Exploring Precursor Variables Related to Help-Seeking in Online Learning Environments

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Abstract

Students face numerous challenges in the online courses. The isolation that occurs in this environment impacts students' ability to seek help. This study sought to determine the relationship between precursor variables and help-seeking in an online dual enrollment course. Relationships between the precursor variables of self-efficacy for learning and performance, goal setting, intrinsic motivation, and task value and help-seeking were statistically significant. Faculty are encouraged to be proactive with students to develop help-seeking skills. Researchers are encouraged to analyze the relationship between student interaction in online and help-seeking.

Introduction

In 2015, 2.8 million post-secondary students were enrolled exclusively in online courses (U.S. Department of Education, 2016). Whether students are enrolled in synchronous, asynchronous, or hybrid courses they face myriad challenges that are unique to the online environment (McInnerney & Roberts, 2004) and to be successful, must be able to regulate their own learning (Swafford, 2017). However, due to the nature of online courses, a communicative disconnect may exist between the student and teacher as well as among other students (Slagter van Tryon & Bishop, 2009). This challenge "can interfere with a behavior that is critical to academic success, help-seeking" (Dunn et al., 2014, p. 75). As Edgar et al. (2016) suggested in the *American Association for Agricultural Education National Research Agenda: 2016-2020*, students must be engaged in meaningful learning in all environments and therefore, an investigation into this phenomenon is warranted.

Researcher proposed models of help-seeking include multiple stages and decision points that determine how learners address learning and learning difficulties (Gross & McMullen, 1983; Karabenick & Newman, 2009; Nelson-Le Gall, 1981). The models include common elements including, 1) determine whether there is a problem; 2) determine whether help is wanted/needed; 3) decide whether to seek help; 4) decide on the type of help (goal); 5) decide whom to ask; 6) solicit help; 7) obtain help; and 8) process the help received. There is no presumption these events occur in order or that learners are mindful of the steps involved (Karabenick & Dembo, 2011). Karabenick and Dembo (2011) posited the help-seeking process involves a combination of automatic and controlled cognitive processing.

As academic help-seeking is a social act, providing opportunities within the online environment may promote help-seeking. Engaging students in trainable learning behaviors, like self-regulation may influence students' tendency to seek help (Dunn et al., 2014). Enrollment in online dual credit programs is an opportunity to create environments where students can develop self-regulated skills, which includes help-seeking, needed for future academic success (Chumbley et al., 2015).

Theoretical Framework
Self-regulated learning is an active process where students set learning goals and then work toward their goals by monitoring, regulating, and controlling their behaviors which are guided and constrained by their goals and the educational environment (Pintrich, 2000). The theoretical framework guiding this study was Zimmerman's (1998) model of the development of self-regulated learning skills. This model includes three phases including, forethought, performance control, and self-reflection. The forethought phase includes the processes that precede learning and include analysis of the learning task and self-motivation beliefs. Students who are self-motivated prior to learning will be efficacious in their beliefs and have clearly defined individual learning expectations (Zimmerman, 1998). The performance control phase occurs during the learning process. This phase includes the processes of controlling one's learning and self-observation, including self-experimentation. Self-reflection is the final phase. According to Zimmerman and Schunk (2001), students perform self-evaluation based upon social comparisons and adjust their performance for the next task. The forethought phase the model served as the foundation for the current study.

Purpose and Objectives
The purpose of this study was to explore the relationships between selected precursor variables and self-regulated learning behaviors, specifically help-seeking. The specific objectives of the study were to:

> 1. Describe the help-seeking behaviors among students enrolled in an online agriculture dual enrollment course.

> 2. Describe the help-seeking precursor variables of self-efficacy for learning and performance, goal setting, intrinsic motivation, and task value of students enrolled in an online agriculture dual enrollment course.

> 3. Determine the relationships between the precursor variables and help-seeking behaviors of students enrolled in an online agriculture dual enrollment course.

Methods
This study was part of a larger descriptive study and included a census of all secondary students enrolled in an online/hybrid introductory horticulture dual enrollment course (N=153). Students completed all assessments (tests, quizzes, discussion posts, final projects) online and engaged in laboratory activities under the guidance of their secondary agriculture instructor. Data were collected, following procedures outlined by Dillman et al. (2008) via an online survey platform embedded in a link within the course learning management system. The final response rate was

85%. The study was comprised of slightly more females (57%) than males (43%). Academically, the course included Seniors (44%), Juniors (32%), and Sophomores (24%). Students identified themselves as Native Americans (41%), Caucasian (33%), and Hispanic (26%).

Help-seeking and goal setting were measured using sub-scales of the Online Self-Regulated Learning Questionnaire (OSLQ) (Lan et al., 2004). The help-seeking sub-scale included four items and the goal setting sub-scale included five items in a 5-point Likert-type format with response choices ranging from *strongly disagree* (1) to *strongly agree* (5). Chumbley et al. (2015) reported a .90 Cronbach's alpha reliability coefficient for this sub-scale. Self-efficacy for learning and performance, intrinsic motivation, and task value were measured using sub-scales of the Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich et al., 1991). The self-efficacy sub-scale (Cronbach's α=.93) included eight items, the intrinsic motivation sub-scale (Cronbach's α=.74) included four items, and the task value sub-scale (Cronbach's α=.90) included six items. These sub-scales are in a Likert-type format with a 7-point response format with choices ranging from *not at all true of me* (1) to *very true of me* (7).

Findings

Objective one was to describe the help-seeking behaviors among students enrolled in an online agriculture dual enrollment course. Students had an overall help-seeking mean score of 3.36 (*SD*=.57). Table 1 illustrates students' level of help-seeking in the online agriculture course.

Table 1
Help-Seeking of Online Dual Enrollment Students

Item	Mean	SD
If needed, I try to meet my classmates face-to-face.	3.54	0.87
I find someone who is knowledgeable in course content so that I can consult with him or her when I need help.	3.50	0.90
I share my problems with my classmates online so we know what we are struggling with and how to solve problems.	3.33	0.90
I am persistent in getting help from the instructor through email.	3.15	0.87
Scale Total:	3.38	0.56

Note. 5-point scale. 1 = *Strongly Agree*, 2 = *Disagree*, 3 = *Neither Agree nor Disagree*, 4 = *Agree*, 5 = *Strongly Agree*.

Objective two sought to describe the levels of task value, self-efficacy for learning and performance, intrinsic goal orientation, and goal setting of students enrolled in an online agriculture dual enrollment course. It should be noted task value, self-efficacy for learning and performance, and intrinsic goal orientation were measured using a 7-point scale while goal setting was measured using a 5-point scale. Table 2 illustrates students' mean scores for the precursor variables related to help seeking.

Table 2
Mean Scores of Precursor Variables Related to Help-Seeking of Online Students

Precursor Variable	*M*	*SD*
Task Value	5.03	1.07
Self-Efficacy for Learning and Performance	4.95	1.10
Intrinsic Goal Orientation	4.87	1.03
Goal Setting	3.65	0.66

Note. Goal Setting, 5-point scale. 1 = *Strongly Agree*, 2 = *Disagree*, 3 = *Neither Agree nor Disagree*, 4 = *Agree*, 5 = *Strongly Agree*. Intrinsic Goal Orientation, Task Value, and Self-Efficacy for Learning and Performance, 7-point scales. 1 = *not at all true of me*, 7 = *very true of me*.

Objective three sought to determine the relationships between help-seeking and the precursor variables task value, self-efficacy for learning and performance, intrinsic goal orientation, and goal setting. Results of a Pearson product-moment correlation yielded substantial (Davis, 1971) associations between help-seeking and precursor variables. These data can be found in Table 3.

Table 3
Correlations among Precursor Variables and Help-Seeking of Online Students

Variable	Self-Efficacy	Intrinsic Motivation	Goal Setting	Task Value
Help-Seeking	0.68	0.59	0.54	0.51

Note. All correlations were significant at the 0.01 level.

Conclusions
Objective one sought to describe the help-seeking behaviors among students enrolled in an online agriculture dual enrollment course. Students in this study were more likely to meet classmates face-to-face or consult with knowledgeable individuals when help was needed. The students met with classmates online to share struggles and develop strategies to solve problems. However, students were least likely seek help from the instructor through email. Cunningham and Billingsley (2003) indicated as students gain experience in the online environment they develop the strategies to acquire the knowledge needed to be successful. As students in this course were secondary students, they may be more likely to seek help from trusted acquaintances rather than the university faculty member with whom they may have never met.

The focus of objective two was to describe the precursor variables related to help-seeking. As help-seeking is a strategy of self-regulated learning (Shunk & Zimmerman, 2008) students must be motivated to learn to develop and incorporate the strategies to aid in their learning. The findings suggest the students in this study were still in the developmental stages of incorporating the strategies to be successful in the online environment. As students gain experience in the online environment, their help-seeking skills will develop and their ability to navigate the challenges inherent to online learning will improve (Shunk & Zimmerman).

Objective three sought to determine the relationships between help-seeking and the selected precursor variables. All precursor variables had substantial relationships with help-seeking. Shunk and Zimmerman (2008) indicated these variables serve as a foundation for developing help-seeking skills. Help-seeking aids students in solving problems, maintain task engagement and interest, and learn (Shunk & Zimmerman, 2008).

Implications
In addition to aiding individual students, help-seeking has implications with the classroom environment. Help-seeking has positive effects on teachers' sense of engagement as it indicates students are interested in their teaching (Shunk & Zimmerman, 2008). As teachers become more engaged with their students, their abilities to assess student learning become more acute and are able to modify teaching plans and methodologies to improve existing teaching strategies. Furthermore, help-seeking behaviors can contribute to a classroom of inquisitiveness, collaboration, and intellectual discourse (Shunk & Zimmerman). Due to the inherent isolationism which can exist in the online environment, promoting help-seeking behaviors can mitigate this issue and encourage students to engage with classmates to discuss and collaborate, which will lead to more knowledge in-depth content acquisition and application.

Recommendations
It is recommended that faculty who teach online courses be proactive with students to develop help-seeking skills. Providing students a guide to follow within the course will serve as a foundation for developing the skills needed for success in online courses. As help-seeking is a component of self-regulated learning, including guides for students to follow to improve their self-efficacy in the online environment will increase student engagement and performance (Pintrich & DeGroot, 1990). Additionally, it is recommended that faculty encourage students to provide feedback on course structure and implementation. Feedback will increase student-teacher interaction, which faculty can use to make continuous improvements to online courses.

Goal setting has been linked to self-evaluation in online learning (Chumbley et al., 2015). It is further recommended that faculty include opportunities for students to set course goals. Establishing goals provides students a context to guide future behaviors. Using their goals as a guide, students will be able to analyze their learning which will promote engagement and collaboration with classmates and faculty to address self-identified learning needs and seek help with complex problems.

Faculty and course developers are encouraged to incorporate valuable learning tasks. Problem-based learning strategies have been shown to aid in the development of self-regulated learning skills (Iran-Nejad & Chissom, 1992). Therefore, it is recommended that this teaching method be included in online courses to provide a context where students are required to create their own knowledge, leading to further development of self-regulated learning strategies and thus, improved help-seeking skills.

Researchers are encouraged to analyze the relationship between online course discussion boards and help-seeking. Discussion boards provide an embedded platform for students to engage with peers and faculty by posing questions and comments. As this relationship is assessed, faculty can

use resulting data to create more meaningful discussion platforms to engage students and ultimately promote proactive strategies for students to seek help.

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