultimately depend on how the instructor explains the purpose of the activity. What is interesting to note is that the number of activities recorded was the least in comparison to the planning and evaluating phases. One of the responses for this question resulted in an answer of "None" while another responded with "I do mini-reflective freewrites... There aren't many other strategies I am aware of." These responses in conjunction with the low number of recorded activities leads to the perception that instructors find this phase the most difficult to teach. This data reinforces the previous claim that instructors need more training in how to teach students to monitor and regulate their metacognitive strategies.

The most common activities used for the evaluating phase were cover letters, revision plans, and journaling. It is interesting to note that the terms 'reflection' or 'reflective' were consistently used to describe the type of activity that was being used. These terms were used much more in responses related to this phase than in either the

planning or monitoring phase. This shows that the instructors are aware of the importance of having the students reflect on their writing, but it is unclear if they are explaining why they are being asked to reflect on their writing. The difficulty in trying to decipher whether the instructors were focusing on the metacognitive aspect of these activities can be boiled down to two different responses. One instructor responded “Not sure” when asked what kinds of strategies they used for students to evaluate their work, while another responded, “I asked them if they could do it again what would they do differently, and also how they would apply what they learned to tasks in the future or other situations.” The first response shows a need for more training, while the second response shows the respondent’s knowledge of the transfer ability that being metacognitively aware gives their students.

Although this section did not go into incredible detail about the focus of the activities that are being done with regards to teaching students to regulate their use of metacognitive strategies, it is the first time the question has been asked to instructors who are currently working in the field. What this question does show is that instructors are using a multitude of different kinds of activities in relation to teaching metacognition, they know the importance of having their students reflect on their writing during the evaluation phase, and that there needs to be more teacher development when it comes to helping students be metacognitively aware in the planning and monitoring phases of their writing.

## **Conclusions**

This study looked at what composition instructors are doing to teach their students to regulate the use of metacognitive strategies as they relate to a major writing assignment. Becoming metacognitively knowledgeable is similar to writing in that it is a communal task that involves both students and instructors. Instructors who are metacognitively aware possess three different types of knowledge as it relates to metacognition: declarative knowledge, procedural knowledge, and conditional knowledge. These different kinds of knowledge relate to knowing how humans learn and process information, knowing about the nature of the task, and knowing about metacognitive strategies, which includes knowing when and where to use those strategies. Being metacognitively aware is just part of what it takes to teach students to be successful metacognitive learners, they must also know how to teach their students to regulate the use of metacognitive strategies when planning, monitoring, and evaluating a specific task. Being successful in teaching these multiple aspects to students requires training, yet the data demonstrates that only a handful of the instructors have had any explicit training in doing this. And of those that have undergone some kind of training, a large majority did so on their own. The data also shows that nearly a quarter of the respondents had undergone no training as it relates to teaching their students to be metacognitive learners. The research findings indicate that instructors may benefit from professional development as it relates to teaching their students to be metacognitively knowledgeable.

Another research question this study analyzed was how instructors were teaching their students to regulate the use of their metacognitive strategies. Previous studies have shown that the most effective way to teach these strategies is to do so explicitly, to explain to the students the metacognitive purpose of an activity. The data from this study indicated that only 40% were doing this to a large extent as it relates to the planning and monitoring aspects of metacognitive regulation. The data also shows that 25% of the participants were explicitly teaching it to a small extent or not at all in regards to the same two aspects, planning and monitoring. While the numbers do improve when looking at the evaluating aspect, it is still only half of the instructors who explicitly teach these strategies to a large extent. Instructor professional development should also include discussions on the importance of explicit teaching when working with students on metacognition.

The participants exhibited that they had a rich understanding of metacognition in general. This was demonstrated through the extensive array of metacognitive activities the instructors reported using with their students. While the most popular activities were journaling, class/group discussions, free-writes, and cover letters, there were numerous other strategies these instructors incorporated into their classroom. The plethora of activities indicates that the instructors are aware of metacognitive strategies, but could benefit from professional development on how to teach these activities so the students get the most out of them.

These instructors' self-reports gave a glimpse of how composition students are being taught to be metacognitive learners. This study looked at what instructors were

doing to help students regulate their metacognitive strategies during the planning, monitoring, and evaluating phases of a major writing assignment. Further research could benefit from focusing on just one of these aspects rather than all three. This would give a clearer picture with more detail as to what composition instructors are doing in their classrooms. One of the limitations of this study is that it relied solely on self-reported answers. It would also be beneficial to observe these instructors in the classroom to get a more fine-grained look at how instructors teach metacognitive regulation.

Metacognition is an important concept when it comes to writing. Metacognitively aware students know how to plan, monitor, and evaluate their work, which leads to better, more precise writing. Metacognition is influential in creating students who are critical thinkers and also helps students transfer what they learned in one class to other academic experiences. Metacognition is a skill that can be taught, which is why it is important to see what instructors are doing to teach their students these strategies. This study has shown that many composition instructors lack the training to effectively teach their students these skills. While these instructors incorporate numerous activities that promote metacognition, they are not all teaching it effectively. Universities need to do a better job training potential instructors on the importance of effectively teaching students to monitor and regulate their use of metacognitive strategies. Until that happens, it would be beneficial for composition departments to incorporate professional development instruction as it relates to teaching metacognition in the classroom.

## Appendix A

## METACOGNITION QUESTIONNAIRE

1. How long have you been teaching composition classes?
2. How long have you been teaching composition classes at Sacramento State?
3. What composition class or classes do you teach at Sacramento State?
4. What, if any, kinds of explicit training have you received or undertaken in teaching metacognition strategies?
5. How would you define metacognition?
6. What are some metacognitive thinking strategies you are familiar with?
7. How confident are you in translating your knowledge of metacognition thinking strategies into the classroom?

*Really confident*      *Confident*      *Not Sure*      *Not confident*      *Really not confident*

8. What kinds of metacognitive thinking strategies do you use when students are planning to do their assignment?

9. How explicitly do you teach these strategies in terms of their metacognitive purpose?

*Not at all*      *To a small extent*      *To some extent*      *To a moderate extent*      *To a large extent*

10. What kinds of metacognitive thinking strategies do you use for student's to *monitor* how the assignment is going?

11. How explicitly do you teach these strategies in terms of their metacognitive purpose?

*Not at all*      *To a small extent*      *To some extent*      *To a moderate extent*      *To a large extent*

12. What kinds of metacognitive thinking strategies do you use for student's to evaluate how the assignment went?

13. How explicitly do you teach these strategies in terms of their metacognitive purpose?

*Not at all*      *To a small extent*      *To some extent*      *To a moderate extent*      *To a large extent*

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