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Factors That Influence Community College Student Perceptions Of Their Instruction Following Behaviors In Online Courses

Vickie Volk

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FACTORS THAT INFLUENCE COMMUNITY COLLEGE STUDENT
PERCEPTIONS OF THEIR INSTRUCTION FOLLOWING BEHAVIORS
IN ONLINE COURSES

by

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A Dissertation

Submitted to the Graduate Faculty

of the

University of North Dakota

in partial fulfillment of the requirements
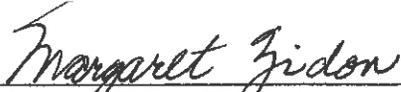
for the degree of

Doctor of Philosophy

Grand Forks, North Dakota

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This dissertation, submitted by Vickie L. Volk in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

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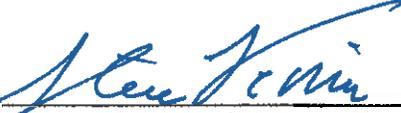
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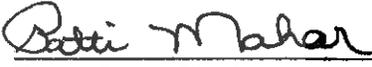
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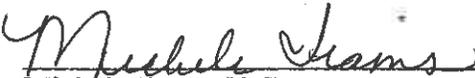
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This dissertation is being submitted by the appointed advisory committee as having met all of the requirements of the Graduate School at the University of North Dakota and is hereby approved.

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July, 22, 2016
Date

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PERMISSION

Title   Factors that Influence Community College Student Perceptions of Their
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Department   Teaching and Learning

Degree   Doctor of Philosophy

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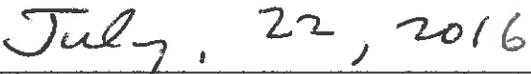University shall make it freely available for inspection. I further agree that permission for
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                                                    Vickie L. Volk
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ACKNOWLEDGMENTS

I want to express a sincere thank you to my committee members: Dr. Margaret Zidon, Dr. Steven LeMire, Dr. Patti Mahar, and Dr. Michele Iiams. Thank you for your time, guidance, and expertise.

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ABSTRACT

Enrollments in online courses offered in community colleges have sharply increased over the past decade. At the same time, it appears there is a growing trend toward community college students displaying a tendency to incorrectly and/or incompletely read and follow instructions in online courses. The ability to follow instructions has a direct impact on the success of students in online classes. This study examined factors that influence community college student perceptions of their instruction following behaviors in online courses using self-regulated learning as the theoretical framework. Participants were 102 students enrolled in general education online courses at a Great Plains community college. The survey collected demographic information related to gender, year in school, age, grade point average, educational funding, parental involvement, living accommodations, employment status, the number of college credits in which the student was enrolled, whether the majority of the student's K-12 education was completed in a rural or urban environment, and the amount of non-academic screen time spent by the student per day. The independent variables chosen from those demographics were age, grade point average, the parental involvement, whether the majority of the student's K-12 education was completed in a rural or urban environment, and the amount of non-academic screen time spent by the student per day. The dependent variables selected measured student perceptions of barriers to online learning, behaviors toward reading instructions, and possible solutions to barriers.

In addition, the survey also included student perceptions of their levels of perfectionism. Results indicated that among all demographics studied, there was a low level of agreement that participants experienced barriers to online learning, a high level of agreement that participants demonstrated successful behaviors in online learning, a high level of agreement for solutions to barriers to online learning, and a moderate level of agreement for participants' levels of perfectionism. Results also indicate that it is not necessary to have separate interventions among students in the independent variable categories.

CHAPTER I

INTRODUCTION

The purpose of this study was to examine factors that influence community

college students' perceptions of their instruction following behaviors in online courses.

Online students do not have the same advantage as on-campus students who have face-to-

face contact with course instructors. In a face-to-face environment, the instructor is able

to explain instructions for assignments to the students and to reiterate those instructions

on an as-needed basis. In an online environment, students are responsible for reading and

comprehending the instructions provided to them in the online course management

system.

Online courses by nature require more effort on the part of students than on-

campus courses in which students have face-to-face interaction with the instructor

(Artino & Jones, 2012). According to Artino and Jones, online students are required to

engage in self-directed learning and are responsible for their own success in the course.

The authors also indicate that primary management and control of learning is shifted

from the instructor to the student. "With this shift, educators have come to understand

that successful online learners must self-regulate to stay motivated; guide their thoughts,

feelings, and actions; and adjust their effort in autonomous online situations" (Artino &

Jones, 2012, p. 170). Not surprisingly, students who completed the 2013 National Survey

of Student Engagement (NSSE) indicated that they experience high levels of challenge

when taking online courses (National Survey of Student Engagement, 2013).

A crucial component of success in online or distance education courses is the ability to follow instructions. According to a study by Sy, Donaldson, Vollmer and Pizarro (2014), failure to follow instructions may be attributed to skill deficit or motivational deficit. They suggest that reinforcement and prompting may be used to address and correct skill deficit. Not only must students in online courses read the instructions for themselves, but the instructions also must be followed meticulously. Implementation of instructions may be jeopardized if students exhibit goal neglect (Ramamoorthy & Verguts, 2012), which can be defined as the "disregard of a task requirement even though it has been understood and remembered" (Duncan, Emslie, Williams, Johnson, & Freer, 1996, p. 257). Goal neglect may occur under different situations: a) if a person can describe the instruction but is not able or chooses not to implement it and b) if instructions are particularly difficult (Ramamoorthy & Verguts, 2012).

Online learning is becoming increasingly more popular. Online enrollments continue to grow at a rate much higher than that of overall higher education. In 2013, over 7.1 million higher education students were taking at least one online course, an increase of 411,000 students from the previous year (Allen & Seaman, 2014). This rate of increase has been slowly declining from year to year, but the growth itself continues to be substantial. Student satisfaction with online classes is high, leading to the likelihood that enrollment numbers will continue to grow. According to the NSSE (2013), students taking all of their courses exclusively online rather than taking no courses online rated the

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quality of their interactions with faculty, academic advisors, and student services staff higher than those of campus-based students.

Enrollment levels in distance education offerings vary across different types of institutions. Undergraduate enrollment in at least one distance education course is most common at 2-year public institutions outranking similar 4-year public institutions (see Table 1). Title IV institutions are those with a written agreement with the Secretary of Education that allows the institution to participate in any of the Title IV federal student financial assistance programs (National Center for Education Statistics, 2014).

Table 1. Number and Percentage of Students Enrolled at Title IV Institutions, by Distance Education Enrollment Status and Level of Institution.

Institution	Total	Students enrolled exclusively in distance education courses		Students enrolled in some distance education courses	
		Number	Percent	Number	Percent
4-year public	8,092,727	574,709	7.1	1,223,442	15.1
2-year public	6,845,174	674,134	9.8	1,182,801	17.3

Undergraduate student enrollment in online courses is particularly important in North Dakota where rural areas are abundant, and access to higher education is difficult due to geographic location, financial resources, and family obligations (Nordine, 2014; Stelmach, 2011). Distance education is a viable method for degree acquisition for rural students.

An informative definition of rural, provided by Merriam-Webster.com (2015) is "of or relating to the country, country people or life, or agriculture." The same source informally defines urban as "of or relating to cities and the people who live in them." A more formal definition of rural, as provided by The International Fund for Agricultural

Development (IFAD), states "rural people usually live on farmsteads or in groups of houses containing perhaps 5,000 – 10,000 persons, separated by farmland, pasture, trees, or scrubland" (para. 2). Based on that description, urban cities in North Dakota would be classified as those with a population over 10,000 persons. Only nine cities meet the qualifier for urban: Bismarck, Dickinson, Fargo, Grand Forks, Jamestown, Mandan, Minot, West Fargo and Williston (United States Census Bureau, 2014). Potential students from small towns and farms often live distant from higher education institutions offering traditional on-campus, face-to-face instruction.

Online learning has been referred to as a lifeline for rural schools (Nordine, 2014). According to Nordine (2014), rural high school graduates are less likely to attend an institution of post-secondary education than their urban peers. Several states - Alabama, Florida, Michigan, and most recently Idaho - require high school students to take online classes as a requirement for graduation (Koebler, 2011). By requiring high school students to take an online course, students, especially rural students, acquire skills that are beneficial when continuing their education after high school. An online learning experience, especially for rural students facing teacher shortages, can supplement the face-to-face learning experience (Hassel & Dean, 2015).

North Dakota and its neighbors, Montana and South Dakota, although geographically spacious, are population scarce and predominantly rural (see Table 2).

Table 2. States, Sizes and Ranks, Population and Ranks, and Number of Urban Cities.

State	Size in Square Miles	Size Rank	Population	Population Rank	Number of Urban Cities
Montana	147,040	4	989,417	45	7

Table 2 cont.

State	Size in Square Miles	Size Rank	Population	Population Rank	Number of Urban Cities
North Dakota	70,698	19	672,591	49	9
South Dakota	77,116	17	814,191	47	11

(United States Census Bureau, 2010)

Given the rural nature of these states and the convenience and access to online education, pursuing a post-secondary degree through enrollment in online classes is a viable and popular endeavor. Compared to neighboring states, North Dakota hosts a higher percentage of distance education students (see Table 3). The higher percentages indicate a need for access to online education and the popularity of online education.

Table 3. Percentage of Undergraduate Students Enrolled at Title IV Institutions by State.

State	Enrolled exclusively in distance education courses	Enrolled in some but not all distance education courses
Montana	5.2%	14.5%
North Dakota	21.5%	16.0%
South Dakota	18.8%	14.3%

(National Center for Education Statistics, 2014)

Statement of the Problem

Based on discussions with colleagues and my own online course experiences, there appears to be a growing trend toward students demonstrating a tendency to incorrectly read and follow instructions. For my courses, instructions are given in the introduction to the assignment, upon accessing the online assignment itself, repeated in an email, and posted on the online course message board. Yet, students are not

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completing the assignment as instructed. Students potentially then lose points on an assignment that is not completed as instructed, which impacts their score on the assignment and their grade in the course. Not only does this instruction following behavior impact the students' grades, but can be disconcerting for the instructor who wants students to perform well in the course and as a result, repeatedly explains the printed instructions.

For my online computer software application courses, students use Skills Assessment Manager (SAM), an assessment, training and project-based system that enables students to be active participants in learning valuable Microsoft Office skills. Students must complete a project based on content from the chapter in the textbook. The project is uploaded to the SAM website where it is automatically graded by the software program, and feedback is provided in a report that explains in detail why points were deducted, if any. If students do not receive 100% on their first attempt, they are instructed to review the report, revise their file, and resubmit. On the second attempt, an improved score should be achieved. If the improved score is not 100%, the students are required to review the most recent report, revise their file, and resubmit again. On the third attempt, an improved score should be achieved, ideally 100%. If these steps are not followed, students receive a zero (0) for the assignment. Week after week, students will submit the project once, do not receive 100%, and earn a zero (0) for the assignment. The logic behind the three attempts is that in a real-world situation, an employer would not accept any document that is not 100%. The three attempts allow the students to practice proofreading skills, troubleshooting skills and critical thinking skills. With the instructions clearly posted in several locations, students should be well aware of the

requirements for the assignment. Why are the instructions not being followed? They have several opportunities to work toward a better score yet they do not.

In a study conducted by Collier and Morgan (2008) related to professors' expectations and students' abilities and performances, faculty attributed the lack of students meeting expectations to a problem summarized as "not following directions" (p. 443). In this same study, it was indicated that although the course syllabus was an important instrument for conveying faculty expectations, faculty indicated that the course syllabus and communicating expectations were not enough as students did not pay attention to those expectations.

One of the most common challenges for college instructors is getting students to read (Hatteberg & Steffy, 2013). Although the importance of completing assigned readings is obvious, Burchfield & Sappington (2000) report that students are reluctant to comply. Burchfield and Sappington indicated that although the problem is widely acknowledged, there is little literature on the subject.

Need for the Study

In a study by Varela, Cater, and Michel (2012), the authors indicated that in existing research there is an important knowledge gap in the attributes of online learners. Distance-education researchers do agree upon the importance of identifying factors that influence students' success in distance-education courses (Yukselturk & Bulut, 2007). Several studies (for example, Hsieh, Sullivan, & Guerra, 2007; Pintrich & De Groot, 1990; Turner, Chandler, & Heffer, 2009) provide insight into student motivation and performance, but do not address the source of the issue: factors that influence students' instruction following behaviors in online courses. Of studies that do exist, none has

looked at the factors that may be related to community college online students' perceptions of their instruction following behaviors. I looked for related studies in the years from 2000 to 2016 and located none.

Student performance in both on-campus and online courses has always been a topic of great interest to faculty members and researchers. This study provides additional insights into the instruction following behaviors of online students at community colleges in the Great Plains, particularly community colleges in rural areas.

Purpose of the Study

The purpose of this study was to examine factors that influence community college students' perceptions of their instruction following behaviors in online courses. This study included student participants who were enrolled in a community college located in the Great Plains. Student demographic information included gender, year in school, age, and grade point average. Other factors consisted of how the students' educations are funded, parental involvement, living arrangements, employment status, number of college credits in which students are enrolled at the time of the study, marital status, and whether or not the student is a parent. Additional factors to be examined included whether the majority of the students' K-12 education was completed in a rural or urban environment and the average amount of non-academic screen time in hours that a student spends each day. In addition, information on perceived barriers, actual behaviors, and possible solutions to successful online instruction following behavior and information on the students' perceived level of perfectionism, using the categories of personal standards, concern over mistakes, and doubts about actions were examined.

I hoped to identify factors that contribute to students' instruction following behaviors and make recommendations for 2-year community college faculty who teach online courses.

Theoretical Framework

Following instructions in an online course is vital to successfully completing the course and achieving resultant academic success. Self-regulated learning (SRL), students' ability to understand and control their learning (Militiadou & Savenye, 2003) was used in this study as a theoretical framework for examining factors that served to explain students' instruction following behaviors.

Hu and Driscoll (2013) conducted a mixed-methods study to examine the effects of self-regulated learning (SRL) strategy training on learners' achievement, motivation, and strategy use in a web-enhanced College Success course at a community college. Their findings indicated that SRL training could assist learners with achievement and self-satisfaction. In 2014, Chang, Liu, Lin, and Cheng (2014) investigated how Internet self-efficacy helps students to transform motivation into learning action, and its influence on learning performance. Findings revealed that Internet self-efficacy of learners is an important factor influencing learning performance and motivation.

Self-regulated learning is a complex process that integrates motivational variables such as self-efficacy and task interest with self-processes such as goal-setting and self-recording to help a person effectively regulate or manage one's behaviors (Cleary, 2006). Self-regulation in particular is a predictor of academic performance (Pintrich & De Groot, 1990). Academic competence in any learning environment, especially an online learning environment, is determined largely by a student's self-regulated learning skills

(Zimmerman & Kitsantas, 2007). Students who take a purposeful role in their own learning are more successful (Wolters, 2003). Likewise, students' motivation levels and learning strategies have a positive significant relationship on their academic accomplishments (Kitsantas & Zimmerman, 2009). The latter two authors also identified several key self-regulatory processes of which self-regulated learning is comprised (see Table 4).

Table 4. Key Self-Regulatory Processes and Descriptions.

Self-regulatory Process	Description
goal setting	specifying intended actions or ends
task strategies	analyzing tasks and identifying specific, advantageous methods for learning or performing various components of a task
imagery	creating or recalling vivid mental images to assist learning
self-instruction	overt or subvocal verbalization to guide performance
time management	estimating and budgeting use of time
self-monitoring	observing and tracking one's own performance and outcomes
self-evaluation	using standards to make self-judgments
environmental structuring	selecting or creating effective physical settings for learning
help seeking	choosing models, teachers, or books to assist one to learn

Additionally, Zimmerman and Kitsantas (2007) identified three cyclical self-regulatory phases: forethought, performance, and self-reflection (see Figure 1).

```
                    ┌─────────────────────────┐
                    │   Performance Phase      │
                    │      Self-Control        │
                    │     Self-instruction     │
                    │        Imagery           │
                    │    Attention Focusing    │
                    │      Task strategies     │
                    │                          │
                    │     Self-Observation     │
                    │  Metacognitive monitoring│
                    │      Self-recording      │
                    └─────────────────────────┘
┌──────────────────────────┐          ┌──────────────────────────┐
│    Forethought Phase      │          │   Self-Reflection Phase  │
│      Task Analysis        │          │      Self-Judgment       │
│       Goal setting        │          │     Self-evaluation      │
│     Strategic planning    │          │    Causal attribution    │
│                           │          │                          │
│  Self-Motivation Beliefs  │          │      Self-Reaction       │
│       Self-efficacy       │          │  Self-satisfaction/affect│
│    Outcome expectations   │          │    Adaptive/defensive    │
│    Task interest/valuing  │          │                          │
│      Goal orientation     │          │                          │
└──────────────────────────┘          └──────────────────────────┘
```

Figure 1. Phases and Subprocesses of Self-Regulation.

The Task Analysis category of the Forethought Phase includes goal setting and

strategic planning. According to Zimmerman and Kitsantas (2007), individuals who

possess a high level of self-regulation set goals and plan strategies to achieve those goals.

For example, online students may set goals to complete their reading assignments by a

specified day and plan a strategy to use time management skills to reach that goal. Also,

inherent in the Forethought Phase is the Self-Motivation Beliefs category which

comprises self-efficacy, outcome expectations, task interest/valuing, and goal orientation.

Zimmerman and Kitsantas (2007) indicate that individuals possessing self-efficacy

believe they have the capability to learn effectively, which is closely related to their

beliefs about the expectations of outcomes. For example, if students hold the belief that they have the knowledge to solve a complex problem, the likelihood of success increases.

The Self-Control category of the Performance Phase includes self-instruction, imagery, attention focusing, and task strategies. According to Zimmerman and Kitsantas (2007), attention-focusing strategies improve one's concentration and ability to screen out distractions. Students may experience a higher level of success by being able to screen out interferences and obstacles and to disregard past mistakes. Included in the Performance Phase is the Self-Observation category which involves metacognitive monitoring and self-recording. Zimmerman and Kitsantas (2007) indicate that self-regulated learners use record-keeping strategies. For example, students may document study habits that proved successful in order to duplicate those good habits.

The Self-Judgment category of the Self-Reflection Phase consists of self-evaluation and causal attribution. According to Zimmerman and Kitsantas (2007), self-evaluation involves comparing self-monitored outcomes with a standard or goal. These self-monitored outcomes are closely related to causal attributions. Students may determine if learning efforts failed due to their limited ability or to insufficient effort. Incorporated in the Self-Reflection Phase is the Self-Reaction category which comprises the aspects of self-satisfaction/affect and adaptive/defensive reactions. Zimmerman and Kitsantas (2007) indicate that self-satisfaction refers to perceptions of satisfaction or dissatisfaction with one's performance. Students who perform well on an assignment, and are satisfied with their work, will attempt similar assignments, while students who perform poorly on an assignment may avoid similar assignments, an aspect that also

depends on the student's ability to screen out prior poor performances and concentrate on the present task.

Self-regulated learning is certainly essential to the success of instruction following behaviors for students enrolled in online courses. Factors such as goal setting, self-efficacy, self-instruction, and causal attribution can be viewed through demographic aspects such as gender, age, year in school, grade point average. Additionally, external factors such as educational funding, parental involvement, living arrangements, employment status, number of college credits in which enrolled, marital status, whether or not the student is a parent, whether their K-12 education was earned in a rural or urban setting, and non-academic screen time may affect goal setting, self-efficacy, self-instruction, and causal attribution.

The research questions for this study were chosen based on findings from the literature review. The first construct, barriers, was selected based on research conducted by Muilenburg and Berge (2005) who identified eight factors that are barriers to online learning: administrative issues, social interaction, academic skills, technical skills, learner motivation, time and support for studies, cost and access to the Internet, and technical problems. Also identified was a lack of reading comprehension, lack of self-confidence, disinterest in the course material, and an underestimation of reading importance (Lei, Bartlett, Gorney, & Herschbach, 2010).

The second construct, behaviors, was chosen based on characteristics such as self-regulation (Carstensen, 2001; Varela, Cater, & Michel, 2012), self-efficacy (Chang, Liu, Lin, Chen, & Cheng, 2014; Choi, 2005), motivation (Hsieh, Sullivan, & Guerra, 2007), and procrastination (Glenn, 2002). The third construct, solutions, was chosen to promote

positive behaviors addressed in the first and second constructs. Additionally, the importance of reading was emphasized (Faust & Glenzer, 2000; Hsieh & Dwyer, 2009).

The fourth construct, perfectionism, has been associated with academic achievement and self-efficacy (Hewitt & Flett, 1991; Stallman & Hurst, 2011). Six questions were chosen word-for-word, with permission (see Appendix B), from the Frost Multidimensional Perfectionism Scale (FMPS) to gather information on a student's level of perfectionism which is likely to influence academic achievement.

The four constructs were examined in relation to the independent variables age, grade point average, the amount of the student's parental involvement, whether the majority of a student's K-12 education was earned in a rural or urban environment, and the amount of non-academic screen time spent per day.

With a majority of community college students categorized as millennials, and findings that vary based on the author, age was the first demographic chosen to be analyzed. Millennials have been characterized as team-oriented and achievement-focused (Farrell & Hurt, 2014; Howe & Strauss, 2000) as well as characterized as narcissistic (Twenge, 2006). Grade point average was the second demographic chosen because of the likelihood that students with higher grade point averages would experience fewer barriers to following instructions in online courses, demonstrate more effective behaviors related to following instructions in online courses, and already be exhibiting behaviors that are solutions when they encounter problems during following instructions in online courses.

The amount of parental involvement, the third demographic, was chosen, as it was deemed a factor that possibly could influence community college student perceptions of their instruction following behaviors in online courses. Recent terminology such as "lawn

mower" and "helicopter" parents (Gross, 2011) suggests that parents can be overly involved in their children's lives and that this involvement can cause a lack of personal responsibility in today's students (Twenge, 2006). Whether the majority of a student's K-12 education was earned in a rural versus an urban environment was chosen as the fourth demographic. Some research (for example, Roscigno & Crowley, 2001) suggests that high school students living in rural areas of the United States demonstrate lower academic achievement. The last demographic chosen was the amount of non-academic screen time spent per day. Findings indicate that adolescents who spend time playing games spend less time reading and less time doing homework (Cummings & Vandewater, 2007).

Research Questions and Hypotheses

The research questions to be answered in this study of online students' perceptions of their instruction following behaviors and the associated hypotheses are as follows:

1. What is the difference between community college students' ages and their perceptions of their instruction following behaviors in online courses? Hypothesis: For the first construct, barriers, community college students 34 years and older will indicate a lower level of agreement than students younger than 34. For the second construct, behaviors, students 34 years and older will indicate a higher level of agreement than students younger than 34. For the third construct, solutions, students 34 years and older will indicate a higher level of agreement than students younger than 34. For the fourth construct,

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perfectionism, students 34 years and older will indicate a lower level of agreement than students younger than 34.

2. What is the difference between community college students' grade point averages and their perceptions of their instruction following behaviors in online courses?

   Hypothesis: For the first construct, barriers, community college students with higher grade point averages will indicate a lower level of agreement than students with lower grade point averages. For the second construct, behaviors, students with higher grade point averages will indicate a higher level of agreement than students with lower grade point averages. For the third construct, solutions, students with higher grade point averages will indicate a higher level of agreement than students with lower grade point averages. For the fourth construct, perfectionism, students with higher grade point averages will indicate a higher level of agreement than students with lower grade point averages.

3. What is the difference between community college students' parental involvement and their perceptions of their instruction following behaviors in online courses?

   Hypothesis: For the first construct, barriers, community college students whose parents are increasingly more involved will indicate a higher level of agreement than students whose parents are less involved. For the second construct, behaviors, students whose parents are more involved will indicate a lower level of agreement than students whose parents are less involved. For

the third construct, solutions, whose parents are more involved will indicate a higher level of agreement than students whose parents are less involved. For the fourth construct, perfectionism, students whose parents are more involved will indicate a lower level of agreement than students whose parents are less involved.

4. What is the difference between community college students' rural versus urban K-12 education and their perceptions of their instruction following behaviors in online courses?

   Hypothesis: For the first construct, barriers, community college students who received a rural K-12 education will indicate a higher level of agreement than students who received an urban K-12 education. For the second construct, behaviors, students who received a rural K-12 education will indicate a lower level of agreement than students who received an urban K-12 education. For the third construct, solutions, students who received a rural K-12 education will indicate a higher level of agreement than students who received an urban K-12 education. For the fourth construct, perfectionism, students who received a rural K-12 education will indicate a lower level of agreement than students who received an urban K-12 education.

5. What is the difference between community college students' amount of non-academic screen time per day and their perceptions of their instruction following behaviors in online courses?

   Hypothesis: For the first construct, barriers, community college students who spend more non-academic screen time per day will indicate a higher level of

agreement than students who spend less non-academic screen time per day.

For the second construct, behaviors, students who spend more non-academic

screen time per day will indicate a lower level of agreement than students who

spend less non-academic screen time per day. For the third construct,

solutions, students who spend more non-academic screen time per day will

indicate a higher level of agreement than students who spend less non-

academic screen time per day. For the fourth construct, perfectionism,

students who spend more non-academic screen time per day will indicate a

lower level of agreement than students who spend less non-academic screen

time per day.

Significance of the Study

Students enrolled in 2-year community colleges are preparing to enter the

workforce or transfer to a 4-year institution. Through my working relationships with

employers in the area and with members of community college advisory boards,

indications are that potential employees are not adequately prepared for the workforce.

Interviews with supervisors indicated that community college students had difficulty with

non-routine tasks and problems encountered on the job. Additionally, students had

difficulty adjusting to the fast pace of their work schedules (Torraco, 2008). According to

a report published by a consortium of The Conference Board, Corporate Voices for

Working Families, the Partnership for 21st Century Skills, and the Society for Human

Resource Management, the top five "very important skills" for two-year college

graduates, as identified by employers are: professionalism/work ethic,

teamwork/collaboration, oral communications, critical thinking/problem solving, and

reading comprehension. These same employers ranked two-year college graduates

deficient in the following: written communications, leadership, professionalism/work

ethic, lifelong learning/self-direction, and creativity/innovation (2006) . How can we, as

instructors, better prepare students for concentrating and focusing on a specific task to see

it through to fruition? Once the factors that influence community college online students'

instruction following behaviors are identified, solutions could be developed to address

these factors in an effort to improve instruction following behavior, which in turn

enhances adequate preparation for the workforce.

Delimitations of the Study

This study is limited by the participants involved and the data collection method.

Participants are specific to one community college and may not represent students

nationwide. Student participation was optional. Access to students was further limited by

instructors who agree to ask their students for their willingness to participate.

An online survey including Likert-type responses was quantitatively analyzed. No

open-ended questions were included.

Assumptions

The following assumptions for this study include:

- Self-reporting measures are only as accurate as the honesty of the respondents.

- Participants will be able to accurately characterize their parents' involvement.

- The population of the community in which a majority of the participants' K-12
  education was earned will adequately distinguish between an urban or rural
  environment.

- For the purpose of this study, an urban environment will be defined as one with a population greater than or equal to 10,000 and a rural environment will be defined as one with a population less than 10,000.

Definitions

Baby Boomers – individuals who are between the ages of 50 and 68 in the year 2014 (Pew Research Center, 2015).

Computer-based learning environment (CBLE) – an environment in which the work performed is completed on a computer.

Generation X – individuals who are between the ages of 34 and 49 in the year 2014 (Pew Research Center, 2015).

Helicopter parents – parents who pay extremely close attention to a child's or children's experiences and problems, particularly at educational institutions. Helicopter parents are so named because, like helicopters, they hover overhead (Gross, 2011).

Involved parents – parents who know their children well and stay connected to them, listen, give their children space to grow up while monitoring what is happening to them. They allow their children to make mistakes, suffer the consequences of their actions, and allow children to solve their own problems with minimal guidance (Don't Be a Helicopter Or a Lawnmower! Learn the Lingo!, 2015).

Lawnmower parents –parents who mow down all obstacles they see in their child's path. They smooth over any problem their child has. They make sure their children always look perfect and if they are not, they'll intervene and make it better right away. Lawnmower parents have also been identified as those who initiate contact in

person rather than by phone (Don't Be a Helicopter Or a Lawnmower! Learn the Lingo!, 2015).

Millennial students or millennials – There are variations to the definition of millennial students. One definition describes students as age 18 to 34 in the year 2015 (Huebner, 2015). Another definition describes them as all Americans born since 1982 (Howe & Strauss, 2007). They may also be referred to as Generation Me, the Millennial Generation, The Entitlement Generation, and Generation Y.

Skills Assessment Manager (SAM) – an assessment, training, and project-based system that enables students to be active participants in learning valuable Microsoft Office skills.

Screen time – the amount of time a person spends in front of a "screen", including TV, cell phones, computers and video games. Screen time does not include academic work.

Self-efficacy – people's judgment of their capabilities to organize and successfully complete a task (Hsieh, Sullivan, & Guerra, 2007).

Self-regulated learning (SRL) – self-initiated actions and processes aimed at acquiring and applying information or skill that involve setting goals, self-monitoring, managing time, and regulating one's efforts, physical and social environment or goal fulfillment (Cheng & Chau, 2013).

Silents – individuals who are between the ages of 69 and 84 in the year 2015 (Pew Research Center, 2015).

Online course – courses in which at least 80 percent of the course content is delivered online. Typically, no face-to-face meetings are involved (Allen & Seaman, 2007).

Uninvolved parents – parents who do not interact with their children often, withholding discipline and encouragement of personal development (McGillicuddy-De Lisi & De Lisi, 2007).

Summary

To summarize, there appears to be a growing trend for online students to not follow instructions explicitly. With the increasing popularity of online classes, it is imperative to identify online students' instruction following behaviors in an effort to understand the factors that keep students from following online instructions and in an effort to resolve the situation. This study utilized Self-Regulated Learning Theory as its theoretical framework to summarize and categorize student behaviors in online classes. While studies similar to this proposed one have looked at online students' instruction following behaviors and/or SRL in an online course, this study contributes unique results by analyzing demographic characteristics as well as instruction following behaviors at a 2-year college. This information can be used to identify those behaviors that interrupt the learning motivation and behaviors.

CHAPTER II

REVIEW OF THE LITERATURE

The purpose of this study was to examine factors that influence community college students' instruction following behaviors in online courses. To explore these factors, the study used survey data collected from students at a Great Plains community college. This survey aimed to answer the following questions:

1. What is the difference between community college students' ages and their perceptions of their instruction following behaviors in online courses?

2. What is the difference between community college students' grade point averages and their perceptions of their instruction following behaviors in online courses?

3. What is the difference between community college students' parental involvement and their perceptions of their instruction following behaviors in online courses?

4. What is the difference between community college students' rural versus urban K-12 education and their perceptions of their instruction following behaviors in online courses?

5. What is the difference between community college students' amount of non-academic screen time per day and their perceptions of their instruction following behaviors in online courses?

The literature review first describes community colleges and the students they serve. Second is a description of the search terms and methods that were used to conduct the literature review. Third is information gathered on the some of the key demographics included in the study: gender, grade point average, age, parental involvement, a rural versus urban K-12 education, and the amount of non-academic screen time that a person spends per day. Fourth is information gathered on the four level two constructs of barriers to online learning, student behaviors in online courses, perfectionism, and solutions to difficulties in online learning. Next is information on the theoretical framework, self-regulated learning, followed by a summary of the chapter.

Community Colleges

Community colleges are an important part of our educational system. The American Association of Community Colleges (2015) indicates that the mission of a community college is to provide education to individuals in its service region. This mission includes but is not limited to serving all segments of society through an open-access admissions policy offering equal and fair treatment to all students, a comprehensive educational program, teaching, and lifelong learning. The open-access admissions policy applies to students who have either graduated from high school or have completed their General Education Development (GED) certificate. This postsecondary education option serves almost half of the undergraduate students in the United States, prepares students for transfer to 4-year institutions, offers noncredit programs such as community enrichment programs or cultural activities, and provides workforce development and skills training (American Association of Community Colleges, 2015).

Community colleges serve a variety of students, many of whom work part-time and full-time jobs while attending college. In a report published by the Center for Community College Student Engagement (2012), a majority of community college students work while attending classes. These same students also care for dependents, and juggle personal, academic, and financial responsibilities. The report also indicates that in 2009, 41% of community college students were enrolled full-time and 59% were enrolled part-time. Of the full-time students, 19% were working more than 30 hours per week and of the part-time students, 42% were working more than 30 hours per week.

The ages, gender, and ethnicities of students also vary. According to the 2015 Community College Fast Facts, in Fall 2013, the average age of community college students was 28, with 37% under the age of 21 and 49% between the ages of 22 and 39. Women comprised 57% of the student body while men comprised 43%. The ethnicity of 50% of the students was White, 21% was Hispanic, 14% was Black, 6% was Asian/Pacific Islander, 1% was Native American, 3% was two or more races, 4% was other/unknown, and 1% was nonresident alien.

The number of postsecondary students in the United States taking online classes continues to increase, even in years where the total enrollment decreases (Allen & Seaman, 2015) See Table 5. Although the annual online enrollment growth rate for years 2010 and 2011 decreased, the online enrollment as a percent of total enrollment increased steadily for five years, from Fall 2007 to Fall 2011, which followed the trend of the previous five years, Fall 2002 through Fall 2006.

Table 5. Total and Online Enrollment in Degree-Granting Postsecondary Institutions –
Fall 2007 through Fall 2011.

	Total Enrollment	Annual Growth Rate Total Enrollment	Students Taking at Least One Online Course	Online Enrollment Increase over Previous Year	Annual Growth Rate Online Enrollment	Online Enrollment as a Percent of Total Enrollment
Fall 2007	18,248,133	2.8%	3,938,111	449,730	12.9%	21.6%
Fall 2008	19,102,811	4.7%	4,606,353	668,242	16.9%	24.1%
Fall 2009	20,427,711	6.9%	5,579,022	972,669	21.1%	27.3%
Fall 2010	21,016,126	2.9%	6,142,280	563,258	10.1%	29.2%
Fall 2011	20,994,113	-0.1%	6,714,792	572,512	9.3%	32.0%

For the review of related literature for this study, the following search terms were used: "instruction(s)", "direction(s)", "following", "online", "success", "self-regulated learning", "SRL", "community college(s)" and "community college student(s)" in every possible combination using Bing, Google, and Google Scholar. Databases in ERIC and QuickLinks used the Dissertation & Theses – All category. Expanding the scope, the use of the term "reading compliance" generated some relevant research, but not specific to following instructions in an online course at a community college. The most beneficial resource of all was following up with articles referenced in the previously located research articles.

A review of related literature revealed a multitude of factors that may influence community college students' instruction following behaviors in online courses. The remainder of the literature review examines studies that have been undertaken in an effort to identify factors related to undergraduate students' ability to successfully understand and complete assignments in an online environment. Related studies from both 4-year

and 2-year colleges are described. The following factors, from relevant studies in a review of the literature include: gender, year in school, age, grade point average, educational funding, parental involvement, living arrangements, employment status, the number of college credits in which enrolled, marital status, whether the student is a parent, whether a majority of the student's K-12 education was completed in a rural or urban environment, and the amount of non-academic screen time that the student spends per day. There was significant research for some of the demographic factors (gender, age, parental involvement, population, and average screen time in hours per day) but little or no research for others (year in school, grade point average, educational funding, living arrangements, employment status, and number of credits in which enrolled, marital status, whether or not the student is a parent).

Demographics

Gender

Comfort levels with computers, individual responsibilities, coursework effort, and gender beliefs and stereotypes all play an important role in online students' academic achievement although results are contradicting and inconclusive.

Gender has often been the focus of research in online education research; however, effects of this variable are inconclusive in regard to student success (Yukselturk & Bulut, 2007). In a study conducted by Thompson and Lynch (2003), it was found that because of lower experience or confidence in the use of computers, women may be at a disadvantage in e-learning environments. Alternatively, Johnson (2011) indicated that the nature of women's communications patterns in online courses may provide them with an advantage that counterbalances that disadvantage. Specifically, Johnson (2011) stated

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that women's tendency to emphasize social interaction in communication allows them to develop stronger relationships with instructors and peers, thus creating a greater social presence in an online environment than men experience. Then again, this same study indicated that males have a tendency to use computers more frequently, leading to a higher comfort level than females report having. Kupczynski, Brown, Holland, and Uriegas (2014), in a more recent study, suggested that gender-based comfort levels are becoming less prevalent, if existent at all.

Researchers Yukselturk and Bulut (2009) indicated that males and females have dissimilar responsibilities in their lives, resulting in varying learning strategies and performance. Although the authors did not explicitly list the exact responsibilities, they did indicate that female students often balance multiple roles and demands on their personal lives, including heavy family responsibilities and financial stresses.

Other researchers, Yang, Cho, Mathew, and Worth (2011), found that male students expend more effort than females in online courses, while female students tend to invest more effort than males in face-to-face courses. The additional invested effort by male students in online courses resulted in higher academic achievement than females. It is interesting to note that gender differences were more significant in online courses than face-to-face courses.

Gender beliefs and stereotypes can have an impact on instruction following in online environments. In an interesting study conducted by Moè and Pazzaglia (2006), female participants performed better when instructions indicated female superiority over males, and female participants performed worse when instructions indicated male superiority over females for the task at hand. In the study, students were divided into

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groups. One group was instructed that men would perform better, and another group was instructed that women would perform better. The women who expected to be more able than men outperformed their counterparts, and the men who expected to be more able than women outperformed their counterparts.

The above-mentioned phenomenon resembles the "Pygmalion effect", also called the "Rosenthal effect", named after the 1968 experiment conducted by Rosenthal and Jacobson (Chang, 2011). Rosenthal and Jacobson's (1968) experiment sought to determine if telling teachers that certain students were exceptional based on a non-existent ability exam, that those students would indeed out perform their classmates. The results of the experiment "provide further evidence that one person's expectations of another's behavior may come to serve as a self-fulfilling prophecy" (p. 20).

Year in School

There was no relevant literature found on year in school, let alone year in school and community college students' online instruction following behavior. This demographic was designed to classify respondents as either freshmen or sophomore students. Some respondents did not answer the question. If a respondent took classes full-time, distinguishing between freshman and sophomore status was straight-forward. If a respondent took classes part-time, it was more difficult to make that distinction.

Age

Age is a demographic that could significantly affect community college students' online instruction following behavior. With the increasing number of non-traditional students enrolled in community colleges who are taking online classes, it was decided to classify students as either millennials or non-millennials (that is, students older than 34).

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Millennials. A large percentage of today's community college student population is comprised of millennials. In the year 2015, millennial students are between the ages of 18 and 34. Much research has been conducted on millennial students, their behaviors, their upbringing, and their attitudes. Twenge (2006) asserted that millennials are the most narcissistic generation in history. Narcissism is sometimes confused with self-esteem although the two are quite different. According to Twenge, "self-esteem is often based on solid relationships with others, whereas narcissism comes from believing that you are special and more important than other people" (2006, p. 70).

Farrell and Hurt (2014) list six characteristics of millennial students, as identified through examination and synthesis of recent articles: a) ability to multi-task, b) desire for structure, c) achievement-focused, d) technologically savvy, e) team-oriented, and f) seeking attention and feedback (p. 54). These characteristics could have an impact on students' perceived instruction following behaviors in online courses. It could be assumed that students' technology skills would be of particular benefit to them in an online learning environment. Their team-oriented trait, on the other hand, could be a disadvantage in an online learning environment if a majority of the work is completed independently.

Howe and Strauss (2000) identified seven core traits of millennials: a) millennials are special, b) millennials are sheltered, c) millennials are confident, d) millennials are team-oriented, e) millennials are achieving, f) millennials are pressured, and g) millennials are conventional (pp. 43-44). The second trait, millennials are sheltered, has a substantial impact on students' character. Generation X parents (born from 1965 to 1981), having grown up with increased divorce, crime, drug and alcohol use, and teen

suicides, raised their children with never before seen protection (DiPietro, 2012). This protection, often considered to be "hovering," showed an inverse correlation to the independence displayed by millennials.

According to Pizzolato and Hicklen (2011), millennial students are typically characterized by their closeness to their parents. There are both advantages and disadvantages to this closeness. A bond with a parent may become the most important relationship in a millennial's life (Raphelson, 2014). The Clark University Poll of Parents of Emerging Adults (Arnette, 2013), indicates that 56% of parents responded that they are in contact with their grown children almost every day. This emotional connection, according to the poll, is a source of support and nurturance for young adults who have not yet found their soul mate. The same poll indicates that parents enjoy their relationship with their adult children more than anything else in their lives, including hobbies, watching television, travel or holidays, and the relationship with their spouse/partner. The child/parent relationship can be positive, but at the same time it can result in impeding the child's development. "Failure to launch" situations are becoming a significant problem in our society (Miller, 2010). Pizzolato and Hicklen (2011) indicate that as students get older, decreasing dependence on parents is an important and desired outcome; and an increased independence and decreased dependence on parents leads to an increased likelihood of desirable outcomes in persistence and achievement in school.

Data suggest that there are more millennial students attending community colleges than four-year institutions. According to data collected by Pew Research Center (2015), both male and female adult Millennials are more likely than adults from previous generations to complete a two-year or Associate degree (see Figures 2 and 3). Per the

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legend, the "Some College" data series represents students who have completed a two-year or Associate degree. In 2014, 34% of male adult Millennials attained a two-year or Associate degree compared to 25% of Gen Xers, 26% of Boomers, and 20% of Silents. That same year, 37% of female adult millennials attained a two-year or Associate degree compared to 29% of Gen Xers, 29% of Boomers, and 24% of Silents. Additionally, both male and female adult Millennials are less likely than adults from previous generations to complete a Bachelor's + degree (see Figures 2 and 3). 21% of male adult millennials attained a Bachelor's + degree compared to 33% of Gen Xers, 31% of Boomers, and 32% of Silents. 27% of female adult Millennials attained a Bachelor's + degree compared to 37% of Gen Xers, 30% of Boomers, and 20% of Silents.
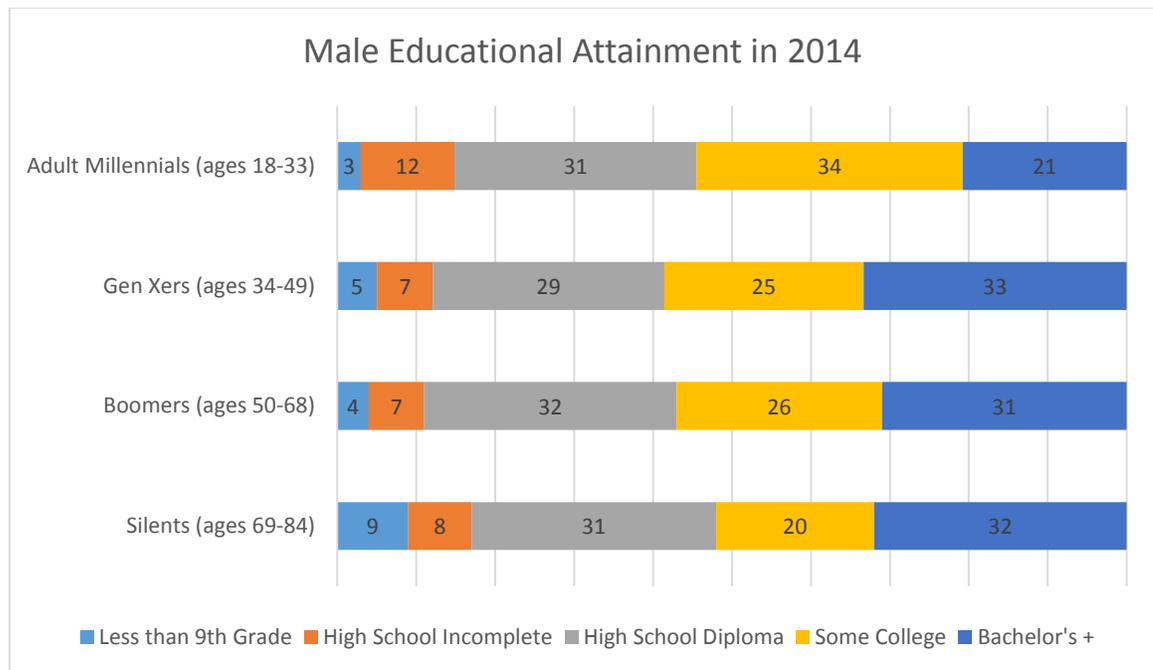
Figure 2. Percent of Males by Generation and Level of Educational Attainment.
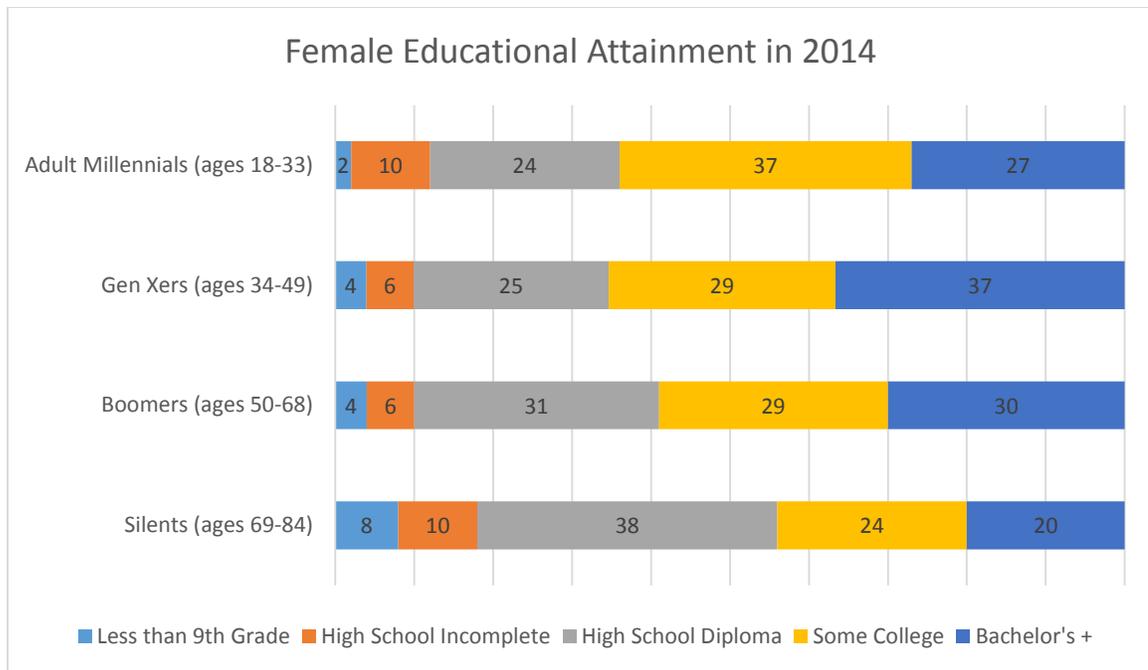
Figure 3. Percent of Females by Generation and Level of Educational Attainment.

Grade Point Average

High school grades have been used by college admissions personnel as an indication of student academic ability (Alwahibee, 2015). Based on information gathered from a statewide community college system, it was found that high school GPAs have a strong association with college GPA, and that they are useful in predicting college success (Belfield & Crosta, 2012). The authors indicate that GPA could be used as a measure of effort. Additionally, grades and GPA can be used as a measure of academic success (Radunzel & Noble, 2013; York, Gibson, & Rankin, 2015).

It is also found that GPAs are predicted by achievement motivation, the degree of goal setting, and performance self-efficacy (Dickinson & Adelson, 2016), which align with this study's theoretical framework's Task Analysis category and Self-Motivation Beliefs category of the Forethought Phase (Zimmerman & Kitsantas, 2007).

A caveat to using GPA as a predictor of college success is the possibility of grade inflation. Grade inflation is giving higher grades to students without an increase in student academic performance (Hodges, 2014; O'Halloran & Gordon, 2014). There are many reasons for grade inflation: increased accountability in higher education (O'Halloran & Gordon, 2014), time requirements and teaching evaluations by students (Faurer & Lopez, 2009; Hodges, 2014), and the subjectivity of making judgments about a student's performance (Faurer & Lopez, 2009).

Although the awareness of grade inflation exists, it continues to be an issue because grading can be a matter of perception, students are paying more for education and feel they deserve a good grade for their money, and prospective employers are likely to use a student's college transcript in making hiring decisions (Faurer & Lopez, 2009).

Parental Involvement

The amount of parental involvement in a student's education could have an impact on the student's academic performance, which includes their instruction following behavior in an online environment. Several explanations contextualize student development in relation to parental involvement. At one end of the spectrum is the separation-individuation theory that states that children must sever maternal ties and develop a unique identity (Wartman & Savage, 2008). At the other end of the spectrum is the attachment theory, which suggests that parental support is advantageous to a student's development because it provides a solid foundation (Kennedy, 2009). Related literature seems to suggest that actual parental involvement has evolved over the years from the separation-individuation theory side of the spectrum to the attachment theory side of the spectrum.

In 1966, Diana Baumrind identified three parenting styles: 1) authoritative where parents display a high level of nurture, involvement sensitivity, reasoning, and encouragement of autonomy, 2) permissive where parents make few demands, exhibit non-controlling behaviors, and use minimal punishment, and 3) authoritarian where parents exhibit highly directive behaviors, high levels of restriction and rejection behaviors, and power-asserting behaviors (Turner, Chandler, & Heffer, 2009). In their study, the researchers reference findings from Baumrind (1991) who indicated that positive associations have been identified between authoritative parenting style and academic performance; authoritarian, permissive, and uninvolved parenting was negatively associated with grades.

According to Sarac (2001), "Authoritarian parenting, also termed dictatorial or harsh, is low on warmth/nurturance, strict on discipline, high in parent-to-child communication but low in child-to-parent communication, and high on expectation" (para. 2). The author indicated that this parenting style leads to potential development drawbacks, including susceptibility to antisocial peer pressure and failure to discuss issues with their parents.

In another parenting style, uninvolved-neglecting, parents do not often interact with their children, and withhold encouragement and discipline (McGillicuddy-De Lisi & De Lisi, 2007). The authors indicated that in previous observations of uninvolved-neglecting parenting styles, parents are viewed as deficient in fulfilling customary parental responsibilities of providing leadership and guidance to their child, which may lead to lack of social development. This lack of social development may result in behavioral and academic problems (Miller, 2010).

"Authoritative parenting is high on warmth, moderate on discipline, high in communication, and moderate in expectations of maturity" (Sarac, 2001, para. 15). The author indicated that children of this parenting style are more likely to develop high self-esteem, possess positive self-concept and greater self-worth, and display less rebellion.

Permissive parents, also called indulgent parents, have few rules for their children and maintain a friend/friend relationship rather than a parent/child relationship (Miller, 2010). Childhood consequences, according to Miller (2011), are entitlement, impulsivity, and immaturity. He indicates that indulged children expect things should always go their way, are less mature than their peers, do not take responsibility for their own actions, and if they do not feel like doing something, they do not do it. Other characteristics of indulged children are poor performance in school and higher rates of misbehavior involving adult authority (Sarac, 2001). These students are less likely to develop self-respect and more likely to display diminished self-esteem (Miller, 2011; Sarac, 2001).

According to Henry, Cavanagh, and Oetting (2011), parents become involved in their children's schooling for a variety of reasons: personal motivators, family demographics and life experiences, and the extent to which a parent feels welcome at the school. The authors describe an example of a personal motivator as the perception that it is a parent's responsibility to be invested, an example of a life experience is a parent's educational experience, and parental knowledge and skills to promote academic achievement. The authors also indicate that if parents feel welcome at the school, they are more likely to attend meetings and other school events.

Parental involvement in their children's education and their children's lives has changed drastically over the years. From a time when parents' involvement was nothing

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more than an occasional parent-teacher conference to a time when parents fight their children's battles both on and off the schoolyard in both elementary and secondary education, educators are adjusting to this change (Howe, 2010). This change in parental involvement has led to the emergence of new classifications of parents. Although definitions vary slightly, one definition by Gross (2011) indicates that "lawn mower" parents typically make contact in person, while "helicopter" parents typically make contact by telephone or email.

Baby Boomer parents are those between the ages of 50 and 68 in the year 2014 (Pew Research Center, 2015). The Baby Boomer parents of millennials have been called "helicopter parents" who are always hovering over their children (Howe, 2010). Generation X parents are those between the ages of 34 and 49 in the year 2014 (Pew Research Center, 2015). Generation X parents of millennials have been called "stealth-fighter parents" who do not hover, but choose when and where to attack (Howe, 2010). According to Howe (2010), Gen-X parents of millennials are more attached, protective, and interventionist than the Baby Boomer parents of millennials. Howe claimed these Gen-X parents "strike" without warning. Individuals have been classified based upon their age, and these classifications often correspond with their parental involvement in their children's lives. However, the age classification may correspond with a different parental involvement style.

Historically, when students enter college, they tend to believe in absolutes and that knowledge is received from all-knowing authorities such as their professors, coaches, and religious leaders (Baxter Magolda, 1992). Because of this belief and dependence in the omniscient authority, students turn to others to solve their problems (Pizzolato &

Hicklen, 2011). According to Twenge (2006), an excess of parental involvement has created a trend toward a lack of personal responsibility in students and that society has created a new generation of young adults who blame everyone else for their failures. Although parental involvement has been associated with better educational outcomes for adolescent students, this is not always the case for millennial college students.

Rural Versus Urban

Whether the majority of a student's education was completed in a rural versus an urban environment could have a direct impact on the student's instruction following behavior in an online environment. The debate over the quality of a rural versus an urban high school education has been a focus of research (Zehr, 2010). Although some people assume the problems faced in an urban area are not the same problems faced in a rural area, this is not always the case. Issues such as low high school graduation rates, alcohol and drug use, and dropout rates also exist in rural America (Henry, Cavanagh, & Oetting, 2011). Although many perceive rural areas to offer a wholesome lifestyle, complete with traditional American values, rural areas can in fact experience poverty, low wages, few job opportunities, and increasing drug use and crime (Stanley, Comello, Edwards, & Marquart, 2008).

According to the U.S. Department of Education, high school students living in rural areas of the United States demonstrate lower achievement and a higher high school dropout rate than do non-rural students (Roscigno & Crowley, 2001). Although advances in transportation and communications systems has narrowed the gap between rural and urban environments (Jordan, Kostandini, & Mykerezi, 2012), the trend for lower

achievement and higher high school dropout rates among rural students continues to be an issue.

Hlinka, Mobelini, and Giltner (2015) indicated that the academic decisions of rural students are influenced by their obligations to family and home. The authors' findings reveal that a majority of the high school students interviewed were reluctant to move away from home, and viewed attending a community college as a transition to attending a four-year college.

Persistence among community college students is essential for both rural and urban students. Liao, Edlin, and Ferdenzi (2014) examined how self-efficacy and motivation affected student persistence at an urban community college. The authors' findings show that persistence is predicted by extrinsic motivation and self-regulated learning efficacy, which align with this study's theoretical framework's Task Analysis category and Self-Motivation Beliefs category of the Forethought Phase (Zimmerman & Kitsantas, 2007).

Screen Time

The amount of non-academic screen time a student spends per day could have a direct impact on a student's instruction following behavior in an online environment. The debate regarding the advantages versus dangers of extended periods of exposure to television and DVDs has been raging for many years. In 1999, the American Academy of Pediatrics expressed concern that high levels of media use in children younger than two years of age may lead to attention deficit disorder or hyperactivity (Gliebe, 2011; Wartella & Lauricell, 2012). Wartella and Lauricell (2012) also indicated that researchers Christikas, Zimmerman, and DiGuiseppe (2004) hypothesize that early media exposure is

associated with longer-term attention deficiencies and other cognitive deficiencies. Although evidence is mixed, this issue has become relevant in higher education.

Fountaine, Ligouri, Mozumdar, and Schuna (2011) found that college students spend 144 minutes per day dedicated to screen time, 60 minutes of which are devoted to watching television. Mobile devices are impacting how college students spend their screen time (eMarketer.com, 2013). Although there is no difference between the total number of hours spent among devices in 2012 and 2013 (14.4 hours) (see Figure 4), cell phone/smartphone usage has increased proportionately to the decrease in computer usage (0.3 hours).
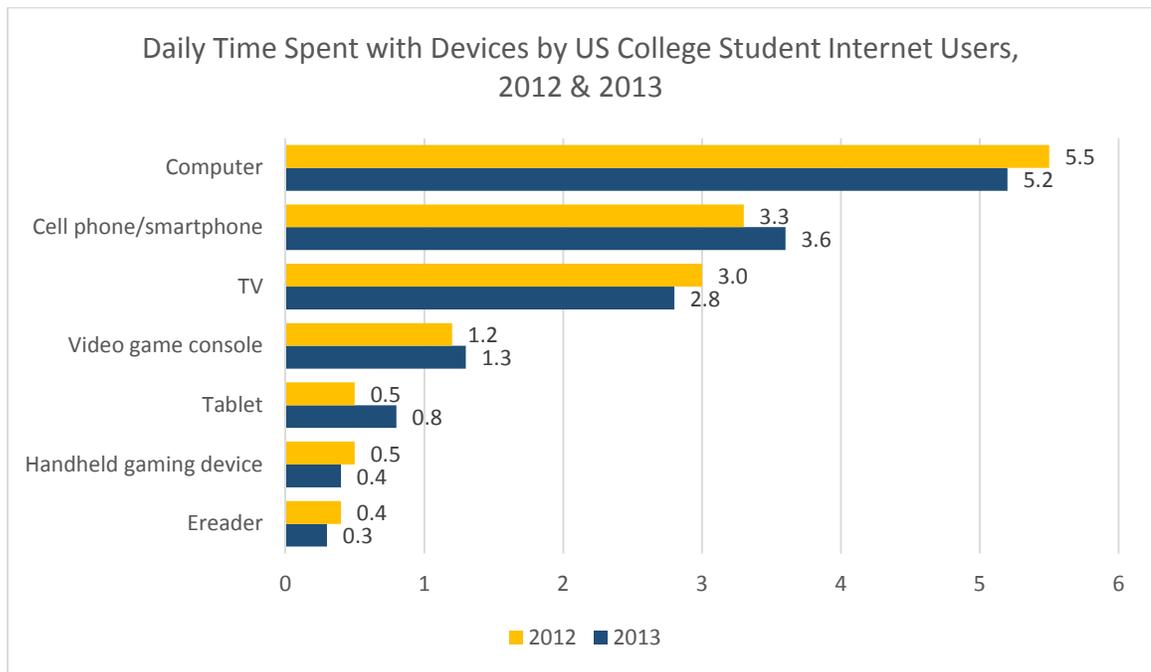
Figure 4. Daily Time Spent with Devices by US College Student Internet Users, 2012 & 2013.

Radesky, Silverstein, Zuckerman, and Christakis (2014) suggested that excessive media use in early childhood contributes to less desirable developmental outcomes. According to the authors, these outcomes may include problems with language

development, cognition, attention, executive functioning, and school achievement and that increased media exposure is associated with early childhood self-regulation problems (p. e1173). There is potential for early childhood self-regulation problems to develop and intensify into adolescence. According to Herrick, Fakhouri, Carlson, and Fulton (2014), key findings from the National Health and Nutrition Examination Survey (NHANES) and the NHANES National Youth Fitness Survey, include: a) Nearly all (98.5%) youth aged 12 – 15 reported watching television daily and b) More than 9 in 10 (91.1%) youth aged 12 – 15 reported using the computer daily outside of school (p. 1). Often these behaviors led to screen-time addiction that carries over to young adult ages and have the potential to take away from study time.

According to Lemmens, Valkenburg, and Peter (2009), a prevalent topic associated with screen-time behaviors is game addiction, which can be described as excessive, obsessive, compulsive, and generally problematic use of videogames. In 2007, the American Medical Association (AMA) encouraged the American Psychiatric Association (APA) to consider including video game addiction as a formal diagnostic disorder in their soon-to-be-released *Diagnostic and Statistical Manual of Mental Disorders* (Lemmens, Valkenburg, & Peter, 2009). The authors surveyed respondents between the ages of 12 and 18 years. Based on the responses, approximately 9.35% of gamers met four of the seven criteria of the game addiction scale.

Excessive time spent gaming reduces the amount of time available for more productive activities. Cummings and Vandewater (2007), based on survey data collected from 1,491 children from age 10 to 19, concluded that compared to nongamers, adolescent gamers spent 30% less time reading and 34% less time doing homework. The

researchers suggested that the time spent gaming is a concern in relation to school responsibilities. It is likely that these behaviors developed as adolescents will follow the students into their college years.

Barriers to Online Learning

To better understand the factors that affect students' online instruction following behavior, it is important to identify barriers that are encountered in an online learning environment. In a pilot study conducted by Muilenburg and Berge (2005), six factors were identified (p. 32). See Table 6. After analyzing the pilot data, the main study conducted by Muilenburg and Berge (2005) was based on eight factors: barriers to student online learning: administrative issues, social interaction, academic skills, technical skills, learner motivation, time and support for studies, cost and access to the Internet, and technical problems.

Table 6. Factors Identified in Factor Analysis of a Pilot Study.

Factor	Description
Time/interruptions	related to perceived barriers to students' spending time in learning online and the interruptions that disrupt learning
Infrastructure/support services	issues that the instructor or organization could control
Motivation	psychological processes that cause students to persist in meeting their learning goals
Prerequisite skills	areas that most students believe they need to have mastered to a certain degree before entering the online classroom
Technical	students being comfortable with the online system and the software/hardware that is being used in online learning
Social	the learning environment that is created for learning online and one in which learning should be promoted

Muilenburg and Berge (2005) studied students' background characteristics and demographics and whether these influence online learning success. They found significant differences in learning, attitudes, motivation, and experiences based on gender, age, ethnicity, ability and confidence with online technology, and type of learning institution attended. Awareness of these characteristics allows instructors to understand student barriers. According to Muilenburg and Berge (2005), the research was conducted to increase both the ability to design instruction and to improve how to instruct.

Many factors influence online students' ability to read and follow instructions correctly, some of which include the online environment, student characteristics and student efforts (Lei, Bartlett, Gorney, & Herschbach, 2010). Lei et al. (2010) identified several major factors involved in students' lack of reading, including a lack of reading comprehension skills, lack of self- confidence, disinterest in the course material, and an underestimation of reading importance (p. 219). All these factors pose a problem in online courses which are often more difficult to complete than on-campus courses because of the effort required to complete assignments and because of the time commitment involved. Failure to read assignments results in poor student performance.

Student Perceptions of Online Learning

Students often rely on online courses to earn their degree. Busy schedules often do not allow them to attend class in a face-to-face environment. The flexible schedules offered by online courses are an appealing feature to students (Varela, Cater, & Michel, 2012; Xu & Jaggars, 2011).

Despite the accessibility of taking courses and possibly earning a degree, student perceptions of the ease of taking online courses and the reality of the effort required for

success are often at odds. Frequently, students demonstrate difficulty succeeding in online courses. In a study released by the Community College Research Center at the Teachers College at Columbia University, Xu and Jaggars (2011) found that community college students enrolled in online courses drop out and fail more often than community college students in a face-to-face learning environment. Although the authors collected demographic data for students enrolled in community and technical colleges, and identified the characteristics of students, the actual causes for dropping out or failing the online courses were not discussed.

Jaggars (2011) indicated that lower community college online course completion rates are not necessarily due to the characteristics of students enrolled in the online courses, but rather due to the online format of the course itself. Jaggars identified three possible difficulties: a) technical difficulties which may be unavoidable (computer error) or avoidable (operator error), b) social distance caused by a lack of a sense of an online community, and c) lack of structure in which the asynchronous nature of online courses allows students to procrastinate or fall behind on assignments.

Students have a tendency to believe that online courses are easier than face-to-face ones, which is a misguided conception. Online courses are typically harder than face-to-face courses and require extreme self-discipline, academic ability, and technical competence (Jenkins, 2011).

Student Behaviors

A number of factors may influence online instruction following behavior including but not limited to personality, self-efficacy, and procrastination. Personality encompasses a broad range of characteristics. The development of personality is a

combination of temperaments inherited at birth, exposure to different types of environments, acquired beliefs and expectations, and the capacity for self-regulation (Carstensen, 2001). According to Varela et al. (2012), student personality is a characteristic that determines the success of students in both face-to-face and online environments. Varela et al. indicated that individuals high in conscientiousness, particularly dependability and achievement orientations, typically possess a strong motivation to learn that is closely correlated with successful learning outcomes.

Self-efficacy can be defined as people's judgment of their capabilities to organize and successfully complete a task (Hsieh, Sullivan, & Guerra, 2007). Self-efficacy is a strong predictor of college student academic performance (Choi, 2005). For example, Chang, Liu, Lin, Chen, & Cheng (2014) indicated that Internet self-efficacy is an important factor influencing learning performance and motivation in online students as well as influencing confidence and relevance related to course content. Choi (2005) corroborated this finding, stating that a student's perceived self-efficacy influences a student's level of task performance, the amount of effort put into performing chosen tasks, and perseverance in the task performance. Other researchers, Hseih, Sullivan, & Guerra (2007), reported that students' motivation toward learning has been found to be a strong predictor of students' achievement as well as students' retention, and that students with more confidence are generally more willing to persist in the face of adversity.

Procrastination, a tendency of students to neglect rather than confront problems or issues (Glenn, 2002), was determined to lead to higher stress and poor coping strategies, including denial and behavioral, mental, and drug/alcohol escape mechanisms (Sirois & Pychyl, 2002). For example, a very popular method of procrastination for today's

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students is social media. In a qualitative survey conducted by Jena Roy as part of her honors thesis project for Carleton University in Ottawa, Canada, one student equated Facebook to an addiction (Pychyl, 2008). In an article, Lei, Bartlett, Gorney, & Herschbach (2010), indicated that student procrastination is also a contributing factor to the perceived lack of online students' ability to read and comprehend directions to successfully complete assignments. Lei et al. (2010) further indicated that procrastinating students are less likely to be motivated to perform class-related activities, and this procrastination leads to starting an assignment too late and prevents students from successfully completing the assignment before the deadline.

Students not only procrastinate, but it also appears that students should be spending more time studying. Student enjoyment may account for the amount of effort put forth toward studying. In a recent study, students indicated a lack of social interaction in online courses as a severe barrier to online enjoyment (Muilenburg & Berge, 2005). Additionally, non-compliance with required reading assignments causes failure of satisfactory participation in class discussions as well as lower exam performance (Lei, Bartlett, Gorney, & Herschbach, 2010).

The use of blogs and discussion boards can enhance the social interaction of an online course. Blogs and discussion boards allow students to reflect upon their ideas before sharing them with the class which leads to more reflective responses (AlJeraisy, Mohammed, Fayyoumi, & Alrashideh, 2015; Smith, 2015). Student engagement is increased and an environment is created for collaboration and the potential to share and enhance knowledge (Halic, Lee, Paulus, & Spence, 2010; Smith, 2015). With the obvious benefits of blogs and discussion boards, why would online students choose to not

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participate? Chapman, Storberg-Walker, and Stone (2008) conducted a qualitative study to understand college student decisions to respond to online discussion postings. The researchers identified the following behaviors: a) students did not respond to posts if they perceived their thoughts were not applicable, b) students did not respond to posts based on negative judgements such as "semi-useless posts", "little patience for", and "huge pet peeve of mine", and c) students did not respond to posts based on personal feelings of like/dislike and feelings of being devalued or excluded (pp. 34-35).

Another important measure of successful academic performance is grade point average. A study (Morris, Finnegan, & Wu, 2005) of online students identified a relationship between high school grade point average, retention, and success. This same study found that undergraduate student achievement was positively correlated with students' actual reading amount. Failure to demonstrate self-discipline prevents student success in the course.

In a study that included over 190,000 first-time college students in fall 2000 through 2006 enrolled in over 109 two-and four-year institutions, Radunzel and Nobel (2013) evaluated the use of high school grade point average (HSGPA) for identifying students who were likely to be successful in college beyond their freshman year. According to their results, using a combination of ACT Composite (ACTC) score and HSGPA was effective in identifying successful students. Similarly, a study by Belfield and Crosta (2012), using data from a community college system, determined that HSGPAs are useful for predicting students' college performance and that HSGPAs have a strong association with college GPAs.

Perfectionism

According to Stallman and Hurst (2011), "perfectionism has been shown to have both a positive and negative effect on student outcomes and has been associated with adjustment, academic achievement, and self-efficacy" (p. 229). According to the authors, maladaptive or negative perfectionism is related to: a) concern over mistakes, b) doubts about actions, and c) socially prescribed perfectionism (p. 229). Adaptive or positive perfectionism includes a) personal standards, b) organization, c) self-oriented perfectionism and d) other-oriented perfectionism (p. 229). Hewitt and Flett (1991) indicated that negative outcomes associated with perfectionism include: a) feelings of failure, b) guilt, c) indecisiveness, d) procrastination, e) shame, and f) low self-esteem (p. 456). According to the authors, these outcomes are manifested in a perfectionist's propensity to set and strive for unrealistic standards.

Additionally, Hewitt and Flett (1991) identified three perfectionism components: self-oriented perfectionism, other-oriented perfectionism, and socially prescribed perfectionism. According to Hewitt and Flett, self-oriented perfectionism involves the self-directed perfectionistic behaviors, which include setting exacting standards for oneself and stringently evaluating and censuring one's own behavior. Other-oriented perfectionism involves beliefs and expectations about the capabilities of others. This person has unrealistic standards for significant others, places importance on other people being perfect, and stringently evaluates others' performance. Socially prescribed perfectionism involves the need to attain standards and expectations prescribed by significant others. These individuals believe that significant others have unrealistic standards for them, evaluate them stringently, and exert pressure on them to be perfect.

Frost, Marten, and Lahart (1990) identified an association between perfectionism and procrastination. The Frost Multidimensional Perfectionism Scale (FMPS) contains 46 questions divided into six categories: Concern over Mistakes, Doubts about actions, Parental Expectations, Parental Criticism, Personal Standards, and Organization. Responses to the questions provide an indication of an individual's level of perfectionism which in turn influences academic achievement.

<h1 align="center">Solutions</h1>

Faced with a multitude of barriers to effective and successful instruction following behaviors in online learning and multiple student behaviors that may inhibit effective and successful instruction following behaviors in online courses, it is important to identify solutions to overcome these obstacles. Possible solutions include self-discipline in regard to online reading strategies and avoiding procrastination.

Online reading strategies can strengthen a student's ability to correctly read and follow instructions. Three popular online reading strategies are rereading strategy, keyword strategy, and question and answer (QA) strategy (Hsieh & Dwyer, 2009). The rereading strategy suggests students read the selection more than once to gather meaning from the content. Rereading builds fluency and enhances comprehension (Faust & Glenzer, 2000). The keyword strategy requires students to identify keywords within the reading to improve the student's ability to comprehend. The question and answer strategy increases metacognition awareness by answering questions related to recently read material. Other successful methods to reading comprehension include actively constructing meaning from text using a set of strategic processes such as previewing the

text, setting goals, making predictions, asking questions, monitoring and understanding, and making connections (Coiro, 2011).

Self-Regulated Learning

Self-Regulated Learning (SRL) refers to effective approaches to learning activities that are characterized by the use of metacognitive knowledge, active regulation of cognitive strategies during task performance, and the presence of mastery-oriented behaviors (Pino-Pasternak, Whitebread, & Tolmie, 2010). Self-regulated learning is especially important for students enrolled in online courses. Students benefit most from computer-based learning environments (CBLEs) when they are adept at self-regulating their learning. Learner characteristics and cognitive and metacognitive processing interact to influence academic performance (Greene, Muis, & Pieschl, 2010). Online students must manage, monitor, and regulate the time, place, and progress of their learning. Online learning shifts the primary management and control of learning from the instructor to the student. Students' motivations and emotions are directly linked to students' ability to self-regulate and achieve (Artino & Jones, 2012). Students adopting more effective learning strategies tend to demonstrate higher learning gains, particularly within computer-based learning environments (Cheng & Chau, 2013).

Summary

Chapter II identified and discussed some of the factors that may influence community college students' instruction following behaviors in online courses. The literature review described community colleges and the students they serve. Information was presented on the some of the key demographics included in the study: gender, year in school, grade point average, age, parental involvement, a rural versus urban K-12

education, and the amount of non-academic screen time that a person spends per day. Information on the four constructs of barriers to online learning, student behaviors in online courses, perfectionism, and solutions to difficulties in online learning was presented as well as information on the theoretical framework, self-regulated learning. There appears to be a gap in the study of the factors that influence community college students' perceptions of their instruction following behaviors in online courses.

CHAPTER III

METHODS AND PROCEDURES

The purpose of this study was to examine factors that influence community

college students' instruction following behaviors in online courses. To explore these

factors, the study used survey data collected from students at a Great Plains community

college. This survey aimed to answer the following questions:

1. What is the difference between community college students' ages and their

   perceptions of their instruction following behaviors in online courses?

2. What is the difference between community college students' grade point

   averages and their perceptions of their instruction following behaviors in

   online courses?

3. What is the difference between community college students' parental

   involvement and their perceptions of their instruction following behaviors in

   online courses?

4. What is the difference between community college students' rural versus

   urban K-12 education and their perceptions of their instruction following

   behaviors in online courses?

5. What is the difference between community college students' amount of non-

   academic screen time per day and their perceptions of their instruction

   following behaviors in online courses?

This chapter describes the participants surveyed, the instrument used to gather data, including the independent and dependent variables of the study, the procedure used to conduct the survey, and the statistical techniques used to analyze the data.

Pilot Study

The survey instrument for this study was originally designed as a project for a multivariate research course and was modified several times to include additional demographics and constructs, identified through initial data collection and literature review. The first survey contained only five demographic questions including gender, age, grade point average, educational funding, and parental involvement. Only the first three constructs of barriers, behaviors, and solutions were used in the pilot study. The fourth construct, perfectionism, was added during a scholarly writing course because additional research identified perfectionism as a factor that could contribute to instruction following behaviors. For this survey, three aspects of perfectionism were included: personal standards, concern over mistakes, and doubts about actions. Another revision took place during an advanced qualitative methods research course when it became apparent that the survey would benefit by adding factors such as living accommodations, employment status, number of college credits in which enrolled, and whether their K-12 education was completed in a rural or urban environment could also influence an online student's instruction following behavior.

Lastly, the literature review process identified "amount of non-academic screen time" as another possible influential factor in students' instruction following behavior in online courses. By researching and collecting data on these variables, I hope that

influencing factors will be identified in an effort to raise awareness of these obstacles and strive to combat their effects.

Participants

The study used a convenience sample of college students enrolled in online general education courses at a Great Plains community college with an approximate enrollment of 4,000 students. Instructors teaching online general education courses were asked to have their online students complete a brief survey. Twenty-six online courses were selected encompassing four categories. Some courses include multiple sections, for a total of 34 classes (see Table 7 for the categories, courses, and sections).

Table 7. General Education Category, and Online Course Titles Indicating the Number of Sections and Maximum Enrollments.

General Education Category	Online Course Title	Maximum Enrollments
Communications	ENGL 110 College Composition I (6)	120
	ENGL 120 College Composition II (4)	80
	ENGL 125 Intro to Professional Writing (3)	60
	COMM 110 Fundamentals of Public Speaking (7)	140
Arts & Humanities	ART 110 Introduction to the Visual Arts (1)	20
	HIST 103 United States to 1877 (1)	20
	HIST 104 United States Since 1877 (2)	40
	MUSC 100 (2)	40
	PHIL 101 Intro to Philosophy (1)	20
Social & Behavioral Sciences	POLS 115 American Government (1)	20

Table 7 cont.

General Education Category	Online Course Title	Maximum Enrollments
	POLS 116 State and Local Government (1)	20
	PSYC 111 Introduction to Psychology (3)	60
	SOC 110 Introduction to Sociology (2)	40
	SOC 115 Social Problems	20
	SPAN 101 First Year Spanish I (1)	20
Business, Math, Science & Technology	BIOL 111 Concepts of Biology (1)	20
	BIOL 124 Environmental Science (1)	20
	BIOL 150 General Biology I (1)	20
	CHEM 115 Intro to Chemistry (1)	20
	CHEM 116 Introduction to Organic and Biochemistry	20
	CSCI 101 Introduction to Computers (5)	100
	CSCI 122 Beginning Visual Basic (1)	20
	CSCI 160 Computer Science I	20
	GEOG 121 Physical Geography (1)	20
	GIS 105 Fundamentals of Geographic Information Systems	20
	MATH 103 College Algebra (2)	40

Procedures

Based on course enrollment, there was a possibility of 639 total responses. Data was collected from 102 participants. There were 48 male and 54 female participants who were enrolled in online general education courses at the college. Eighty-one of the

participants were between the ages of 18 and 34 years and 21 participants older than 34 years of age. A majority of participants were sophomore (73) while 23 were freshmen and 6 did not indicate their year in school.

Data was collected using an online survey. Selected faculty members teaching general education online courses sent students in their courses an email containing a link to the survey. Participants were informed that the survey was being conducted to gather information for a doctoral dissertation. Completion of the survey was optional and participants were not be compensated for completion. Completion of the survey indicated consent. No distinguishable personal information was collected to ensure privacy of the participants. To be included, participants had to be 18 years of age or older. The survey was administered to online students enrolled in the spring 2016 semester.

Survey Instrument Design

The student survey, developed by the researcher, was designed to address the study's research questions (see Appendix A for the complete survey). The survey contains 13 independent variables which are demographic items: gender, year in school, age, grade point average, educational funding, parental involvement, living accommodations, employment status, number of college credits in which enrolled at the time of the survey, marital status, whether the student is a parent, whether the majority of the student's K-12 education was completed in a rural or urban environment (determined by population), and the average amount of non-academic screen time that a student spends each day.

The constructs and corresponding survey questions, chosen based on research found during the literature review, are listed in Table 8.

Table 8. Constructs and Corresponding Survey Questions.

Barriers	I have difficulty following instructions in online courses because of my lack of reading comprehension skills.	
	I have difficulty following instructions in online courses because of my lack of self-confidence.	
	I have difficulty following instructions in online courses because of my disinterest in the course material.	
	I have difficulty following instructions in online courses because of the social distance caused by the lack of a sense of community.	
Behaviors	I purposefully plan my schedule to allow adequate time to thoroughly complete my online course assignments.	
	When reading online course instructions, I read each word carefully to be sure I understand what is being asked of me.	
	When reading online course instructions, I follow the instructions exactly to correctly complete the assignment.	
	When reading online course instructions, I allow myself ample time to correctly complete the assignment.	
Solutions	If I read the instructions more carefully, I would probably complete my assignments more thoroughly.	
	If I asked the instructor for clarification on instructions I find unclear, I would probably complete my assignments more thoroughly.	
	When I experience technical difficulties, if I asked the instructor for assistance right away, I would probably complete my assignments more thoroughly.	
	If I started my assignment earlier in the week, I would probably complete my assignments more thoroughly.	
Perfectionism	Personal Standards	I set higher goals than most people.
		I hate being less than the best at things.
	Concern Over Mistakes	I tend to get behind on my work because I repeat things over and over.
		If I do not set the highest standards for myself, I am likely to end up a second-rate person.
	Doubts About Actions	People will probably think less of me if I make a mistake.
		It takes me a long time to do something "right".

The Barriers construct is associated with the Forethought Phase of Zimmerman and Kitsantas' (2007) three cyclical self-regulatory phases. The Forethought Phase includes the Task Analysis and Self-Motivation Beliefs categories. The Task Analysis category encompasses goal setting and strategic planning. The Self-Motivation Beliefs category comprises self-efficacy, outcome expectations, task interest/valuing, and goal orientation. Questions one and two, related to lack of reading comprehension skills and lack of self-confidence, are aligned with self-efficacy. Students' judgments of their capabilities to complete a task can be indicative of their perception of their reading comprehension skills and perception of their lack of self-confidence. Question three, related to disinterest in the material, is aligned with task interest/valuing. The task interest or value that students possess can affect the emphasis placed on course material. Question four, related to sense of community, is aligned with task interest/valuing. Students who feel a sense of community within the online course are more likely to value the interaction.

The Behaviors construct is associated with the Performance Phase of Zimmerman and Kitsantas' (2007) three cyclical self-regulatory phases. The Performance Phase includes the categories of Self-Control and Self-Observation. The Self-Control category is comprised of self-instruction, imagery, attention focusing, and task strategies. The Self-Observation category includes metacognitive monitoring and self-recording. Questions five, six, seven, and eight, related to actual student behaviors when reading online course instructions, align with both task strategies and metacognitive monitoring. Students who set achievable task strategies are likely to meet performance expectations. By monitoring performance, students are able to identify successful strategies.

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The Solutions construct is associated with the Self-Reflection Phase of Zimmerman and Kitsantas' (2007) three cyclical self-regulatory phases. The Self-Reflection Phase includes the categories of Self-Judgment and Self-Reaction. The Self-Reflection category is comprised of self-evaluation and casual attribution. The Self-Reaction category includes self-satisfaction/affect and adaptive/defensive. Questions nine, ten, eleven and twelve, related to reading the instructions more carefully, asking for clarification, asking for assistance with technical difficulties, and starting assignments earlier in the week, align with both self-evaluation and causal attribution. Students who perform a self-evaluation are able to determine the results of learning efforts and identify whether success or failure is a result of limited ability or a lack of effort.

The Perfectionism construct includes the categories of Personal Standards, Concern over Mistakes, and Doubts about Actions. All six questions align with self-efficacy. Students' judgments of their capabilities to complete a task are directly related to their perception of their perfectionism. How they perceive themselves creates the level of perfectionism they believe they possess.

Variables

Independent Variables. There are a wide variety of factors that could influence online students' instruction following behaviors. Five demographic factors were selected for this study: age, grade point average, parental involvement, rural versus urban, and non-academic screen time. These factors were chosen as most are underreported or not reported at all in research related to instruction following behaviors of community college students enrolled in online courses. Each demographic factor is an independent variable that will be evaluated to determine statistical significance.

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The first independent variable examined was student age. An assumption can be made that an older student would possess stronger instruction following behaviors than a younger student (Twenge, 2006). This assumption, as well as all assumptions, will be tested for statistical significance using independent samples *t*-tests.

The second independent variable examined was community college grade point average. Once again, assumptions can be made regarding the results of this independent variable. It is likely that students with a higher grade point average will possess stronger instruction following behavior than students with lower grade point averages (Belfield & Crosta, 2012; Radunzel & Nobel, 2013).

The third independent variable examined was parental involvement in the student's education. Parental involvement is a topic for which there has been much research and debate. Parents have been classified as helicopter parents or lawnmower parents who swoop in at a moment's notice to immerse themselves into every aspect of their children's' lives, righting all wrongs and bringing justice to their children's worlds. Results have been conflicting. Some sources indicate that this parental involvement is beneficial to students (Kennedy, 2009), while other sources indicate that the students become too dependent upon the parent to fight their battles (Miller, 2011). The expectation is to determine if parental involvement influences an online community college student's instruction following behavior. The first question related to the parent allowing the child to act independently describes an uninvolved parent; the second question related to the parent providing guidance describes an involved parent; the third question related to the parent paying extremely close attention describes a helicopter

parent; and the fourth question related to the parent stepping in and literally smoothing out any obstacles describes a lawnmower parent.

The fourth independent variable, whether a majority of K-12 education completed in a town with a population less than 10,000 or greater than or equal to 10,000, is designed to determine whether the participant completed a majority of their K-12 education in a rural versus urban setting. Research conducted on student success relative to rural versus urban schooling shows inconclusive results (Zehr, 2010). Rural school districts could have lower funding while urban school districts could have higher funding (Henry, Cavanagh, & Oetting, 2011). This funding disparity could affect the quality of instruction, and access to technology and current materials.

The fifth independent variable, amount of non-academic screen time spent per day, could influence online students' instruction following behavior in several ways. Too much screen time, especially playing video games, can distract a student from spending time working on course assignments (Cummings & Vandewater, 2007). According to some research, individuals who spend too much screen time lack concentration and the ability to focus on a task at hand (Gliebe, 2011; Wartella & Lauricell, 2012).

Dependent Variables. Four constructs based on factors identified during the literature review and related to the self-regulated learning theoretical framework were designed for this study.

The first construct (C1) includes four statements related to barriers to successful instruction following behavior in online courses. These statements deal with barriers related to lack of reading comprehension skills, lack of self-confidence, disinterest in the course material and social distance caused by the lack of a sense of community.

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The second construct (C2) includes four statements related to behaviors when following instructions in online courses. These statements deal with behaviors that include purposefully planning their schedule to allow adequate time to thoroughly complete their assignment, reading each word carefully to understand what is asked, following instructions exactly to correctly complete the assignment, and allowing ample time to correctly complete the assignment.

The third construct (C3) includes four statements related to possible solutions for successfully following online course instructions. These statements include reading the instructions more carefully, asking the instructor for clarification on instructions, asking the instructor for assistance when technical difficulties are experienced, and starting the assignment earlier in the week.

The fourth construct (C4) includes six statements related to measuring the student's level of perfectionism, with two questions each in the categories of personal standards, concern over mistakes, and doubts about actions. The personal standards statements include setting higher goals than most people and hating being less than the best at things. The concern over mistakes statements include getting behind on work because tasks are repeated over and over and if highest standards are not set and fear of ending up a second-rate person. The doubts about actions statements include a perception that people will think less of the student for making a mistake and for taking too long to do something "right". These six questions related to perfectionism are taken from the Frost Multidimensional Perfectionism Scale (FMPS).

Preliminary Analysis

Participants were asked to rate the extent to which they agree to each statement on a six-point Likert-type scale with 6 = strongly agree, 5 = agree, 4 = slightly agree (*all some form of agreement*), 3 = slightly disagree, 2 = disagree, and 1 = strongly disagree (*all some form of disagreement*). The instrument results were analyzed using Statistical Package for the Social Sciences (SPSS).

The data was screened prior to the main analysis to check for missing data. Surveys with missing data were omitted from the main analysis. Reliability analysis was conducted as well as factor analysis.

First, the demographic information was summarized in a table displaying the total number of participants in each category and the corresponding percentage of the overall sample.

Second, the percentage of some level of agreement, the mean, and the standard deviation was determined for each of the four constructs: barriers behaviors, solutions, and perfectionism included in the survey.

Third, bivariate correlations were calculated and documented to illustrate the degree of association between the constructs, and the Cronbach's alphas were calculated as an estimate of the data reliability.

Main Analysis

After completion of the preliminary analysis, independent samples *t*-tests were used to determine if there was a difference between the demographic independent variables and the dependent constructs of barriers, behaviors, solutions, and perfectionism. For the purpose of this study, statistical significance was set at the .05

level for each independent construct test. The independent variables grade point average, parental involvement, and the average amount of non-academic screen time spent per day were collapsed into two categories. Additionally, Cohen's *d* was calculated to measure the effect size between the groups.

CHAPTER IV

RESULTS

The purpose of this study was to examine factors that influence community

college students' instruction following behaviors in online courses. To explore these

factors, the study used survey data collected from students at a Great Plains community

college. This survey aimed to answer the following questions:

1. What is the difference between community college students' ages and their

   perceptions of their instruction following behaviors in online courses?

2. What is the difference between community college students' grade point

   averages and their perceptions of their instruction following behaviors in

   online courses?

3. What is the difference between community college students' parental

   involvement and their perceptions of their instruction following behaviors in

   online courses?

4. What is the difference between community college students' rural versus

   urban K-12 education and their perceptions of their instruction following

   behaviors in online courses?

5. What is the difference between community college students' amount of non-

   academic screen time per day and their perceptions of their instruction

   following behaviors in online courses?

An email was sent to 39 full-time and adjunct faculty members who teach general education online courses at a Great Plains community college. Thirty-two of the faculty members agreed to distribute the survey to the students in their online courses. The total number of potential responses was 639. Of the 118 surveys were returned, 16 were not included as no responses were provided, which resulted in 102 useable surveys, for a return rate of 15.96%.

Table 9 summarizes the demographic information displaying the total number of participants in each category and the corresponding percentage of the overall.

Table 9. Demographic Information for Students Surveyed.

	Overall Sample	
Demographic Information	n = count	%
1. Gender		
Male	48	47.1
Female	54	52.9
2. Year in school		
Freshman	23	22.5
Sophomore	73	71.6
Not indicated	6	5.9
3. Age		
≥ 18 and < 34	81	79.4
≥ 34	21	20.6
4. Grade point average		
≥ 3.0 and ≤ 4.0	68	66.7
≥ 2.0 and < 3.0	31	30.4
< 2.0	3	2.9
5. Educational funding (choose all that apply)		
Me	63	61.8
Parents	17	16.7
Financial Aid	46	45.1
Other	15	14.7
6. Parental involvement		
Allow independence (uninvolved)	68	66.7
Provide guidance (involved)	28	27.5
Pay close attention (helicopter)	3	2.9
Step in and take over (lawnmower)	0	0.0
Not indicated	3	2.9

Table 9 cont.

Demographic Information	Overall Sample	
	n = count	%
7. Living arrangements		
Dorm	7	6.9
Apartment	32	31.4
At home	26	25.5
Own home	37	36.3
8. Employment status		
0 hours per week	8	7.8
>0 and <16 hours per week	12	11.8
≥ 16 and <32 hours per week	23	22.5
≥32 hours per week	59	57.8
9. Number of college credits in which enrolled		
<12	36	35.3
≥12 and <15	38	37.3
≥15	27	26.5
Not indicated	1	1.0
10. Marital status		
Single	67	65.7
Married	31	30.4
Divorced	4	3.9
Widowed	0	0.0
11. Parent		
Yes	35	34.3
No	67	65.7
12. Population		
< 10,000 (rural)	50	49.0
≥10,000 (urban)	52	51.0
13. Non-academic screen time in hours per day		
<2 hours	32	31.4
≥2 and <4 hours	51	50.0
≥4 and <6 hours	12	11.8
≥6 hours	7	6.9

According to the demographic information, as expected, the number of male versus female participants was closely distributed (M = 48, F = 54) while a majority of the participants were sophomore students (sophomore = 73, freshman = 23). This

distribution is surprising, based on the general education introductory courses that were selected for survey delivery.

Table 10 summarizes the percentage of some form of agreement (responses indicating 6 = strongly agree, 5 = agree, or 4 = slightly agree), the mean, and standard deviation for all participants for each question measuring barriers. It was interesting to note that for the responses for Questions 1 and 2 related to the individual's ability, the percentage of some form of agreement was small, while the responses for Questions 3 and 4, related to the course was higher.

Table 10. Students Surveyed Regarding Barriers.

Question Number	Barriers	% Some Form of Agreement	M	SD
1	I have difficulty following instructions in online courses because of my lack of reading comprehension skills.	5.9	1.6	0.9
2	I have difficulty following instructions in online courses because of my lack of self-confidence.	4.9	1.6	0.9
3	I have difficulty following instructions in online courses because of my disinterest in the course material.	16.7	2.1	1.3
4	I have difficulty following instructions in online courses because of the social distance caused by the lack of a sense of community.	11.8	1.9	1.1

Table 11 summarizes the percentage of some form of agreement (responses indicating 6 = strongly agree, 5 = agree, or 4 = slightly agree), the mean, and standard deviation for all participants for each question measuring behaviors. It was interesting to note that for the responses to Questions 5 through 8, participants indicated a high level of agreement that they displayed positive, academically successful behaviors when reading

instructions in online courses, with Question 8 regarding time management indicating the lowest percentage with 90.2% agreement.

Table 11. Students Surveyed Regarding Behaviors.

Question Number	Behaviors	% Some Form of Agreement	M	SD
5	When reading instructions in online courses, I read each word carefully to be sure I understand what is being asked of me.	92.2	5.0	1.0
6	When reading instructions in online courses, I follow the instructions exactly to correctly complete the assignment.	97.1	5.1	0.8
7	When reading instructions in online courses, I allow myself ample time to correctly complete the assignment.	92.2	4.8	1.2
8	When reading instructions in online courses, I purposefully plan my schedule to allow adequate time to thoroughly complete my online course assignments.	90.2	4.8	1.2

Table 12 summarizes the percentage of some form of agreement (responses indicating 6 = strongly agree, 5 = agree, or 4 = slightly agree), the mean, and standard deviation for all participants for each question measuring solutions. It is interesting to note that in comparison to Table 11 where participants indicated a high level of some form of agreement that they participated in positive, academically successful behaviors when reading instructions in online courses, their responses to Questions 9 through 12 appear to indicate that there was room for improvement. This discrepancy could be attributed to inflated self-reported perceptions. Exaggerations in self-reported measures can occur based on participants' perceptions of the level of privacy or confidentiality of the responses provided (Brener, Billy, & Grady, 2003). The authors also indicate that social desirability, the desire to provide others with favorable impressions of oneself, can also attribute to inflated self-reporting.

Table 12. Students Surveyed Regarding Solutions.

Question Number	Solutions	% Some Form of Agreement	M	SD
9	If I read the instructions more carefully, I would probably complete my assignments more thoroughly.	69.6	3.9	1.5
10	If I asked the instructor for clarification on instructions I find unclear, I would probably complete my assignments more thoroughly.	70.6	4.0	1.5
11	If I started my assignment earlier in the week, I would probably complete my assignments more thoroughly.	78.4	4.3	1.3
12	When I experience technical difficulties, if I asked the instructor for assistance right away, I would probably complete my assignments more thoroughly.	77.5	4.1	1.5

Table 13 summarizes the percentage of some form of agreement (responses indicating 6 = strongly agree, 5 = agree, or 4 = slightly agree), the mean, and standard deviation for all participants for each question measuring perfectionism. It was interesting to note that for Questions 13 and 14 related to Personal Standards, participants indicated a high percentage of some form of agreement.

Table 13. Students Surveyed Regarding Perfectionism.

Question Number	Perfectionism	% Some Form of Agreement	M	SD
13	I set higher goals than most people.	87.3	4.3	1.3
14	I hate being less than the best at things.	76.5	4.3	1.2
15	I tend to get behind on my work because I repeat things over and over.	17.6	2.5	1.2
16	If I do not set the highest standards for myself, I am likely to end up a second-rate person.	46.1	3.3	1.5
17	People will probably think less of me if I make a mistake.	33.3	2.9	1.5
18	It takes me a long time to do something "right".	24.5	2.7	1.3

Bivariate correlations were calculated and documented in Table 14 to illustrate the degree of association between the constructs, and the Cronbach's alphas were calculated as an estimate of the data reliability.

Table 14. Correlation of Subscale Constructs and Measures of Internal Consistency.

Construct	Subscale	Items	C1.	C2.	C3.	α
C1.	Barriers	1, 2, 3, 4				.84
C2.	Behaviors	5, 6, 7, 8	-.57			.81
C3.	Solutions	9, 10, 11, 12	.09	.03		.87
C4.	Perfectionism	13, 14, 15, 16, 17, 18	.13	-.06	.03	.66

The correlation of subscale constructs indicates a low correlation among constructs. The correlation between the Barriers construct and the Behaviors construct is the strongest at -.57, which indicates an inverse relationship between the two constructs. As Barriers increase, the Behaviors decrease.

Cronbach's alpha is used to describe the internal consistency reliability (Warner, 2013). Scores in the range from .75 to .95 indicate high internal consistency reliability. The highest internal consistency (the way the items relate as a group) was indicated for the Solutions construct, indicating a Cronbach's alpha of .87. There was also high consistency for the Barriers construct (Cronbach's alpha of .84) and the Behaviors construct (Cronbach's alpha of .81). The Perfectionist construct indicated a low internal consistency (Cronbach's alpha of .66).

Independent samples *t*-tests were conducted to compare the demographics of age, grade point average, parental involvement, whether a majority of their K-12 education was completed in a rural or urban environment, and the amount of non-academic screen time spent per day.

Research Question 1: What is the difference between community college students' ages and their perceptions of their instruction following behaviors in online courses?

A comparison was made between age groups and constructs to determine statistical significance. The demographic, age, was purposefully grouped into two categories: greater than or equal to 18 and less than 34, and greater than or equal to 34. This grouping separated the participants into the categories of millennials and non-millennials. For the Barriers construct, students younger than 34 years (millennials; n = 81) resulted in a mean of 1.89 with a standard deviation of 0.95 while students 34 years or older (non-millennials, n = 21) resulted in a mean of 1.55 with a standard deviation of 0.58. Cohen's *d* was .38. For the Behaviors construct, students younger than 34 years (n = 81) resulted in a mean of 4.87 with a standard deviation of 0.85 while students 34 years or older (n = 21) resulted in a mean of 5.25 with a standard deviation of 0.62. Cohen's *d* was .48. For the Solutions construct, students younger than 34 years (n = 81) resulted in a mean of 4.14 with a standard deviation of 1.16 while students 34 years or older (n = 21) resulted in a mean of 3.83 with a standard deviation of 1.48. Cohen's *d* was .25. For the Perfectionism construct, students younger than 34 years (n = 81) resulted in a mean of 3.41 with a standard deviation of 0.81 while students 34 years or older (n = 21) resulted in a mean of 3.22 with a standard deviation of 0.74. Cohen's *d* was .24. See Table 15.

Group statistics show that when looking at the means, for the first construct, barriers, community college students 34 years and older (non-millennials) indicated a lower level of perceptions of barriers to online learning than students younger than 34 years (millennials). For the second construct, behaviors, community college students 34

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years and older indicated a higher level of agreement than students younger than 34. For

the third construct, solutions, students 34 years and older indicated a lower level of

agreement than students younger than 34. For the fourth construct, perfectionism,

students 34 years and older indicated a lower level of agreement than students younger

than 34.

There was no statistical significance found for any of the constructs.

Table 15. Independent Samples *t*-tests for Age and Constructs.

Construct	Subscale	Age	*n*	Mean	Std. Dev.	*t.*	Sig. (2-tailed)	Cohen's *d*
C1.	Barriers	<34	81	1.89	.95	1.57	.12	.38
		≥34	21	1.55	.58			
C2.	Behaviors	<34	81	4.87	.86	-1.92	.06	.48
		≥34	21	5.25	.62			
C3.	Solutions	<34	81	4.15	1.16	1.04	.30	.25
		≥34	21	3.83	1.48			
C4.	Perfectionism	<34	81	3.41	.81	0.98	.33	.24
		≥34	21	3.22	.74			

Research Question 2: What is the difference between community college

students' grade point averages and their perceptions of their instruction following

behaviors in online courses?

A comparison was made between grade point average and constructs to determine

statistical significance. Grade point averages were grouped into two categories: those

greater than or equal to 2, representing students with a C or higher average, and those less

than 2, representing students with a less than C average. The categories were chosen

based on common practice by educational institutions of classifying a D grade as below

average and an F grade as failing. For prerequisite courses, students may have to repeat a

course with a D grade before enrolling in the next sequential course. For the Barriers

construct, students with a grade point average greater than or equal to 2 (n = 99) resulted

in a mean of 1.84 with a standard deviation of 0.88 while students with a grade point

average less than 2 (n = 3) resulted in a mean of 1.08 with a standard deviation of 1.12.

Cohen's *d* was .85. For the Behaviors construct, students with a grade point average

greater than or equal to 2 (n = 99) resulted in a mean of 4.97 with a standard deviation of

0.77 while students with a grade point average less than 2 (n = 3) resulted in a mean of

4.17 with a standard deviation of 2.02. Cohen's *d* was .98. For the Solutions construct,

students with a grade point average greater than or equal to 2 (n = 99) resulted in a mean

of 4.05 with a standard deviation of 1.22 while students with a grade point average less

than 2 (n = 3) resulted in a mean of 5.00 with a standard deviation of 1.52. Cohen's *d* was

.77. For the Perfectionism construct, students with a grade point average greater than or

equal to 2 (n = 99) resulted in a mean of 3.40 with a standard deviation of 0.79 while

students with a grade point average less than 2 (n = 3) resulted in a mean of 2.67 with a

standard deviation of .76. Cohen's *d* was .92. See Table 16.

Table 16. Independent Samples *t*-tests for Grade Point Averages and Constructs.

Construct	Subscale	GPA	*n*	Mean	Std. Dev.	*t.*	Sig. (2-tailed)	Cohen's *d*
C1.	Barriers	≥2	99	1.84	.88	1.46	.15	.85
		<2	3	1.08	1.13			
C2.	Behaviors	≥2	99	4.96	.77	1.68	.10	.98
		<2	3	4.17	2.02			
C3.	Solutions	≥2	99	4.05	1.22	-1.32	.19	.77
		<2	3	5.00	1.52			
C4.	Perfectionism	≥2	99	3.40	.79	1.57	.12	.92
		<2	3	2.67	.76			

A Cohen's *d* of .80 is considered a large effect size. Three of the constructs show

a large effect size, with the Solutions construct only .03 away. The .98 effect size

associated with the Behaviors construct is by far the most noteworthy, almost an entire standard deviation away. This indicates that for the independent variable of grade point average, there was an easily detectable difference in responses.

For the first construct, barriers, community college students with higher grade point averages indicated a higher of agreement than students with lower grade point averages. For the second construct, behaviors, students with higher grade point averages indicated a higher level of agreement than students with lower grade point averages. For the third construct, solutions, students with higher grade point averages indicated a lower level of agreement than students with lower grade point averages. For the fourth construct, perfectionism, students with higher grade point averages indicated a higher level of agreement than students with lower grade point averages. There was no statistical significance found for any of the constructs.

Research Question 3: What is the difference between community college students' parental involvement and their perceptions of their instruction following behaviors in online courses?

A comparison was made between parental involvement and constructs to determine statistical significance. Parental involvement was grouped into two categories: parents who are minimally involved (involved parents and uninvolved parents), and parents who are more involved (helicopter parents and lawnmower parents). The categories were chosen based on Baumrind's (1991) findings that permissive and uninvolved parenting was associated with lower academic performance than authoritative parenting. It was interesting to note that no student indicated lawnmower parents and a majority of the students indicated a minimal amount of parental involvement. For the

Barriers construct, students whose parents are more involved (n = 3) resulted in a mean of

1.75 with a standard deviation of 1.56 while students whose parents are less involved (n =

99) resulted in a mean of 1.82 with a standard deviation of 0.88. Cohen's *d* was .08. For

the Behaviors construct, students whose parents are more involved (n = 3) resulted in a

mean of 4.17 with a standard deviation of 0.63 while students whose parents are less

involved (n = 99) resulted in a mean of 4.97 with a standard deviation of 0.82. Cohen's *d*

was .98. For the Solutions construct, students whose parents are more involved (n = 3)

resulted in a mean of 3.67 with a standard deviation of 1.53 while students whose parents

are less involved (n = 99) resulted in a mean of 4.09 with a standard deviation of 1.23.

Cohen's *d* was .35. For the Perfectionism construct, students whose parents are more

involved (n = 3) resulted in a mean of 3.72 with a standard deviation of 0.92 while

students whose parents are less involved (n = 99) resulted in a mean of 3.36 with a

standard deviation of 0.80. Cohen's *d* was .45. See Table 17.

Table 17. Independent Samples *t*-tests for Parental Involvement and Constructs.

Construct	Subscale	Parental involvement	*n*	Mean	Std. Dev.	*t.*	Sig. (2-tailed)	Cohen's *d*
C1.	Barriers	less	99	1.82	.88	0.14	.89	.08
		more	3	1.75	1.56			
C2.	Behaviors	less	99	4.97	.82	1.68	.10	.98
		more	3	4.17	.63			
C3.	Solutions	less	99	4.09	1.23	0.59	.56	.35
		more	3	3.67	1.53			
C4.	Perfectionism	less	99	3.36	.80	-0.77	.45	.45
		more	3	3.72	.92			

The .98 effect size associated with the Behaviors construct is by far the most

noteworthy, almost an entire standard deviation away. This indicates that for the

independent variable of parental involvement, there was an easily detectable difference in

responses.

For the first construct, barriers, community college students whose parents are more involved indicated a lower level of agreement than students whose parents are less involved. For the second construct, behaviors, students whose parents are more involved indicated a lower level of agreement than students whose parents are more involved. For the third construct, solutions, students whose parents are more involved indicated a higher level of agreement than students whose parents are less involved. For the fourth construct, perfectionism, students whose parents are more involved indicated a higher level of agreement than students whose parents are less involved. There was no statistical significance found for any of the constructs.

Research Question 4: What is the difference between community college students' rural versus urban K-12 education and their perceptions of their instruction following behaviors in online courses?

A comparison was made between a rural versus urban K-12 education and constructs to determine statistical significance. For the Barriers construct, students who received a rural K-12 education (n = 50) resulted in a mean of 1.93 with a standard deviation of 1.01 while students who received an urban K-12 education, (n = 52) resulted in a mean of 1.71 with a standard deviation of 0.75. Cohen's d was .23. For the Behaviors construct, students who received a rural K-12 education (n = 50) resulted in a mean of 4.86 with a standard deviation of 0.88 while students who received an urban K-12 education (n = 52) resulted in a mean of 5.02 with a standard deviation of 0.77. Cohen's d was .20. For the Solutions construct, students who received a rural K-12 education (n = 50) resulted in a mean of 4.18 with a standard deviation of 1.25 while students who received an urban K-12 education (n = 52) resulted in a mean of 3.99 with a standard

deviation of 1.22. Cohen's *d* was .15. For the Perfectionism construct, students who

received a rural K-12 education (n = 50) resulted in a mean of 3.37 with a standard

deviation of 0.75 while students who received an urban K-12 education (n = 52) resulted

in a mean of 3.38 with a standard deviation of 0.85. Cohen's *d* was .01. See Table 18.

Table 18. Independent Samples *t*-tests for Rural Versus Urban K-12 Education and Constructs.

Construct	Subscale	K-12 education	*n*	Mean	Std. Dev.	*t.*	Sig. (2-tailed)	Cohen's *d*
C1.	Barriers	Rural	50	1.93	1.01	1.18	.24	.23
		Urban	52	1.71	.75			
C2.	Behaviors	Rural	50	4.86	.88	-1.03	.30	.20
		Urban	52	5.02	.77			
C3.	Solutions	Rural	50	4.18	1.25	0.76	.45	.15
		Urban	52	3.99	1.22			
C4.	Perfectionism	Rural	50	3.37	.75	-0.05	.96	.01
		Urban	52	3.38	.85			

Group statistics show that when looking at the means, for the first construct,

barriers, community college students who received a rural K-12 education indicated a

higher level of agreement than students who received an urban K-12 education. For the

second construct, behaviors, students who received a rural K-12 education indicated a

lower level of agreement than students who received an urban K-12 education. For the

third construct, solutions, students who received a rural K-12 education indicated a higher

level of agreement than students who received an urban K-12 education. For the fourth

construct, perfectionism, students who received a rural K-12 education indicated a lower

level of agreement than students who received an urban K-12 education. There was no

statistical significance found for any of the constructs.

Research Question 5: What is the difference between community college students' amount of non-academic screen time per day and their perceptions of their instruction following behaviors in online courses?

A comparison was made between the amount of non-academic screen time a student spends per day and constructs to determine statistical significance. Screen time per day was grouped into two categories: students who spend less than four hours of non-academic screen time per day and students who spend greater than or equal to four hours of screen time per day. These categories were chosen based on recommendations from the National Heart, Lung, and Blood Institute-supported Expert Panel and the American Academy of Pediatrics (AAP) who recommend leisure screen time be limited to two hours or less daily (Herrick, Fakhouri, Carlson, & Fulton, 2014). Two hours seems like an unrealistic expectation, so twice that recommendation was chosen for the break off point. For the Barriers construct, students who spend more non-academic screen time per day (n = 19) resulted in a mean of 1.88 with a standard deviation of 1.09 while students who spend less non-academic screen time per day (n = 83) resulted in a mean of 1.80 with a standard deviation of 0.85. Cohen's *d* was .09. For the Behaviors construct, students who spend more non-academic screen time per day (n = 19) resulted in a mean of 4.89 with a standard deviation of 0.62 while students who spend less non-academic screen time per day (n = 83) resulted in a mean of 4.96 with a standard deviation of 0.88. Cohen's *d* was .08. For the Solutions construct, students who spend more non-academic screen time per day (n = 19) resulted in a mean of 4.38 with a standard deviation of 1.09 while students who spend less non-academic screen time per day (n = 83) resulted in a mean of 4.01 with a standard deviation of 1.26. Cohen's *d* was .30. For the Perfectionism

construct, students who spend more non-academic screen time per day (n = 19) resulted in a mean of 3.62 with a standard deviation of 0.72 while students who spend less non-academic screen time per day (n = 83) resulted in a mean of 3.32 with a standard deviation of 0.81. Cohen's *d* was .39. See Table 19.

Table 19. Independent Samples *t*-tests for Amount of Non-academic Screen Time per Day and Constructs.

Construct	Subscale	Screen time	*n*	Mean	Std. Dev.	*t.*	Sig. (2-tailed)	Cohen's *d*
C1.	Barriers	<4	83	1.80	.85	-0.34	.74	.09
		≥4	19	1.88	1.09			
C2.	Behaviors	<4	83	4.96	.88	0.30	.77	.08
		≥4	19	4.89	.62			
C3.	Solutions	<4	83	4.01	1.26	-1.18	.24	.30
		≥4	19	4.38	1.09			
C4.	Perfectionism	<4	83	3.32	.81	-1.52	.13	.39
		≥4	19	3.62	.72			

For the first construct, barriers, community college students who spend more non-academic screen time per day indicated a higher level of agreement than students who spend less non-academic screen time per day. For the second construct, behaviors, students who spend more non-academic screen time per day indicated a lower level of agreement than students who spend less non-academic screen time per day. For the third construct, solutions, students who spend more non-academic screen time per day indicated a higher level of agreement than students who spend less non-academic screen time per day. For the fourth construct, perfectionism, students who spend more non-academic screen time per day indicated a higher level of agreement than students who spend less non-academic screen time per day. There was no statistical significance found for any of the constructs.

CHAPTER V

DISCUSSION

The purpose of this study was to examine factors that influence community

college students' instruction following behaviors in online courses. As indicated in the

literature review, there are many factors that influence students' academic behaviors.

Using Zimmerman and Kitsantas' (2007) three cyclical self-regulatory phases:

forethought, performance, and self-reflection, survey questions were developed to assess

students' perceptions of their instruction following behaviors in relation to the phases and

subprocesses (see Figure 1).

For the first research question, "What is the difference between community

college students' ages and their perceptions of their instruction following behaviors in

online courses?", the demographic, age, was purposefully grouped into two categories:

greater than or equal to 18 and less than 34, and greater than or equal to 34. This

grouping separated the participants into the categories of millennials and non-millennials.

The hypotheses were based on the characteristics of millennials as identified by Farrell

and Hurt (2014), (ability to multi-task and achievement-focused), and as identified by

Howe and Strauss (2000), (confident, achieving, and pressured). I expected to see a

difference in the age categories because the characteristics of millennials differ from

other generations (Fessenden, 2014). The results were predominantly consistent with the

literature.

For the construct of Barriers, it was hypothesized that as age increased, participants would indicate a lower level of agreement that they experienced difficulty following instructions in online courses. The hypothesis was based on findings that as students get older, they become more independent, which increases the likelihood of desirable outcomes in academic achievement in school (Pizzolato & Hicklen, 2011). The hypothesis for this study matched the actual results, however, there was no statistical significance found.

For the construct of Behaviors, it was hypothesized that as age increased, participants would indicate a higher level of agreement that they utilized effective instruction following behaviors. Once again, the hypothesis was based on findings that as students get older, they become more independent, which increases the likelihood of desirable outcomes in academic achievement in school (Pizzolato & Hicklen, 2011). The hypothesis for this study matched the actual results, however, there was no statistical significance found.

For the construct of Solutions, it was hypothesized that as age increased, participants would indicate a higher level of agreement that if they modified their instruction following behaviors in online courses, they would complete assignments more thoroughly. The hypothesis was based on findings that millennial students are confident (Howe & Strauss, 2000) and may perceive their instruction following behaviors are already adequate. The hypothesis for this study did not match the actual results. There was no statistical significance found.

For the construct of Perfectionism, it was hypothesized that as age increased, participants would indicate a lower level of agreement regarding their perceived level of

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perfectionism. The hypothesis was based on findings that millennial students are achievement-focused (Farrell & Hurt, 2014; Howe & Strauss, 2000) and millennial students are pressured (Howe & Strauss, 2000). The combination of the desire to achieve and the pressure to obtain that achievement could foster stronger levels of perfectionism. The hypothesis for this study matched the actual results, however, there was no statistical significance found.

For the second research question, "What is the difference between community college students' grade point averages and their perceptions of their instruction following behaviors in online courses?", the results of the demographic, grade point average, were grouped into two categories: greater than or equal to two, and less than two. This grouping separated the participants into those with a C or higher average and those with less than a C average. The hypotheses were based on literature that indicates that grade point average can be used as a measure of effort (Belfield & Crosta, 2012) and as a measure of academic success (Radunzel & Noble, 2013; York, Gibson, & Rankin, 2015). I expected to see larger differences in the two categories because participants with a C or higher average are likely to experience fewer barriers to following instructions and exhibit better behaviors to following instructions in online courses. The results were somewhat consistent with the literature.

It was disconcerting that of the 102 participants, 99 participants have a C or higher average while only 3 of the participants have lower than a C average. This is an indication that the intended target audience was not the same audience who completed the surveys. It was hoped that participants of all grade point averages would participate in the survey, not just the participants who typically do well academically. In speaking to

some of the online faculty who offered bonus points to students for completing the survey, they indicated that the students who needed to complete the survey were not the same students who did complete the survey.

For the construct of Barriers, it was hypothesized that as grade point average increased, participants would indicate a lower level of agreement that they experienced difficulty following instructions in online courses. The hypothesis was based on findings that grade point average can be used as a measure of effort (Belfield & Crosta, 2012) and as a measure of academic success (Radunzel & Noble, 2013; York, Gibson, & Rankin, 2015). The hypothesis for this study did not match the actual results. This difference could be explained by the disparity in the number of participants in each category. A higher number of participants in the <2.0 grade point average category would likely produce more accurate results. There was no statistical significance found.

For the construct of Behaviors, it was hypothesized that as grade point average increased, participants would indicate a higher level of agreement that they utilized effective instruction following behaviors. Once again, the hypothesis was based on findings that grade point average can be used as a measure of effort (Belfield & Crosta, 2012) and as a measure of academic success (Radunzel & Noble, 2013; York, Gibson, & Rankin, 2015) which leads to engagement in more effective instruction following behaviors in online courses. The hypothesis for this study matched the actual results, however, there was no statistical significance found. The Cohen's d was noteworthy at .98, which indicates that for the independent variable of grade point average, there was an easily detectable difference in responses.

For the construct of Solutions, it was hypothesized that as grade point average increased, participants would indicate a higher level of agreement that if they modified their instruction following behaviors in online courses they would complete assignments more thoroughly. Once again, the hypothesis was based on findings that grade point average can be used as a measure of effort (Belfield & Crosta, 2012) and as a measure of academic success (Radunzel & Noble, 2013; York, Gibson, & Rankin, 2015) and participants already engage in effective instruction following behaviors in online courses. The hypothesis for this study did not match the actual results. This difference could be explained by the interpretation of the questions. If the participants are already engaging in effective instruction following behaviors, then there would be little room for improvement. There was no statistical significance found.

For the construct of Perfectionism, it was hypothesized that as grade point average increased, participants would indicate a higher level of agreement regarding their perceived level of perfectionism. The hypothesis was based on the assumption that grade point averages are predicted by achievement motivation, the degree of goal setting, and performance self-efficacy (Dickinson & Adelson, 2016). The hypothesis for this study matched the actual results, however, there was no statistical significance found.

For the third research question, "What is the difference between community college students' parental involvement and their perceptions of their instruction following behaviors in online courses?", the results of the demographic, parental involvement, were grouped into two categories: parents who are minimally involved (involved parents and uninvolved parents), and parents who are more involved (helicopter parents and lawnmower parents). The hypotheses were based on literature by Baumrind (1991) who

identifies parenting styles and the resultant academic performance. I expected to see a difference in the categories because children of parents who are overly involved display lower academic performance. The results were inconsistent with the literature.

It was interesting that of the 102 participants, zero participants indicated that their perception of their parent's involvement was associated with a "lawnmower" parent and only three indicated that their perception of their parent's involvement was associated with a "helicopter" parent. Participants completing the survey may see themselves as independent and making their own decisions. Participants may be accustomed to their parental style and may not be able to accurately identify the parental style. It was hoped that participants of all parental involvements would participate in the survey, not just the participants whose parents were minimally involved.

For the construct of Barriers, it was hypothesized that as parental involvement increased, participants would indicate a higher level of agreement that they experienced difficulty following instructions in online courses. The hypothesis was based on the findings of Twenge (2006) who indicated that an excess of parental involvement creates a lack of personal responsibility in students. The hypothesis for this study did not match the actual results. This difference could be explained by the disparity in the number of participants in each category. A higher number of participants in the more involved parental involvement category would likely produce more accurate results. There was no statistical significance found. The Cohen's d was noteworthy at .98, which indicates that for the independent variable of parental involvement, there was an easily detectable difference in responses.

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For the construct of Behaviors, it was hypothesized that as parental involvement increased, participants would indicate a lower level of agreement that they utilized effective instruction following behaviors. Once again, the hypothesis was based on the findings of Twenge (2006) who indicated that an excess of parental involvement creates a lack of personal responsibility in students. The hypothesis for this study matched the actual results, however, there was no statistical significance found.

For the construct of Solutions, it was hypothesized that as parental involvement increased, participants would indicate a higher level of agreement that if they modified their instruction following behaviors in online courses they would complete assignments more thoroughly. The hypothesis was based on findings of Baumrind (1991) who indicated that children exposed to an authoritarian parenting style do not perform as well academically as students exposed to an authoritative parenting style. The hypothesis for this study did not match the actual results. This difference could be explained by the disparity in the number of participants in each category and by the interpretation of the questions. If the participants are already engaging in effective instruction following behaviors, then there would be little room for improvement. There was no statistical significance found.

For the construct of Perfectionism, it was hypothesized that as parental involvement increased, participants would indicate a lower level of agreement regarding their perceived level of perfectionism. The hypothesis was based on findings by Howe (2010) who indicated that today's Generation-X parents of millennials are more attached, protective, and interventionist. This over protectiveness would likely cause participants to be less assertive and perfectionist-oriented. The hypothesis for this study did not match

the actual results. Once again, his difference could be explained by the disparity in the number of participants in each category. There was no statistical significance found.

The fourth research question, "What is the difference between community college students' rural versus urban K-12 education and their perceptions of their instruction following behaviors in online courses?", the results of the demographic, where a majority of the K-12 education was completed, showed little difference between results. Of the 102 participants, the results were almost evenly distributed with 50 participants indicating a rural K-12 education and 52 participants indicating an urban K-12 education. The hypotheses for all four constructs were based on findings that rural environments have a tendency toward lower achievement and higher dropout rates than urban environments (Jordan, Kostandini, & Mykerezi, 2012; Roscigno & Crowley, 2001). I expected to see a difference in the categories because of the disadvantages afforded to rural students. The results were consistent with the literature.

For the construct of Barriers, it was hypothesized that participants with a more rural K-12 education would indicate a higher level of agreement that they experienced difficulty following instructions in online courses. The hypothesis was based on findings of Hlinka, Mobelini, and Giltner (2015) who indicated that rural high school students were often doubtful in their ability to transition to college. The hypothesis for this study matched the actual results, however, there was no statistical significance found.

For the construct of Behaviors, it was hypothesized that participants with a more rural K-12 education would indicate a lower level of agreement that they utilized effective instruction following behaviors. The hypothesis was based on findings of Roscigno and Crowley (2001) who indicated that rural high school students exhibit lower

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levels of educational achievement. The hypothesis for this study matched the actual results, however, the difference was not statistically significant.

For the construct of Solutions, it was hypothesized that participants with a more rural K-12 education would indicate a higher level of agreement that if they modified their instruction following behaviors in online courses they would complete assignments more thoroughly. Once again, the hypothesis was based on findings of Roscigno and Crowley (2001) who indicated that rural high school students demonstrate lower achievement than urban high school students. The hypothesis for this study matched the actual results, however, the difference was not statistically significant.

For the construct of Perfectionism, it was hypothesized that participants with a more rural K-12 education would indicate a lower level of agreement regarding their perceived level of perfectionism. The hypothesis was based on findings of Hlinka, Mobelini, and Giltner (2015) who indicated that rural students seem to display a lack of self-confidence. The hypothesis for this study matched the actual results, however, the difference was not statistically significant.

The fifth research question, "What is the difference between community college students' amount of non-academic screen time per day and their perceptions of their instruction following behaviors in online courses?", the results of the demographic, the amount of non-academic screen time per day, were grouped into two categories: participants spending less than four hours of non-academic screen time per day and participants spending greater than or equal to four hours of non-academic screen time per day. Of the 102 participants, 93 participants indicated they spent less than four hours of non-academic screen time per day and 19 participants indicated they spent more than four

hours of non-academic screen time per day. The hypotheses for all four constructs were based on findings by Cummings and Vandewater (2007) who indicated that screen time spent conducting non-academic activities affects school-related responsibilities such as reading and homework. I expected to see a difference in categories because of the amount of time spent away from academic activities. The results were predominantly consistent with the literature.

For the construct of Barriers, it was hypothesized that participants who spend more non-academic screen time per day would indicate a higher level of agreement that they experienced difficulty following instructions in online courses than participants who spend less non-academic screen time per day. The hypothesis was based on findings by Radesky, Silverstein, Zuckerman and Christakis (2014) who indicated that excessive media use may result in problems with school achievement. The hypothesis for this study matched the actual results, however, the difference was not statistically significant.

For the construct of Behaviors, it was hypothesized that participants who spend more non-academic screen time per day would indicate a lower level of agreement that they utilized effective instruction following behaviors than participants who spend less non-academic screen time per day. Once again, the hypothesis was based on findings by Radesky, Silverstein, Zuckerman and Christakis (2014) who indicated that excessive media use may result in problems with school achievement. The hypothesis for this study matched the actual results, however, the difference was not statistically significant.

For the construct of Solutions, it was hypothesized that participants who spend more non-academic screen time per day would indicate a higher level of agreement that if they modified their instruction following behaviors in online courses, they would

complete assignments more thoroughly than participants who spend less non-academic screen time per day. The hypothesis was based on findings by Radesky, Silverstein, Zuckerman and Christakis (2014) who indicated that excessive media use may result in self-regulation problems. The hypothesis for this study matched the actual results, however, the difference was not statistically significant.

For the construct of Perfectionism, it was hypothesized that participants who spend more non-academic screen time per day would indicate a lower level of agreement regarding their perceived level of perfectionism than participants who spend less non-academic screen time per day. The hypothesis was based on findings by Radesky, Silverstein, Zuckerman and Christakis (2014) who indicated that excessive media use may result in problems with language problems and cognition. The hypothesis for this study did not match the actual results. The difference could be attributed to the self-efficacy of the participants who completed the survey. A higher self-efficacy would likely lead to a higher level of agreement regarding the participants' perceived level of perfectionism. They hypotheses for this study did not match the actual results. The difference was not statistically significant.

<div align="center">**Conclusion**</div>

This study of examining factors that influence community college students' perceptions of their instruction following behaviors in online courses contributes to the understanding of students' perceptions of the barriers they face in an online course, their behaviors regarding reading the instructions, solutions that could improve their performance in the course, and their level of perfectionism which provides insight into their self-efficacy.

When examining the constructs one at a time, it is easier to see any patterns that may have emerged. For the first construct, Barriers, throughout the demographic categories, virtually all participants indicated a low level of agreement that they have difficulty following instructions in online courses. See Table 20. The most interesting statistic is the mean for the participants with a grade point average less than 2, who indicated the lowest level of agreement that they have difficulty following instructions in online courses. This statistic appears counterintuitive.

Table 20. Mean and Standard Deviation for Barriers.

		n	*M*	*SD*
Age	<34	81	1.89	.95
	≥34	21	1.55	.58
Grade point average	≥2	99	1.84	.88
	<2	3	1.08	1.13
Parental involvement	less	99	1.82	.88
	more	3	1.75	1.56
K-12 education	Rural	50	1.93	1.01
	Urban	52	1.71	.75
Non-academic screen time	<4	83	1.80	.85
	≥4	19	1.88	1.09

For the second construct, Behaviors, throughout the demographic categories, virtually all participants indicated a high level of agreement that they demonstrate effective and productive behaviors when following instructions in online courses. See Table 21. The least surprising statistics are for participants whose grade point average is less than two and for participants who indicated more parental involvement, with a mean of 4.17 for both. It can be assumed that a lower grade point average could be influenced by less effective and less productive behaviors when reading instructions in online courses. It can also be assumed that increased parental involvement influences a student's independence and attention to detail.

Table 21. Mean and Standard Deviation for Behaviors.

		n	*M*	*SD*
Age	<34	81	4.87	.86
	≥34	21	5.25	.62
GPA	≥2	99	4.96	.77
	<2	3	4.17	2.02
Parental involvement	less	99	4.97	.82
	more	3	4.17	.63
K-12 education	Rural	50	4.86	.88
	Urban	52	5.02	.77
Non-academic screen time	<4	83	4.96	.88
	≥4	19	4.89	.62

For the third construct, Solutions, throughout the demographic categories, virtually all participants indicated a relatively high level of agreement that they would complete their assignment more thoroughly if demonstrating effective and productive behaviors. One of the most interesting statistics is for participants who are greater than or equal to 34 years old (non-millennials). The lower mean of 3.83 could indicate that the participants are already demonstrating effective and productive behaviors, which would leave less room for improvement. The other interesting statistic is for participants who indicated more parental involvement. The lower mean of 3.67 could indicate an inflated sense of self-efficacy, leading participants to perceive there is little room for improvement. See Table 22.

Table 22. Mean and Standard Deviation for Solutions.

		n	*M*	*SD*
Age	<34	81	4.15	1.16
	≥34	21	3.83	1.48
GPA	≥2	99	4.05	1.22
	<2	3	5.00	1.52
Parental involvement	less	99	4.09	1.23
	more	3	3.67	1.53

Table 22 cont.

		n	M	SD
K-12 education	Rural	50	4.18	1.25
	Urban	52	3.99	1.22
Non-academic screen time	<4	83	4.01	1.26
	≥4	19	4.38	1.09

For the fourth construct, Perfectionism, throughout the demographic categories,

virtually all participants indicated a moderate level of agreement regarding their

perceptions of their level of perfectionism. See Table 23. The most interesting statistic is

for participants whose grade point average is less than two. The mean of 2.67 indicates

their lower level of perceived perfectionism than the other demographic categories.

Table 23. Mean and Standard Deviation for Perfectionism.

		n	M	SD
Age	<34	81	3.41	.81
	≥34	21	3.22	.74
GPA	≥2	99	3.40	.79
	<2	3	2.67	.76
Parental involvement	less	99	3.36	.80
	more	3	3.72	.92
K-12 education	Rural	50	3.37	.75
	Urban	52	3.38	.85
Non-academic screen time	<4	83	3.32	.81
	≥4	19	3.62	.72

I had anticipated greater differences in the means for each of the constructs and

between each of the demographics.

Implications for Practice

By examining factors that influence community college students' perceptions of

their instruction following behaviors, it was hoped that students' strengths and

weaknesses could be identified. By identifying these strengths and weaknesses, faculty at

community colleges could watch for signs of students experiencing difficulty following instructions in online courses and exhibiting poor instruction following behaviors in online classes and take remediation. This remediation could include mandatory enrollment in a first-year experience course. A course such as FYE 101- Seminar on Success orients students to campus culture and environment, equips students with the necessary tools and resources to succeed, and encourages thoughtful decision making and personal responsibility. Topics include study skills, learning styles, and campus resources.

Many community college online courses are designed for students to work independently. Many of today's employers are looking for graduates who can work well collaboratively. This may cause a disparity between how an online student learns and how that same student performs in a workplace setting. This study focused primarily on the role of the student as a learner. Another factor that needs to be considered is the instructional design of the course. Instruction could be administered synchronously versus asynchronously. The instructor would need to be cognizant of the need for support for students and address the issue appropriately.

Based on the data collected in the study, the independent variable demographic factors do not seem to have any impact on instruction following behaviors and, therefore, there is no evidence that they need special treatment.

<center>**Limitations**</center>

There are several limitations to this study. First, the data collected are based on students' perceptions of their instruction following behaviors in online courses. Self-reported data can be inflated or deflated to meet perceived expectations of desirable

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outcomes. Second, with a potential pool of over 600 participants and only 102 actual responses, there is a gap in the data that were collected. Ideally there should have been more students in the category of grade point average less than two and more students in the category of more parental involvement. Students in these two categories may have decided against taking the survey. Third, the possibility of grade inflation is a likelihood.

Recommendations for Future Research

Further similar research involving online students at other community colleges would be beneficial. Ideally the target audience should be students enrolled in Academic Skills Courses which are required for students whose ACT score for English is less than 18 and ACT score for Math is less than 21, or COMPASS score for English is less than 77 and COMPASS score for Math (Algebra) is less than 49. Those students are the ones most likely to experience difficulty following instructions in online courses. By focusing on students who are most susceptible to experiencing difficulty following instructions in online courses, data collected would likely indicate statistical significance.

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APPENDICES

Appendix A

Student Survey Instrument

Student Survey			
Gender ___ Male ___ Female	**Year in school** ___ Freshman ___ Sophomore	**Age** ___ ≥18 and <34 ___ ≥34	**Grade point average** ___ ≥3.0 and ≤ 4.0 ___ ≥2 and <3.0 ___ <2.0

My education is funded primarily by ___ Me ___ Parents ___ Financial Aid ___ Other	**My parents are best described as** ___ allow me to act independently, make mistakes, and learn from them ___ provide guidance to me, helping me avoid mistakes ___ pay extremely close attention to my experiences and problems ___ step in and literally smooth out any obstacles in my path

I am currently living ___ dorm ___ apartment ___ at home ___ own home	**My employment status is** ___ 0 hours per week ___ >0 and <16 hours per week ___ ≥16 and <32 hours per week ___ ≥32 hours per week	**Number of college credits enrolled** ___ <12 ___ ≥12 and <15 ___ ≥15

Marital status ___ single ___ married ___ divorced ___ widowed	**Parent** ___ yes ___ no	**A majority of my K-12 education was completed in a town with the following population** ___ <10,000 ___ ≥10,000	**Non-academic screen time per day** ___ <2 ___ ≥2 and <4 ___ ≥4 and <6 ___ ≥6

		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1.	I have difficulty following instructions in online courses because of my lack of reading comprehension skills.	1	2	3	4	5	6
2.	I have difficulty following instructions in online courses because of my lack of self-confidence.	1	2	3	4	5	6
3.	I have difficulty following instructions in online courses because of my disinterest in the course material.	1	2	3	4	5	6
4.	I have difficulty following instructions in online courses because of the social distance caused by the lack of a sense of community.	1	2	3	4	5	6
5	When reading instructions in online courses, I read each word carefully to be sure I understand what is being asked of me.	1	2	3	4	5	6
6	When reading instructions in online courses, I follow the instructions exactly to correctly complete the assignment.	1	2	3	4	5	6
7.	When reading instructions in online courses, I allow myself ample time to correctly complete the assignment.	1	2	3	4	5	6

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8.	When reading instructions in online courses, I purposefully plan my schedule to allow adequate time to thoroughly complete my online course assignments.	1	2	3	4	5	6
9.	If I read the instructions more carefully, I would probably complete my assignments more thoroughly.	1	2	3	4	5	6
10.	If I asked the instructor for clarification on instructions I find unclear, I would probably complete my assignments more thoroughly.	1	2	3	4	5	6
11	If I started my assignment earlier in the week, I would probably complete my assignments more thoroughly.	1	2	3	4	5	6
12.	When I experience technical difficulties, if I asked the instructor for assistance right away, I would probably complete my assignments more thoroughly.	1	2	3	4	5	6
13.	I set higher goals than most people.	1	2	3	4	5	6
14.	I hate being less than the best at things.	1	2	3	4	5	6
15.	I tend to get behind on my work because I repeat things over and over.	1	2	3	4	5	6
16.	If I do not set the highest standards for myself, I am likely to end up a second-rate person.	1	2	3	4	5	6
17.	People will probably think less of me if I make a mistake.	1	2	3	4	5	6
18.	It takes me a long time to do something "right".	1	2	3	4	5	6

Appendix B

Email Permission to use FMPS Questions

From: Randy Frost [mailto:rfrost@smith.edu]
Sent: Wednesday, July 13, 2016 1:59 PM
To: Volk, Vickie <vickie.volk@bismarckstate.edu>
Subject: Re: Frost Multidimensional Perfectionism Scale - Permission to Use Questions

Dear Vickie,

No worries. You can have my permission to use the questions.

Good luck with your defense.

best,

Randy

Randy O. Frost
Harold and Elsa Siipola Israel Professor of Psychology
Smith College
Northampton, MA 01063
413 585-3911

On Wed, Jul 13, 2016 at 2:21 PM, Volk, Vickie <vickie.volk@bismarckstate.edu> wrote:

Dear Dr. Frost:

I apologize for disturbing you during the summer.

I am a doctoral student in the Teaching & Learning department at the University of North Dakota in Grand Forks, North Dakota. I am working on my dissertation titled, "Factors That Influence Community College Student Perceptions of their Instruction Following Behaviors in Online Courses."

I would like to ask your permission to use 6 of the questions on the Frost Multidimensional Perfectionism Scale in a survey administered to community college students. The six questions I would like to use are:

From Personal Standards:
I set higher goals than most people.
I hate being less than the best at things.

From Concern Over Mistakes:

I tend to get behind on my work because I repeat things over and over.

If I do not set the highest standards for myself, I am likely to end up a second-rate person

From Doubts About Actions:

People will probably think less of me if I make a mistake.

It takes me a long time to do something "right".

It would be extremely helpful to my research if you would grant me permission to use those questions in my survey.

Thank you very much!

Respectfully,

Vickie

Vickie Volk
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