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A Pilot Study on Influencing Student Success in Online Courses

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Since 2012, the enrollment in online courses has grown steadily each year (Seaman et al., 2018). With the COVID 19 pandemic's implementation of lock-downs and online learning in 2020, more students than ever before are shifting to online college courses. Even as students and workers go back out into the world, taking online college courses continues to be a viable option for traditional and non-traditional college undergraduates. There has been increased interest in the scientific community in online courses and undergraduate students' ability to be successful in remote learning situations. Research has been conducted on the qualities needed to achieve higher performance in online courses in order to facilitate better learning experiences for both students and teachers. With the wealth of information available, there still remains limited research on how to influence online academic achievement in college undergraduates when specific qualities are not already present for the student.

Why are some students more prone to successful completion of their online courses while others are not? With a number of studies being done on academic achievement in online courses, significant factors of success are becoming more evident. Support from family and work, belief in self and one's ability to complete courses (self-efficacy), belief in ability to impact future outcomes (locus of control), self-regulation skills, goal setting, and time management skills are all key to a student's ability to positively impact their academic performance. Consistently, the findings in online course research point to self-efficacy and motivation as a driving force of academic achievement. It appears that an online student's belief in their ability to do well in their courses and their resolve to complete them support their ability to persist throughout their courses consistently (Stark, 2019; Younju et al., 2013).

Significant effort has been taken to study which strategies affect academic achievement. In a study done by Richardson et al. (2012), it was found that there are a few differences in what

influences performance in traditional versus online courses. Mainly, in online courses, there were specific self-regulation learning techniques that were the most effective for students. Time management, critical thinking, effort regulation, and metacognition were found to be fundamental to success in remote learning environments (Broadbent & Fuller-Tyszkiewicz, 2018).

Self-regulation techniques go beyond a specific skill set that a student can learn. Self-regulation is a method in which learners merge learning tactics with their thought processes to direct the outcomes of goals. Specific skills of self-regulated learners include setting goals, creating and implementing strategies to attain goals, self-monitoring of performance, creating space in one's life for completion of goals, self-assessing which behaviors support goals and which do not, and adjusting one's strategies as needed (Zimmerman, 2002). Self-regulated learners implement metacognitive behaviors as they work to attain their goals. Metacognition is the awareness of one's own way of thinking. It is the ability to reflect on your thought processes, gain insight, and adjust accordingly. The two primary tasks in metacognition are monitoring and controlling. When monitoring, a student is able to identify the task, evaluate progress, and navigate outcomes. Making the specific decisions based on these insights, implementing time management and using effective resources are all examples of the control aspect of metacognition (Schmidt & Ford, 2003).

Interest in academic achievement and how to support students' success inspired the creation of Motivated Strategies for Learning Questionnaire (MSLQ; See Appendix A). Developed by Pintrich et al. (1993), this survey measures different types of academic motivations and skills that college students employ in their specific college courses. Motivation is measured in three aspects in the MSLQ: belief in their ability to succeed (self-efficacy),

internal and external motivations, and the student's self-reported anxiety about taking the course. Learning strategies are also measured. The MSLQ provides a scale of reference for researchers to understand which techniques students implement when learning new material in a specific course. The students' techniques that researchers observe range from basic skills like memorization to more complex, metacognitive approaches such as reflection on goals and personal understanding. This tool has not only been useful in the past to understanding academic achievement, but can continue to help researchers understand particular skill sets and motivations for online courses, too (Stark, 2019).

The previous research has shown that there are key factors that an online student possesses which positively impact their academic performance. It is clear that self-efficacy and motivation are instrumental in the success of a student who is in the process of completing their online courses (Stark, 2019; Broadbent & Fuller-Tyszkiewicz, 2018). What is lacking in prior studies is research on how to positively influence students' belief and motivation when it is not readily available. There is a lack of research investigating the impact learning self-regulation skills on a student's self-efficacy and motivation in their online courses. This study proposes that a student's belief in their ability to complete online courses is correlated with self-regulation skills that will help them set goals, manage their time, create strategies, and reflect on their progress to fulfill their long term goals at the end of their course.

Participants in this study will be grouped into one level. They will be taught specific self-regulation skills before the beginning of the semester of an online course. In addition, the group will participate in four surveys during the semester, prompting the students to use metacognitive skills to monitor and adjust their strategy during the course. Self-efficacy and motivation will be measured twice during the study, once before the course begins and again

after the semester has been completed. This current study hypothesizes that self-regulation and metacognitive skills will be correlated with self-efficacy and motivation. The data collected in this study will create a preliminary foundation for future research in how to support and influence the success of online undergraduate college students.

Proposed Method

The previous research on online undergraduate college students and their academic achievement focuses on what sets successful students apart from those who are not persistent. It is unclear with the current available research on how to support undergraduate online students who fall into the latter category of being unsuccessful. Self-efficacy and motivation have been found to be significant to success in online courses (Stark, 2019). Beyond what the previous data has shown, self-efficacy and motivation are vital to student success because a student who believes that they have the ability to achieve their goals and is motivated to learn the skills necessary to complete their courses, will have the fortitude to overcome challenges that occur throughout their college career. It is important to uncover and understand how to influence these qualities so that struggling students do not quit before they complete their courses.

Can the self-efficacy and motivation of a student be influenced by that student attaining self-regulated learning skills? This study hypothesizes that there is a direct correlation between the self-regulation and metacognitive skills a student possesses and their self-efficacy and motivation. The independent variables being measured are self-regulated learning skills and metacognitive behaviors and the dependent variables are self-efficacy and motivation.

Participants

The participants will be randomly sampled from the population of Johnson County Community College's (JCCC) undergraduate online students. In 2020, there were 2,397 exclusively online students and 3,436 students enrolled in at least one online course ("JCCC Students," 2020). With permission from the Registrar, the e-mail addresses of current undergraduate students taking at least one online class will be collected and put into a simple sampling frame. This database will randomly select 500 students to contact in order to achieve the most representative sample of the online student body enrolled at JCCC. It is this study's goal to achieve at least a 50 % response rate before beginning the research.

Due to financial constraints and ethical concerns, monetary compensation for participants will not be provided. In order to entice participants, the skills being taught and measured in this study will be advertised as an opportunity to learn basic tools that will support academic success. Each participant will sign a consent form, and will be given a detailed account of the study before it begins.

Design

Using the Online Motivated Strategies for Learning Questionnaire (OMSLQ), participants' baseline learning techniques, self-efficacy, locus of control, motivations, and demographics will be measured at the beginning of the study. Both independent (self-regulated and metacognitive skills) and dependent variables (self-efficacy and motivations) will be assessed with this initial questionnaire, providing the data to make correlations (if they exist) between the variables at the end of the study. This will be a correlational study, with every

participant taking part of the same treatment. The research will be a within-groups design. The duration of this study will be over a single semester of an online undergraduate student's course.

Materials

This pilot study will implement the use of the OMSLQ. The OMSLQ is a self-report measure with 81 items, and will take 20-30 minutes to complete (Crede & Phillips, 2011). The OMSLQ is identical to the original created by Pintrich et al. (1991), in every way except that it is distributed through the internet and collects the data automatically. Both the researcher administering the questionnaire and the participants taking it can view the results and scores immediately after completion (Kolack, 2019). The use of the Likert scale is utilized to measure the responses for each item in this questionnaire. The OMSLQ is used to specifically measure motivations and learning strategies for one course, but for this experiment we will ask the participants to generalize their responses in order to collect data on their broad scholarly intentions and strategies (Pintrich, 1991).

The OMSLQ is divided into two major sections: one to measure motivation and the other to measure learning strategies. Each section is divided into multiple subsections that focus on specific aspects of each construct. Thirty-one items of the questionnaire measure motivation, which is subdivided into items focused on value beliefs and goals, expectancy of outcomes in the course, and the student's belief in their ability to affect outcomes. Learning strategies are covered in the final fifty questions. Cognitive strategies, metacognitive abilities, resource management, and critical thinking are the components of the remaining subsections (Crede & Phillips, 2011).

Items in the OMSLQ are scored based on a seven point Likert scale, with the responses ranging from one (not true) to seven (very true to me). There are fifteen scales that are measured in the results of the survey (see Table 1). Some of the questions contain negatively worded items, and their score must be adjusted and reversed before calculation of the participants' scales. The mean of the numerical responses of the questions within a scale group becomes the final score of each scale group (Duncan & McKeachie, 2005). In this study, the final scale scores will be analyzed and utilized to find the existence of significant relationships between specific factors.

TABLE 1
Coefficient Alphas and Items Comprising the 15
MSLQ Scales

<i>Scale</i>	<i>Items Comprising the Scale</i>	<i>α</i>
Motivation scales		
Intrinsic Goal Orientation	1, 16, 22, 24	.74
Extrinsic Goal Orientation	7, 11, 13, 30	.62
Task Value	4, 10, 17, 23, 26, 27	.90
Control of Learning Beliefs	2, 9, 18, 25	.68
Self-Efficacy for Learning and Performance	5, 6, 12, 15, 20, 21, 29, 31	.93
Test Anxiety	3, 8, 14, 19, 28	.80
Learning strategies scales		
Rehearsal	39, 46, 59, 72	.69
Elaboration	53, 62, 64, 67, 69, 81	.75
Organization	32, 42, 49, 63	.64
Critical Thinking	38, 47, 51, 66, 71	.80
Metacognitive Self-Regulation	33r, 36, 41, 44, 54, 55, 56, 57r, 61, 76, 78, 79	.79
Time and Study Environment Management	35, 43, 52r, 65, 70, 73, 77r, 80r	.76
Effort Regulation	37r, 48, 60r, 74	.69
Peer Learning	34, 45, 50	.76
Help Seeking	40r, 58, 68, 75	.52

An online workshop will be implemented before the beginning of the semester. This course will be created through the website, open.edu/, a free resource in creating online classes and training workshops. The course will be inspired primarily from the self-regulated learning skills defined by Zimmerman (2002), a Professor Emeritus of Educational Psychology and Head

of the Learning Development and Instruction at the City University of New York. Zimmerman's research and contribution of over 100 articles on self-regulated learning behaviors has influenced the work of countless other researchers ("Barry Zimmerman," 2021).

The online workshop will focus on teaching self-regulated learning skills. The entirety of the course will take about an hour to complete. The participants will have access to their course materials indefinitely to refer back to throughout the semester. The workshop will focus on teaching online students the components of academic success, as defined by the self-regulated learning theory.

Four surveys will be emailed to the online students throughout the semester. This online survey will be created through [surveymonkey.com](https://www.surveymonkey.com), an online resource for creating surveys and questionnaires. After the term has begun, participants will fill out an online survey, and email it back to the researcher every four weeks. The researcher will send email reminders three days before each survey is due. This survey will support the participants in practicing metacognitive skills throughout the semester in order to bring awareness to their goals and strategies.

Since the participants will all be enrolled in online undergraduate courses, the entirety of this study will be conducted online and through the internet. Data will be collected through the OMSLQ results, through the four metacognitive surveys, and through email correspondence.

Procedure

A week before the beginning of the school semester, each participant will be sent the OMSLQ. They will each complete the questionnaire. Once the results have been dispersed to both the researcher and the participants, the student will be given an invitation to attend the

online workshop. The online self-regulation and metacognitive skills workshop will be completed the same day as the OMSLQ. A baseline of scores from specific scales concerning self-efficacy, motivation, metacognitive skills, and demographic information of the participants will be collected and recorded.

The Self-Regulated Learning Skills Workshop will become live the same day the OMSLQ is taken. Participants will receive an email including link and directions on how to access the online workshop. The strategies taught in the workshop focus on identifying goals and adjusting strategies as problems arise. The workshop will cover the benefits of setting goals and will prompt participants to define their own goals and motivations for online courses. Participants will be given examples of strategies for completing courses and will be elicited to create at least two personal strategies to complete their goal in their online course. They will learn about monitoring their performance, self-evaluation methods, and adjusting strategies as problems arise. Each participant will be given access to an online calendar to create a schedule and predict adjustments in the upcoming weeks of school for their classwork. Participants will learn about time management and be asked to set weekly time goals for studying (Zimmerman, 2002). The course will include a list of academic resources from JCCC.

Every four weeks, a metacognitive skills survey will be emailed to the participants. The survey will incorporate six open-ended questions that invite the students to monitor their progress towards the goals they have set for themselves during their semester. The questions on the survey are:

1. What are two goals I have set for myself this semester?
2. What obstacles have I encountered?

3. Name one strategy that I have implemented this semester that is helping me unsuccessfully achieve my goal.
4. Name one strategy that I have implemented this semester that could be adjusted to more effectively reach my goal.
5. What alternative strategy could I use moving forward?
6. What resources have I not utilized this semester that could be supportive?

The surveys will be emailed back to the researcher for proof that the participants have completed them. Though the subsequent data from the surveys will not be measured, it is the intention of this study to teach the metacognitive skills of goal setting, monitoring progress, and adjustment of strategies that are prompted through the questions in the survey.

One week after the semester has come to an end, the OMSLQ will be redistributed to all participants of the study. After taking the workshop and completing the four metacognitive skills surveys, the results from the initial OMSLQ are hypothesized to differ from the final OMSLQ. The participants will complete the questionnaire, and the results will be sent back to the researchers for further examination. The data will be analyzed with the intention of uncovering whether correlations exist between increased self-regulated learning and metacognitive skills and higher self-efficacy and motivation.

Due to the design of correlational research, causation can not be determined at the conclusion of this study. There are many confounding variables that are present because this is not technically an experiment. Various factors will be present in the individual participants' lives that cannot be controlled throughout this study due to lack of resources. Though the sample

of participants being used may be representative of JCCC, this study's sample may not be representative of the larger population of online undergraduate students in the country. JCCC is predominately white and economically affluent, so this will need to be taken into consideration.

With the wealth of information about the qualities of successful online students, this study aims to use its findings to support the research that has come before it and to inspire continuing experiments to come. The benefit of this design is that it is relatively inexpensive, provides students with resources on how to succeed in their studies regardless of outcome, and any data gathered in the study will provide future researchers with a foundation for more structured experiments around this topic. It is this study's intention to aid in supporting online undergraduate college students who do not already possess high levels of self-efficacy and motivation in order to ultimately support online students in their achievement of higher levels of academic success.

Results

The final statistical analyses of this study will be computed from a number of multiple regressions. Both the scores from the first and second OMSLQ will be computed and compared in order to ascertain whether there is a correlation between self efficacy and motivations with self-regulation skills and metacognitive behaviors within each condition of the survey. The regression analysis will display if any linear relationships exist between the variables. It is hypothesized that the self-regulated learning skills and metacognitive behaviors scores will increase after the online workshop and surveys have been taken, and that this increase will be correlated with higher marks in self-efficacy and motivation. In teaching the students methods

towards achieving their goals, it is theorized that their belief in themselves and motivation will be affected.

Discussion

It is paramount for researchers to use their resources to find ways to support online students who may struggle in their academic careers, especially when the transition from face to face classes to online learning is already occurring. This proposed correlational study has the potential to gather useful data that could support future work with very low financial overhead. The initial creation of surveys and the workshop, the distribution of the OMSLQ, and the final analysis of data are the majority of output needed by the researcher to conduct the study. Since all of the data collected will be gathered by the OMSLQ, the focus of the researcher will be on the analysis of material and any potential troubleshooting the participants may need. Additionally, the skills being taught in the workshop and with the metacognitive surveys have the potential to be beneficial to the participants during their semester online.

Due to financial constraints and a lack of resources, the limitations of this study are many. Without a lab to create a more controlled experiment, the study will be unable to establish causation between the variables being measured. A correlational study is a simple and inexpensive way to begin to look at the possible relationship between the variables. With a lack of research available on influencing self-efficacy and motivation, a clear direction on how to create a more controlled experiment was unknown. Future potential funding and the use of the data collected from this study could support researchers in creating a lab experiment that is capable of controlling more aspects of the students' learning process and focus primarily on establishing clear causal relationships.

Primarily, there is one researcher available to manage all aspects of the study. There is a limited ability to expand the study to include participants outside of JCCC. The restricted funding makes providing adequate financial compensation for participants improbable, possibly affecting the size of the sample that will be taken. A larger team of researchers would be a valuable asset to upcoming studies. Ideally, sampling participants from multiple campuses, either in the state or across the country, would potentially generate more generalizable results that could extend to a larger online college student population. In future research, in-person or over the phone surveys and workshops would be possible with an increased number of people available to assist or participate in the study.

A number of confounding variables are potentially present in the study. Using a correlational research design limits the ability to confidently identify if the skills being taught are in fact influencing the participants' self-efficacy and motivations. The length of the study increases the chances that participants may be affected by variables that exist in their personal lives that influence their belief in themselves or that alter their motivations to complete their courses. Certain aspects of the participants' demographics may also turn out to be confounding variables. A change in financial status, a loss of a job, or a potential housing relocation may impact aspects of this study.

The use of online surveys and open-ended questions could affect the data being collected. Participants who have questions about the surveys may feel less inclined to ask for clarification than participants who have access to interviewers in person. The use of open-ended questions could potentially fatigue the participants, and ultimately influence their digestion of the skills being taught. Though these potential obstacles are present, the use of online surveys may work better for this specific sample of students because the participants are already familiar with

online courses and have chosen to take classes in a remote setting. In future research, this approach will need to be analyzed and may need to be amended.

Internal and external validity may be threatened in this correlational study design. Since March 2020, the United States and the larger global population have been experiencing a pandemic. It is possible that the effects of this will have an impact on the participants and their self-efficacy and motivation, along with their ability to participate in the study. Due to illness, psychological distress, financial changes, and possible deaths of loved ones, the participants' scores on the OMSLQ may be affected, or they may drop out of the study altogether. Attrition is a concern, but will need to be addressed after the semester has concluded. It may be wise to replicate the same study in the future to compare the findings. Issues of reliability will become apparent if the study is replicated and analyzed. The participants will be taking the OMSLQ twice, creating an added potential threat to validity. On a larger scale, the findings of this study will not be generalizable to the larger undergraduate online college population. Future research will need to include more campuses throughout the state or the country in order for a representative sample to be taken of the larger population.

This study hypothesizes that the data collected will show that there is a correlation between self-efficacy and motivation with self-regulated learning skills and metacognitive behaviors. This work has the potential to establish a basis for further research on how to assist and support online learning for all types of students. Not every student possesses the confidence or drive to be persistent in their online courses, yet with the data collected in this study, future researchers may uncover how to provide the necessary support so that more students ultimately are able to succeed.

Self-regulation skills and metacognitive behaviors can be taught, but how does one teach self-efficacy and motivation? Both qualities, which research has shown are fundamental to success in online learning situations, are not hard skills that can be taught in a classroom. Still, by studying the correlation between the aspects, it may be possible to influence both self-efficacy and motivation by providing students with the remaining skills needed for success. In feeling more prepared and resourced, do self-efficacy and motivation change in a measurable way? Any success rendered will provide incentives for more funding in the future, and more interest for other researchers to collaborate and create more controlled experiments.

References

- Broadbent, J., & Fuller-Tyszkiewicz, M. (2018). Profiles in self-regulated learning and their correlates for online and blended learning students. *Educational Technology, Research and Development*, 66(6), 1435-1455. <http://dx.doi.org.ezproxy.jccc.edu/10.1007/s11423-018-9595-9>
- Credé, M., & Phillips, L. A. (2011). A meta-analytic review of the Motivated Strategies for Learning Questionnaire. *Learning and individual differences*, 21(4), 337-346.
- Duncan, T. G., & McKeachie, W. J. (2005). The Making of the Motivated Strategies for Learning Questionnaire. *Educational Psychologist*, 40(2), 117–128. https://doi-org.ezproxy.jccc.edu/10.1207/s15326985ep4002_6
- Everson, H. (n.d.). *Barry Zimmerman*. Learning and the Adolescent Mind. Retrieved November 1, 2021, from http://learningandtheadolescentmind.org/people_04.html
- JCCC student population and Demographics*. Univstats. (n.d.). Retrieved October 24, 2021, from <https://www.univstats.com/colleges/johnson-county-community-college/student-population/>.
- Kolack, K. (2019). *Online Motivated Strategies for Learning Questionnaire (MSLQ)*. Queensborough Community College. Retrieved November 1, 2021, from <https://www.qcc.cuny.edu/chemistry/facultypages/kkolack/onlineMSLQ.html>
- Pintrich, P. R. (1991). A manual for the use of the Motivated Strategies for Learning Questionnaire (MSLQ).

Schmidt, A. M., & Ford, J. K. (2003). Learning within a learner control training environment: The interactive effects of goal orientation and metacognitive instruction on learning outcomes. *Personnel Psychology*, 56(2), 405.

<http://ezproxy.jccc.edu/login?url=https://www-proquest-com.ezproxy.jccc.edu/scholarly-journals/learning-within-learner-control-training/docview/220133026/se-2?accountid=2200>

Seaman, J. E., Allen, I. E., & Seaman, J. (2018). *Grade Increase: Tracking Distance Education in the United States*. Babson Survey Research Group.

Sitzmann, T., Bell, B. S., Kraiger, K., & Kanar, A. M. (2009). A MULTILEVEL ANALYSIS OF THE EFFECT OF PROMPTING SELF-REGULATION IN TECHNOLOGY-DELIVERED INSTRUCTION. *Personnel Psychology*, 62(4), 697-734.

Stark, E. (2019). Examining the Role of Motivation and Learning Strategies in Student Success in Online Versus Face-to-Face Courses. *Online Learning Journal [OLJ]*, 23(3), 234+.
https://link.gale.com/apps/doc/A601763135/AONE?u=jcl_jccc&sid=bookmark-AONE&xid=38b1f52b

Youngju Lee, Jaeho Choi, & Taehyun Kim. (2013). Discriminating factors between completers of and dropouts from online learning courses. *British Journal of Educational Technology*, 44(2), 328–337. <https://doi-org.ezproxy.jccc.edu/10.1111/j.1467-8535.2012.01306.x>

Zimmerman, B. J. (2002). Becoming a self-regulated learner: an overview. *Theory into Practice*,

41(2), 64+.

https://link.gale.com/apps/doc/A90190493/EAIM?u=jcl_jccc&sid=summon&xid=5ef125

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Appendix A

The Motivated Strategies for Learning Questionnaire

Part A. Motivation

The following questions ask about your motivation for and attitudes about this class. Remember there are no right or wrong answers, just answer as accurately as possible. Use the scale below to answer the questions. If you think the statement is very true of you, circle 7; if a statement is not at all true of you, circle 1. If the statement is more or less true of you, find the number between 1 and 7 that best describes you. 1 2 3 4 5 6 7 not at all very true to true of me of me

1. In a class like this, I prefer course material that really challenges me so I can learn new things.
2. If I study in appropriate ways, then I will be able to learn the material in this course.
3. When I take a test I think about how poorly I am doing compared with other students.
4. I think I will be able to use what I learn in this course in other courses.
5. I believe I will receive an excellent grade in this class.
6. I'm certain I can understand the most difficult material presented in the readings for this course.
7. Getting a good grade in this class is the most satisfying thing for me right now.
8. When I take a test I think about items on other parts of the test I can't answer.
9. It is my own fault if I don't learn the material in this course.

10. It is important for me to learn the course material in this class.
11. The most important thing for me right now is improving my overall grade point average, some main concern in this class is getting a good grade.
12. I'm confident I can learn the basic concepts taught in this course.
13. If I can, I want to get better grades in this class than most of the other students. 14. When I take tests I think of the consequences of failing.
15. I'm confident I can understand the most complex material presented by the instructor in this course.
16. In a class like this, I prefer course material that arouses my curiosity, even if it is difficult to learn.
17. I am very interested in the content area of this course.
18. If I try hard enough, then I will understand the course material.
19. I have an uneasy, upset feeling when I take an exam.
20. I'm confident I can do an excellent job on the assignments and tests in this course.
21. I expect to do well in this class.
22. The most satisfying thing for me in this course is trying to understand the content as thoroughly as possible.
23. I think the course material in this class is useful for me to learn.

24. When I have the opportunity in this class, I choose course assignments that I can learn from even if they don't guarantee a good grade.
25. If I don't understand the course material, it is because I didn't try hard enough.
26. I like the subject matter of this course.
27. Understanding the subject matter of this course is very important to me.
28. I feel my heart beating fast when I take an exam.
29. I'm certain I can master the skills being taught in this class.
30. I want to do well in this class because it is important to show my ability to my family, friends, employer, or others.
31. Considering the difficulty of this course, the teacher, and my skills, I think I will do well in this class.

Part B. Learning Strategies

The following questions ask about your learning strategies and study skills for this class. Again, there are no right or wrong answers. Answer the questions about how you study in this class as accurately as possible. Use the same scale to answer the remaining questions. If you think the statement is very true of you, circle 7; if a statement is not at all true of you, circle 1. If the statement is more or less true of you, find the number between 1 and 7 that best describes you.

1 2 3 4 5 6 7 not at all very true to true of me of me.

32. When I study the readings for this course, I outline the material to help me organize my thoughts.

33. During class time I often miss important points because I'm thinking of other things.
34. When studying for this course, I often try to explain the material to a classmate or friend.
35. I usually study in a place where I can concentrate on my course work.
36. When reading for this course, I make up questions to help focus my reading.
37. I often feel so lazy or bored when I study for this class that I quit before I finish what I planned to do.
38. I often find myself questioning things I hear or read in this course to decide if I find them convincing.
39. When I study for this class, I practice saying the material to myself over and over. not at all very true true of me of me
40. Even if I have trouble learning the material in this class, I try to do the work on my own, without help from anyone.
41. When I become confused about something I'm reading for this class, I go back and try to figure it out.
42. When I study for this course, I go through the readings and my class notes and try to find the most important ideas.
43. I make good use of my study time for this course.
44. If course readings are difficult to understand, I change the way I read the material.
45. I try to work with other students from this class to complete the course assignments.

46. When studying for this course, I read my class notes and the course readings over and over again.
47. When a theory, interpretation, or conclusion is presented in class or in the readings, I try to decide if there is good supporting evidence.
48. I work hard to do well in this class even if I don't like what we are doing.
49. I make simple charts, diagrams, or tables to help me organize course material. not at all very true of me
50. When studying for this course, I often set aside time to discuss course material with a group of students from the class.
51. I treat the course material as a starting point and try to develop my own ideas about it.
52. I find it hard to stick to a study schedule.
53. When I study for this class, I pull together information from different sources, such as lectures, readings, and discussions.
54. Before I study new course material thoroughly, I often skim it to see how it is organized.
55. I ask myself questions to make sure I understand the material I have been studying in this class.
56. I try to change the way I study in order to fit the course requirements and the instructor's teaching style.
57. I often find that I have been reading for this class but don't know what it was all about.

58. I ask the instructor to clarify concepts I don't understand well.
59. I memorize key words to remind me of important concepts in this class.
60. When coursework is difficult, I either give up or only study the easy parts. not at all very true true of me of me
61. I try to think through a topic and decide what I am supposed to learn from it rather than just reading it over when studying for this course.
62. I try to relate ideas in this subject to those in other courses whenever possible.
63. When I study for this course, I go over my class notes and make an outline of important concepts.
64. When reading for this class, I try to relate the material to what I already know.
65. I have a regular place set aside for studying.
66. I try to play around with ideas of my own related to what I am learning in this course.
67. When I study for this course, I write brief summaries of the main ideas from the readings and my class notes.
68. When I can't understand the material in this course, I ask another student in this class for help.
69. I try to understand the material in this class by making connections between the readings and the concepts from the lectures.
70. I make sure that I keep up with the weekly readings and assignments for this course.

71. Whenever I read or hear an assertion or conclusion in this class, I think about possible alternatives.
72. I make lists of important items for this course and memorize the lists.
73. I attend this class regularly.
74. Even when course materials are dull and uninteresting, I manage to keep working until I finish.
75. I try to identify students in this class whom I can ask for help if necessary.
76. When studying for this course I try to determine which concepts I don't understand well.
77. I often find that I don't spend very much time on this course because of other activities.
78. When I study for this class, I set goals for myself in order to direct my activities in each study period.
79. If I get confused taking notes in class, I make sure I sort it out afterwards.
80. I rarely find time to review my notes or readings before an exam.
81. I try to apply ideas from course readings in other class activities such as lecture and discussion.