WEAVING SCHOOL AND LIFE INVOLVEMENTS: EXPLORING SELF-REGULATORY PROCESS OF ADULT STUDENTS IN ONLINE DISTANCE EDUCATION COURSES

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ABSTRACT

This study presents a new understanding of how adult students engage in the self-regulatory process. Based on the social cognitive model of self-regulated learning (SRL), a qualitative study was conducted to inductively explore the adult students' self-regulatory process in online distance education (DE) courses. In addition to being registered as online DE students, all participants were purposively recruited to meet the age requirements of being 25-years and older and having a self-supporting job and/or key family commitments. The findings broadly suggest the adaptive nature of the adult students' self-regulatory process; influenced by their online distance course settings and requirements as well as their broader life involvements and responsibilities as adults.

Keywords: distance learning, online learning, adult learners, adult students, nontraditional students, self-regulated learning

INTRODUCTION

Online distance learning has significant appeal among adult students who are pursuing their college degrees. Adult students are typically differentiated based on their age (typically 25 years and older), off-campus residency, and nontraditional pathways into college as most did not enroll into postsecondary education immediately after high school (Bean & Metzner, 1995; Chickering, 1974; Kasworm, 2018). For this group of students, their specific learning needs are often characterized by their life involvements as adults, which typically includes responsibilities such as working full time, being married and having a family, and/or supporting dependents (Kasworm, 2003; Kasworm, Polson, & Fishback, 2002). Because of their complex live involvements, taking online courses in a distance learning format provides these adult students with more control over their schedule and the pace of their learning. O'Lawrence (2006) noted that the online and distance education format provided a learning structure that allows the adult students to be more in control over the pace and process of their learning because they can take classes at flexible times and have the convenience of studying from home and/or at work.

At the same time, the impact of multiple demands and inter-role conflicts experienced by adult students in their academic studies have been well-documented in the literature (see Fairchild, 2003; Kasworm & Blowers, 1994). Because of their current life involvements, adult students typically must consider their existing adult commitments in relation to their studies. This often makes the adults' self-regulatory process much more dynamic as their study strategies were not only concentrated on their academic studies but tied to their adult lives as well (Benda, Bruckman, & Guzdial, 2012; Jézégou, 2013).

Although numerous reports have shown high

online learning and distance education enrollment from students with nontraditional profiles (Noel-Levitz, 2013; Stavredes, 2011), research exploring adult learners' engagement in self-regulated learning, particularly in the online distance setting, has been quite limited (Ke & Xie, 2009; Kee, 2010; Yoo & Huang, 2013). More importantly, an emerging area of research in the distance learning setting has suggested some important linkages between self-regulated learning (SRL) and successful learning outcomes among online distance students (Artino, 2007; Azevedo, Guthrie, and Seibert, 2004; Barnard, Paton, & Lan, 2008; Puzziferro, 2008; Yukselturk & Bulut, 2007). Because learning in the online distance environment primarily shifts the autonomy and responsibility of learning onto the individual learners, SRL has been identified as a key framework that emphasizes skills and learning processes that are essential for supporting successful online learning experiences (Dabbagh & Kitsantas, 2004).

As reported by Tsai, Shen, and Fan (2013), between 2003 and 2012, there was a significant increase in the number of SRL studies conducted in the online distance learning setting. They also reported that the sample groups for these studies were mostly undergraduates in higher education (Tsai, Shen, & Fan, 2013), whereas only a small percentage of the research was focused on adult learners in informal learning settings. Given the prevalence of adult students taking online distance courses in higher education, this current study was conducted to explore the self-regulatory process of adult students who were learning in online distance education setting.

LITERATURE REVIEW

Self-regulation is a broad research domain in the field of educational psychology that represents various theoretical viewpoints and empirical research on how people exert control over an extensive range of influences and behaviors in a wide range of phenomena (Boekaerts, Pintrich, & Zeidner, 2000). In situating SRL within the broader self-regulation literature, Pintrich (2000) refers to SRL as "the application of general models of regulation and self-regulation [related] to issues of learning" (p. 451). Zimmerman (1998) also refers to SRL as academic self-regulation and examined how students become successful learners by transforming their mental abilities into academic skills in order to attain their academic goals.

SRL can also be understood from different theoretical perspectives (see Zimmerman & Schunk, 2001). The theoretical focus for this study was based on the social cognitive view of SRL as explicated by Zimmerman (1989; 2000; 2002). This particular SRL model was based on Bandura's (1986) social cognitive theory and his triadic view of reciprocal determinism where "behavior, cognitive and other personal factors, and environmental influences all operate interactively as determinants of each other" (p. 23). The central understanding of this model views self-regulated learning as "not determined merely by personal (covert) processes; rather these processes are assumed to also be influenced by environmental and behavioral events in reciprocal fashion" (Zimmerman, 1989, p. 330).

The inclusion of contexts and environmental influences in this SRL model was particularly important for research studies on students' engagement and behaviors in the online distance environment. Previous research has demonstrated the applicability and adaptability of the social cognitive model of SRL as a framework for studying online and web-based learning processes (e.g., Hodges, 2005; Miltiadou & Savenye, 2003; Wang & Lin, 2007; Whipp & Chiarelli, 2004). As alluded to by Artino (2007) in his literature review on SRL research in online distance education, "a social cognitive perspective on self-regulation, which addresses the interrelationship between the learner, the learner's behaviors, and the social environment, appears to lend itself well to an understanding of how successful learners function in online situations" (¶ 11).

Furthermore, there is research that suggests a link between adult students' personal influences and their SRL strategies when learning online (Dibiase & Kidwai, 2010; Hill & Hannafin, 1997). In one related study, Hill & Hannafin (1997) examined how self-efficacy, metacognitive knowledge, subject knowledge, and system knowledge affected the strategies used by adult learners during their self-learning process using the World Wide Web. They found that different levels of self-reported knowledge in metacognition, the subject, and the system (the World Wide Web) differently impacted the strategies used by these adults and thus determined the successfulness of their self-

learning outcomes. Meanwhile, a comparative study by Dibiase and Kidwai (2010) looked at two different sections of an online course, one designed for undergraduate students (younger adults with a median age of 21) and the other for certificate-seeking professionals (older adults with a median age of 34). Except for the schedule of each of these two sections (15-week for the undergraduates versus 10-week for the working professionals), both sections had identical content and course constructs. The findings reported noticeable differences in the attitudes of the younger and older adult students. Older adult students devoted more time and effort in their learning process and were significantly more satisfied with their online class experiences as compared to their younger counterparts. It also mentioned that both groups enrolled in the course for different reasons (fulfilling degree requirement versus career advancement purposes), indicating that different academic motivations existed for the adult students as compared to the younger undergraduate students. However, the research in this area is very limited, especially for studies involving adult students from an SRL perspective, despite reports of increasing numbers of SRL studies in distance learning environments in the literature (Tsai, Shen, & Fan, 2013).

THEORETICAL FRAMEWORK

The social cognitive model of SRL (Zimmerman, 1989; 2000; 2002) was used as the theoretical framework for this study. To explain the SRL processes in his model, Zimmerman (2000; 2002) described a cyclical process involving three phases: forethought, performance/volitional control, and self-reflection. Zimmerman primarily modeled his cyclical phases of self-regulation based on Bandura's (1986; 1991) conceptualization of self-regulatory mechanism. For a visual representation of Zimmerman's three phases of cyclical model, please refer to Figure 1.

The forethought phase, involving sub-elements of task analysis and motivational beliefs, sets the stage for learning and takes place before the actual learning begins. Task analysis involves "decomposing a learning task and its context into constituent elements, and constructing a personal strategy from prior knowledge of these elements" (Zimmerman & Moylan, 2009, p. 31). The forethought process also assumes the importance of

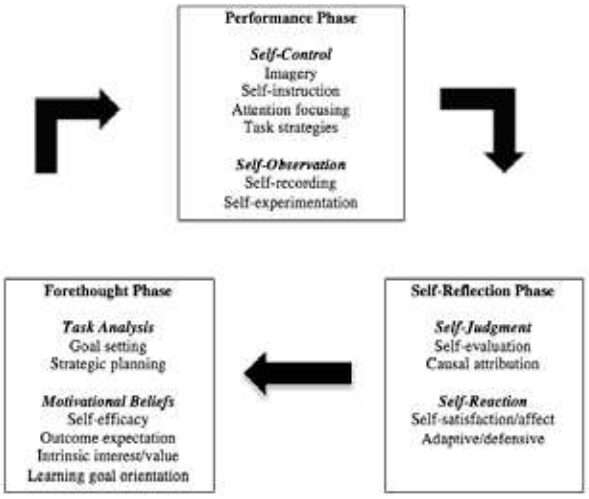

Figure 1. Phases and subprocess of self-regulation. Reprinted from Zimmerman (2002), p. 67. Adapted with permission.

motivational beliefs in enacting SRL. As noted by Zimmerman (2000), "self-regulatory skills are of little value if a person cannot motivate themselves to use them" (p. 17).

The next stage in Zimmerman's cyclical model is the performance (volitional) control phase. This phase involves the learner's behavioral efforts through self-control and self-observation that occur during learning. Self-control refers to the process of sustaining the concentration and interest in engaging and completing a learning task. Self-control strategies include forming mental pictures of the task being learned (imagery), creating self-instruction to learn, improving attention focusing, and deconstructing learning tasks into key elements or foci (task strategies). Meanwhile, self-observation relates to an act of monitoring one's own learning performance using various self-experimentation and self-recording strategies.

The self-reflection phase follows after the learning is done when learners evaluate their efforts by using self-judgment and self-reaction subprocesses. The learners will evaluate their performances using certain criteria or goals and make causal attributions of their efforts based on their accomplishments. Causal attributions will lead to their self-reaction to the overall outcomes of their learning process.

Because this is an exploratory study conducted using a qualitative approach, this study broadly explores the elements as described in the cyclical model to examine the self-regulatory processes of

adult students and the key actions they used when learning in online distance education courses. The following section explains the methodology used to conduct this exploratory study.

METHODOLOGY

Participants and Sampling

This study is an exploratory investigation that embodied the characteristics of a generic qualitative research approach (Caelli, Ray, & Mill, 2003). Participant selection in this study was guided by purposeful sampling (Patton, 2002). Two key strategies were used to develop the sampling criteria: criterion sampling based on the logical rationale of the study and theory-based sampling to further refine the participant selection based on important theoretical constructs as identified in the key literature (Patton, 2002). The criteria included were participants being 25 years or older, a registered undergraduate student that had completed at least 30 credit hours or more (Sophomore classification or above), and having previously completed at least two online distance education courses to ensure that all participants had adequate online DE learning experiences that were purposive to the study. All participants in this study were also completing their semester completely online (by taking all their courses in DE format) when the data collection took place. This study also outlined additional criteria using theory-based sampling; based on adult student's definition as conceptually defined by Kasworm (2003; 2018). This definition referred to adult students not only by the status of their age (25 or older), but also students who performed at least one other adult role or responsibility or satisfied at least one aspect of being in the status of maturity and development complexity as an adult. The status of responsibility as adults was identified when the student was also performing adult roles involving work and/or family. In this sense, it was assumed that the student would confer a perspective reflecting maturity and development as an adult based on the student's age, accumulated commitments, and/or their role responsibilities related to their jobs and/or families, in addition to their role as a college student.

Eleven adult undergraduate students (n = 11) participated in this study, which included nine female and two male students whose ages ranged from 26 to 60 years old. The average age of the participants was 38 and the median age was 36. The students were from both the sciences and the humanities and majored in engineering, environmental science, social work, leadership, women studies, general education studies, and political science. All participants were from the same university.

Given the exploratory nature and sample specificity that was aimed for in this study, the sample adequacy was guided based on data saturation (Charmaz, 2003) and sufficient information power as explained by Malterud, Siersma, and Guassora (2015). According to Malterud et al. (2015), sample adequacy based on information power is determined by items such as study aim, sample specificity, use of established theory, quality of dialogue, and analysis strategy. As such, for exploratory analysis, "the ambition is not to cover the whole range of phenomena, but to present selected patterns relevant for the study aim" (p. 4). In addition, because this study was interested in exploring the participants' broader life involvement as adult students and its impact on their self-regulatory process when learning in online distance courses, the participants' employment and family-related information were also examined as part of the study profiles. Out of the eleven participants, five students were employed full time; one had a part-time teaching job, two held both a full-time and an additional part-time job, while three others were stay-at-home parents. All but one student had children whose ages ranged from one to 20 years old. This study included adult students from different academic programs, genders, ages, and family backgrounds. Participants also differed in terms of the life experiences that they brought with them into the program, mostly in conjunction with their current or prior work experiences, previous collegial experiences, and educational pathways into the program. Their adult roles involving work and family also varied from one individual to another. Some students juggled multiple roles and held more adult responsibilities in their current lives.

Data Collection and Analysis

Data were primarily collected through in-depth interviews using critical incidents technique (Hughes, 2007) and think-aloud protocol (Patton, 2002). The interviews ranged from 56 to 108 minutes, and a total of 16.7 hours contact hours

of interviews were conducted in this study. The secondary data came from course syllabi, descriptions of weekly assignments and readings, descriptions of major individual or collaborative assignments/projects, assignments or scoring rubrics, and additional documents as voluntarily provided by the participants. The researcher also recorded two types of field notes: descriptive and reflective field notes (Bogdan & Biklen, 2007). These field notes served as both data triangulation and audit trail during the research process to ensure that the study met the quality, trustworthiness, and rigor of good research practice (Marshall & Rossman, 2011).

Inductive analysis was conducted to identify recurring patterns and develop categories and themes across the dataset. The analysis was guided by a combination of critical incident (Flanagan, 1954; Hughes 2007) and constant comparative methods (Birks & Mills, 2011; Merriam, 2009). A qualitative software analysis, MAXQDA, was used to assist the data analysis process, particularly from the aspects of data management and handling. The data analysis took place in four key stages. The first stage focused on the familiarization of all the various data collected in this research. All three data sources were broadly reviewed in their entirety in order to organize, integrate, and streamline a more detailed analysis process. The second stage involved categories formation. The study's research questions and theoretical framework served as the broad frame of reference for guiding the development of the initial categories while allowing other categories to emerge inductively based on the open codes that were derived earlier. As more data were brought in, the third stage encompassed an iterative process that focused on modifying, combining, and reducing the number of codes and categories into more refined categories and subcategories until data saturation was met. Data saturation was determined when new data collected did not contribute to any new insights (redundancy of data) but instead showed recurring patterns that fit into the existing categories developed (Bowen, 2008; Charmaz, 2003). Once the data collection process was phased out, the final stage of analysis focused on crystalizing the themes that tied all the categories and subcategories together. It was during this final phase that the key findings and conclusions were identified, which included the consequential process of interpreting and discussing the data into meaningful findings.

Researcher's Positionality

Patton (2002) suggested that the statement of a researcher's positionality should principally provide "personal and professional information (about the researcher) that may have affected data collection, analysis, and interpretation—either negatively or positively—in the minds of users of the findings" (p. 566). This study was conducted as part of the researcher's Doctoral dissertation research. Although the researcher was a graduate student from the same university as all the participants, she did not know them or have previous contact with them prior to the data collection.

FINDINGS AND DISCUSSION

Findings from the data highlighted two sets of themes that framed the adult students' self-regulatory process when learning online, involving 1) their key actions in navigating the varied designs and requirements in online distance courses and 2) juggling and integrating their adult roles and responsibilities. Table 1 summarizes the subcategories that corresponded to these two main themes.

Table 1. Adult Students' Self-Regulatory Process When Learning In Online Distance Courses

Key themes	Navigating the various designs, resources, and requirements in online DE courses	Juggling and integrating adult roles
Subcategories	Familiarizing with online course structure and organization flow	Balancing multiple responsibilities
	Engaging with varied course materials and resources	Renegotiating life priorities from time to time to meet varied, changing, and competing demands
	Recognizing and meeting instructors' expectations	

All but one student took more than one DE courses during the semester they participated in this study. Therefore, these students reported that each of the online distance courses they took did not provide an equal learning experience. Rather, they perceived differences in terms of how these

online DE courses were designed and delivered and the requirements to complete them. Conversely, they spoke about how these factors impacted their online learning experiences as well as their self-regulatory actions when learning in these online DE courses.

Key Findings

As the purpose of this study was to explore how adult students engaged in SRL, the findings identified two key actions that were reported by these students as part of their self-regulatory process when learning in an online distance course. The first key action reported was on how they navigated the various designs, resources, and requirements in the online distance education courses that they took. Due to the asynchronous nature of these courses, the students had to primarily navigate and complete their assigned lessons on their own. They were required to take responsibility for accessing the learning management system, the designated assignments, and the course resources that were provided by the respective instructors. Therefore, these adult students reported that their respective online course settings presented an important context that corresponded to how they experienced and managed their learning across the courses. These students reported managing the different designs and requirements in the following three key areas.

Familiarizing with online course structure and flow. The first key finding is on getting themselves familiarized with the course structure and flow. The students reported that certain courses had better course structure or organizational flow than others. In their views, a well-organized course facilitated their learning, whereas a disorganized course caused disengagement, dissatisfaction, and frustration among them. In the words of one student, "Some courses are just easier to follow. I always have the [course] schedule printed out, and I like to be able to go through and check off, like week 1 is done, week 2 is done." Meanwhile, less organized courses were perceived as challenging and time consuming, thus requiring more self-regulation efforts from the students, mainly in self-planning and self-monitoring, in order to effectively manage the course learning. For example, one student pointed out that one particular course "took so much effort to plan" due to the course's lack of organization and specifications in providing structure and guidelines for completion, and thus she needed to put in much more time and effort to manage the class. She contrasted her experience with another course where her planning was facilitated by the well-organized course structure in which the instructor "even [provided] check boxes [for each of the items due every week in the syllabus], which is wonderful . . . I numbered what week it is, so I know what week I'm in, so here's the week, here's what you gonna [going] do." These differing experiences impacted how participants navigated their online learning process. For well-organized courses, less planning and self-management were needed from the students' end. However, more planning and efforts were required when the courses were perceived to have poor course structure or weak organizational flow.

Engaging with varied course materials and resources. Students also reported that the availability of course materials and resources provided in these online DE courses varied greatly from one to another. Studying in these courses thus warranted different approaches depending on the availability of the materials and the resources and learning content that were provided. For example, one student shared his contrasting study approaches in two courses that were designed differently, in which he managed to get an A in both courses nonetheless:

> *The course that I was engaged in—there is no way to get through that class without doing the work [that was assigned] because every week we had to submit a map of our work and a report associated with it. It was very hands-on . . . And the other course, it's just memorization. Just read and read and if you need to, read again. That's what it came down to. That's all you could do is read. We didn't know of any resource [where] we could go and test our own knowledge . . . It got to the point where I would do [read] the PowerPoint, then rewrite it [the lecture notes], then reread it sometimes twice [before taking the exam].*

These students spoke of different ways and task strategies in which they would engage with the course materials depending on the resources that were provided (or the lack thereof). Some students shared how they triangulated and combined the

information they were learning in their courses by using multiple study resources. One student noted how she used her textbook to supplement the content that she learned from her online lectures. Another student shared how she actively took notes when listening to her online lectures. She noted, "This is the [online course] structure that I really like. You have your readings and then they actually post online video lectures. I love that, because [to me], you can't learn all by reading. Some professors give you all readings, which is hard." Other students reported that some courses only had online lectures and they had to seek outside materials on their own to facilitate their understanding of the course subject matter. In essence, the availability of the learning resources in each respective course impacted how these students engaged in their tasks and study strategies in the online DE courses they took.

Recognizing and meeting instructors' expectations. Adding to the complexity of navigating and completing these online DE courses were the perceived expectations of the course instructors as gauged by these students. They believed each instructor had their own set of expectations towards the students' work in each course. These expectations were either expressed by communicating them directly to the class through the course syllabus and assignments or in more indirect ways, such as through the tone they set in their course syllabus and ongoing class communication, or on certain things or topics they emphasized in the course. Students also reported on their emerging ability to recognize instructor expectations and tailor their learning efforts to deliver and meet these expectations. For example, one student explained:

> *Usually, as I got further along, I kind of knew what to expect from the instructor and what they wanted, so I'd pick out by 4 or 5 weeks in what they really wanted us to know and focus on that and take notes on that or cover the PowerPoint on that . . . Some of it [knowing the expectation] is instinctual I think; some of it is you pick it up after a long time. You learn what teachers want; they all want certain things. It's hard to explain because kind of the way they say things or the way certain things are emphasized.*

Another student reported how she used the instructor's feedback from her earlier assignment to improve her overall written work. She emphasized the importance of receiving such feedback because, "If I can figure out what the instructor wants early on then I could sort of cater what I do for the class so I don't ever do anything that's not efficient . . . to get the grade I want." These students suggested that recognizing and meeting the instructor's expectations presents another important conduct in determining how they navigated their online distance studies. They also adjusted their study efforts based on their perceived expectations of their course instructors as part of their key action when learning online.

The second key action focused on the participants' ongoing efforts in juggling and integrating their adult roles while they concurrently participated in their online distance studies. Most of the students in this study were working and thus needed to continue maintaining their employment commitment throughout their studies. In addition, there were students who were stay-at-home parents and working parents with family responsibilities. As adult students, they characterized their concurrent and ongoing commitments as juggling the rigors of their multiple roles. Due to these responsibilities, online distance courses became an important option for these adult students to pursue their educational goals in a more supportive and flexible learning structure.

As mutually shared by the group, one common yet valued key feature of the online distance courses was its flexibility. By pursuing their education through this learning format, these students could participate in classes at a time and location that suited their busy schedules. The asynchronous online course setup, to a certain limit, enabled the students to schedule their own classes or study times, to learn at their own paces, and/or to arrange their study places at more convenient locations. To manage their converging responsibilities while they participated in their online distance studies, these students reported two sets of actions interwoven with their online distance learning experiences.

Balancing multiple responsibilities. By and large, the participants' online distance learning experiences were mostly described in relation to how they viewed themselves as students who were engaged in multiple roles. They noted that

their learning often took place within the realm of their adult world in which they must incorporate their studies within their life schedules involving their commitments and responsibilities as adults with jobs and/or families. When reflecting on their learning in online DE courses, the adults reported that they continuously assessed their responsibilities and life circumstances in relation to how these roles impacted their learning process. Many shared their struggles to remain engaged in juggling two or more of these roles: as a parent, a worker, a spouse, and as a student at the university. One student, for example, highlighted how he was focused upon achieving "the right balance" in his life, which involved his efforts to be a responsible and attentive father to his daughter while also maintaining his ongoing online coursework. He was also working, mostly full time, to support himself and his family throughout his studies. He described, "It's challenging; it's tough. For me, it's really hard because I really was so focused on school. I made sure I spent time with my daughter. Finding the right balance is what it comes down to …"

For the majority of these students, keeping a balanced life also meant they had to constantly parse out their study time in relation to the time needed for their family situations and/or work obligations. Having flexibility for their online studies was an advantage, but sometimes, it presented difficult decisions because of their multiple obligations. Working adults had to consider key time commitment factors in relation to their working hours and job-related commitments. Students with parental responsibilities had to take into consideration their family's schedules and children's routines. Therefore, students reported that their study schedules were often squeezed in between their work and/or family commitments. One student illustrated how she typically scheduled her routine involving her multiple roles as a worker, parent, and a student:

> *Every day I'd get up, do work out, come home, take a shower. My kids get up and my mom would come over [to babysit my children]. Then I'd go to work . . . During my lunch hour [at work], I'd do school work; watch lectures and take quizzes or read . . . Then I come home and somebody has to cook dinner . . . Then I help my older son with his homework or play with the younger one. Then put them to bed, and then I might have more school work to do.*

The above highlighted the integration of the student's life routines, which was not focused only on her study commitments but also on how she strived to balance her multiple role responsibilities as an adult.

Renegotiating life priorities from time to time. While creating a balanced routine involving their work, family, and studies was integral for these students, they also found themselves shuffling and reshuffling their priorities depending on the demands of their studies or life exigencies associated with their adult roles. Students suggested that their priorities changed at different times depending on what was more important and critical for them in their studies and their ongoing adult lives. One student described how she felt, "There are times where I just have to accept that my family is going to come first (before I can study). The family unit is what makes it difficult but also what makes it possible for me." One student shared how she opted out from her church commitment during one Sunday even though it was important for her, because "I just got to get that assignment done that weekend." Another student shared a similar point of view on how he viewed and negotiated his priorities in life from time to time. He said:

> *Sometimes you don't need to get an 'A' on every assignment . . . At certain times, I may need to say, I don't need to study five hours for this test. Let me go ahead and have dinner with my wife or take my daughter to the playground. Just make sure you know what your priorities are. It can be both, but at different times and situations.*

For these students, the flexibility of online distance courses provided the support structure for them to adapt and make changes to the converging demands in their lives. When faced with adult role dilemmas in their studies, the students renegotiated their priorities and schedules so that their studies could still take place at different times. As noted by another student, "I didn't prioritize by number all the areas of my life. I guess I really don't know how! Everything becomes important at different times."

As adults, these students reported a broad set of actions on how they actively planned and replanned their online distance studies in order to

integrate their study routines and efforts into their existing adult roles and commitments. Their self-reflection on the whole learning process was often not exclusively focused on the process or outcomes of their study alone; but rather the successful integration of their study commitment into their existing life routines as they seek to balance their multiple responsibilities as a student, worker, spouse, and/or parent.

DISCUSSION

Based on the key actions reported by these adult students in their online distance studies, the findings suggested that the adult students' online self-regulatory process was adaptive in nature. Specifically, in comparison with Zimmerman's (2000; 2002) SRL model, the adult students' self-regulatory process did not reflect the cyclical phases of planning (forethought), implementation (performance), and reflection during their online learning process. Rather, their process was dynamically shaped by the fluid and converging demands of their online course structure and multiple adult roles. One previous study found that academic satisfaction among nontraditional students was directly influenced by job-related factors, and that having a strong sense of control, as seen through the self-regulatory process, was particularly important to mitigate the stress and allow these students to manage their multiple roles effectively (Gopalan, Goodman, Hardy, & Jacobs, 2019)

The SRL literature tends to view students' learning involvement as separate and isolated from the rest of their life. It is assumed that the primary tasks of learners are studying and learning alone. Further, many SRL studies often concentrated on students' activities and behaviors within a single context or examining specific behaviors (e.g., evaluating learning tasks or setting a goal) (for example, see Belski & Belski, 2014; Cheung, 2004; Greene, Hutchison, Costa, & Crompton, 2012). However, as highlighted in the findings and supported by the literature, adult students typically do not view and engage in their college studies as a separate commitment from their adult lives. Rather, "most adults continue their complex lives—with added challenging role of [being a college] student" (Kasworm, 2008, p. 27). Their learning context is often situated within their broader adult life context and placed within their work, family, and community roles (Kasworm & Blowers, 1994), where "it is evident that the context of adult life directly and indirectly impacted adult involvement in higher education and engagement in academic and life role learning" (p. 119). As a matter of fact, their college commitment is rarely concentrated on a single study activity or course. For participants in the current study, all except one were completing more than one online course at the time of this study. Further, while completing their multiple online courses, they also simultaneously juggled other responsibilities associated with their adult roles. Their specific self-regulatory actions when learning online were focused not only on managing the varied course designs and meeting the specific requirements of their multiple online coursework, but also appeared to be closely planned and integrated with their adult roles and responsibilities. For these students, self-regulation was mostly about finding effective and successful ways to manage and balance their varied academic demands interwoven with their life demands from their adult roles. As noted by Kasworm (2008), "Because adults have competing lives, hopes, and realities, each semester of college involvement represents either a renegotiation or adaptation of themselves and their lives" (p. 29).

Three other qualitative studies have also reported on the adaptive and changing nature of adults' SRL as well as the importance of recognizing the impacts of adults' other life contexts on their SRL. The first two studies examined adults' self-regulated learning in the workplace. In the first study, Margayan, Littlejohn, and Milligan (2013), studied the self-regulatory learning practices among working professionals. Their research focused upon adults taking personal responsibility for organizing their own learning within their workplace environment. The professionals' SRL in the workplace was found to be "iterative, fluid, and continuous rather than clearly delineated into discrete stages of planning, implementation and reflection, as postulated by extant SRL theories" (p. 255). These findings further suggested that SRL in the workplace was structured and deeply integrated by the professionals' work tasks and their job priorities. Further, it was also socially influenced by the community of the workplace environment and the broader organizational factors. Meanwhile, the second study, conducted by van Eekelen, Boshuizen,

and Vermunt (2005), focused on the work-related learning processes as reported by higher education teachers (instructors). They distinguished three types of self-regulation in the teachers' workplace learning: planned learning, spontaneous unplanned learning, and nonlinear learning. Their findings showed that while some teachers did plan for their learning, most were involved in spontaneous and nonlinear learning. They found that teachers self-regulate their learning spontaneously from all kinds of day-to-day teaching experiences without actually planning for it. Teachers were also involved in nonlinear learning, where their self-regulation often starts with a problem or new task to be performed. Their learning process was described as nonlinear in the sense that these teachers did not plan or establish their learning goal or how they were going to teach their task beforehand. Rather, their learning was led by inquisitive behaviors to learn something in order to solve a problem or perform the task. Meanwhile, in the third study, Berkhout et al. (2015) explored the factors influencing adult medical students' SRL in a clinical setting. Although the data reported broad elements of self-regulation among the clinical adult students, the study found "little evidence for the distinct stages as they are portrayed in Zimmerman's (2012) model" (p. 596). Instead, their findings led them to conclude that SRL in the clinical setting was a complex process in which many factors and different personal, contextual, and social attributes interacted, thus "making it [the SRL process] a highly individualized, context-specific process" (Berkhout et al., 2015, p. 596).

Although dissimilar in contexts and findings, these three studies shared a similar notion with the current study in concluding that self-regulation among adult learners may take place as a much more dynamic process rather than one systematically defined phases or stages of learning. The current study, as aligned and supported by the three studies discussed above, thus broadly suggests that self-regulatory process among adult learners are typically very responsive to the changes and demands of concurrent events or situations that impacted or triggered their learning. Specifically, for this study, the adult students' SRL was found to be adaptive in nature; their self-regulatory process was about finding a successful integration between their online study demands and their life responsibilities as adults.

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Using a qualitative approach, this study explored the key actions of adult students in self-regulatory processes when learning in online distance courses. The findings illuminated the adults' self-regulatory actions in two key aspects: 1) navigating their learning through the varied online course settings and requirements interwoven with 2) juggling and integrating their adult roles and responsibilities as part of the overall self-regulatory process. In essence, the students' stories about how they engaged in online learning also suggested a dynamic process that was not only influenced by their online learning environment but their broader life involvements as adult students with multiple roles and responsibilities.

Because nonacademic influences, such as the involvement of adult roles, were not critically addressed in Zimmerman's (2000; 2002) model, future research should seek to broaden this understanding further. The result of this study also should be considered as preliminary due to the limitation of its sample size. Therefore, recommendations for future studies should include a higher sample size to increase the transferability of the findings and extend such research beyond the exploratory research design for a more robust empirical investigation on the topic.

The findings of this study also offer practical insights for supporting adult students' learning and their self-regulatory process in online distance education courses. A broad overview of the findings suggests that adult students valued having flexible and personalized learning to meet their varied needs as adult learners. Access and flexibility of online distance education are especially valuable to them to ease any conflicts in managing their multiple roles (Home, 1998). Providing online courses with flexible but clear scheduling, diverse learning approaches, and varied learning resources and support are the elements that were most valued by adults in their online distance courses. At the same time, the influences of their broader life context and the challenges of their adult role involvements are also important aspects that must be recognized in parallel with their learning.

REFERENCES

Artino, A. R. (2007). Self-regulated learning in online education: A review of the empirical literature. International Journal of Instructional Technology and Distance Learning, 4(6), 3–18.

Azevedo, R., Guthrie, J. T., & Seibert, D. (2004). The role of self-regulated learning in fostering students' conceptual understanding of complex systems with hypermedia. Journal of Educational Computing Research, 20(1-2), 87–111. doi:10.2190/DVWX-GM1T-6THQ-5WC7

Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1991). Social cognitive theory of self-regulation. Organizational Behavior and Human Decision Processes, 50(2), 248–287. doi:10.1016/0749-5978(91)90022-L

Barnard, L., Paton, V., & Lan, W. (2008). Online self-regulatory learning behaviors as a mediator in the relationship between online course perceptions with achievement. International Review of Research in Open and Distance Learning, 9(2), 1–11. doi:10.19173/irrodl.v9i2.516

Bean, J. P., & Metzner, B. S. (1985). A conceptual model of nontraditional undergraduate student attrition. Review of Educational Research, 55(4), 485–540. doi:10.3102/00346543055004485

Belski, R., & Belski, I. (2014). Cultivating student skills in self-regulated learning through evaluation of task complexity. Teaching in Higher Education, 19(5), 459–469. doi:10.1080/13562517.2014.880685

Benda, K., Bruckman, A., & Guzdial, M. (2012). When life and learning do not fit: Challenges of workload and communication in introductory computer science online. ACM Transactions on Computing Education, 12(4), Article 15. doi:10.1145/2382564.2382567

Berkhout, J. J., Helmich, E., Teunissen, P. W., van de Berg, J. W., van der Vleuten, C. P. M., Debbie, A., & Jaarsma, C. (2015). Exploring the factors influencing clinical students' self-regulated learning. Medical Education, 49(6), 589–600. doi:10.1111/medu.12671

Birks, M., & Mills, J. (2011). Grounded theory: A practical guide. London, UK: Sage.

Boekaerts, M., Pintrich, P. R., & Ziedner, M. (2000). Self-regulation: An introductory overview. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), Handbook of self-regulation (pp. 5–9). San Diego, CA: Academic Press. doi:10.1016/B978-012109890-2/50030-5

Bogdan, R. C., & Biklen, S. K. (2007). Qualitative research for education: An introduction to theories and methods (5th ed.). Boston, MA: Pearson Education.

Bowen, G. A. (2008). Naturalistic inquiry and the saturation concept: A research note. Qualitative Research, 8(1), 137–152. doi:10.1177/1468794107085301

Caelli, K., Ray, L., & Mill, J. (2003). 'Clear as mud': Toward greater clarity in generic qualitative research. International Journal of Qualitative Methods, 2(2), 1–13. doi:10.1177/160940690300200201

Charmaz, K. (2003). Grounded theory: Objectivist and constructivist methods. In N. K. Denzin & Y. S. Lincoln (Eds.), Strategies of qualitative inquiry (pp. 249–291). Thousand Oaks, CA: Sage.

Cheung, E. (2004). Goal setting as motivational tool in student's self-regulated learning. Educational Research Quarterly, 27(3), 3–9.

Chickering, A. W. (1974). Commuting versus resident students: Overcoming the educational inequities living off campus. San Francisco, CA: Jossey-Bass.

Dabbagh, N., & Kitsantas, A. (2004). Supporting self-regulation in student-centered web-based learning environments. International Journal on E-Learning, 3(1), 40–47. Retrieved from http://www.editlib.org/p/4104

Dibiase, D., & Kidwai, K. (2010). Wasted on the young? Comparing the performance and attitudes of younger and older U.S. adults in an online class on geographic information. Journal of Geography in Higher Education, 34(3), 299–326. doi:10.1080/03098265.2010.490906

Fairchild, E. E. (2003). Multiple roles of adult learners. New Directions for Student Services, 102, 11–16. doi:10.1002/ss.84

Flanagan, J. (1954). The critical incident technique. Psychological Bulletin, 51(4), 327–358. doi:10.1037/h0061470

Gopalan, N., Goodman, S., Hardy, A., & Jacobs, C. (2019). A fine balance: Understanding the influence of job, school and personal characteristics in predicting academic and job satisfaction amongst non-traditional students. Journal of Education and Work, 32(6-7), 570–585. doi:10.1080/13639080.2019.1673890

Greene, J. A., Hutchison, L. A., Costa, L., & Crompton, H. (2012). Investigating how college students' task definitions and plans relate to self-regulated learning processing and understanding of a complex science topic. Contemporary Educational Psychology, 37(4), 307–320. doi:10.1016/j.cedpsych.2012.02.002

Hill, J. R., & Hannafin, M. J. (1997). Cognitive strategies and learning from the World Wide Web. Educational Technology Research and Development, 45(4), 37–64. doi:10.1007/BF02299682

Hodges, C. B. (2005). Self-regulation in Web-based courses: A review and the need for research. Quarterly Review of Distance Education, 6(4), 375–383.

Home, A. M. (1998). Predicting role conflict, overload and contagion in adult women university students with families and jobs. Adult Education Quarterly, 48(2), 85–97. doi:10.1177/074171369804800204

Hughes, H. (2007). Critical incident technique. In S. Lipu, K. Williamson, & A. Llyod (Eds.), Exploring methods in information literacy research (pp. 49–66). Wagga Wagga, Australia: Centre for Information Studies.

Jézégou, A. (2013). The influence of the openness of an e-learning situation on adult students' self-regulation. The International Review of Research in Open and Distributed Learning, 14(3), 182–201. doi:10.19173/irrodl.v14i3.1450

Kasworm, C. E. (2003). Setting the stage: Adults in higher education. New Directions for Student Services, 102, 3–10. doi:10.1002/ss.83

Kasworm, C. E. (2008). Emotional challenges of adult learners in higher education. New Directions for Continuing Education, 120, 27–34. doi:10.1002/ace.313

Kasworm, C. E. (2018). Adult students: A confusing world in undergraduate higher education. The Journal of Continuing Higher Education, 66(2), 77–87. doi:10.1080/07377363.2018.1469077

Kasworm, C. E., & Blowers, S. (1994). Adult undergraduate students: Patterns of involvement (Final project report). Knoxville, TN: College of Education, University of Tennessee. Retrieved from http://eric.ed.gov/?id=ED376321

Kasworm, C. E., Polson, C. J., & Fishback, S. J. (2002). Responding to adult learners in higher education. Malabar, FL: Krieger Publishing.

Ke, F., & Xie, K. (2009). Toward deep learning for adult students in online courses. Internet and Higher Education, 12(3), 136–145. doi:10.1016/j.iheduc.2009.08.001

Kee, F. (2010). Examining online teaching, cognitive, and social presence for adult students. Computers & Education, 55(2), 808–820. doi:10.1016/j.compedu.2010.03.013

Malterud, K., Siersma, V. D., & Guassora, A. D. (2015). Sample size in qualitative interview studies: Guided by information power. Qualitative Health Research, 26(13), 1753–1760. doi:10.1177/1049732315617444

Margayan, A., Littlejohn, A., & Milligan, C. (2013). Self-regulated learning in the workplace: Strategies and factors in the attainment of learning goals. International Journal of Training and Development, 17(4), 245–259. doi:10.1111/ijtd.12013

Marshall, C., & Rossman, G. B. (2011). Designing qualitative research (5th ed.). Thousand Oaks, CA: Sage.

Merriam, S. B. (2009). Qualitative research: A guide to design and implementation. San Francisco, CA: Jossey-Bass.

Miltiadou, M., & Savenye, W. C. (2003). Applying social cognitive constructs of motivation to enhance student success in online distance education. AACE Journal, 11(1), 78–95. Retrieved from https://www.learntechlib.org/primary/p/17795/

Noel-Levitz. (2013). National online learners' priorities report. Retrieved from https://www.noellevitz.com/papers-research-higher-education/2013/2013-adult-and-online-learner-satisfaction-priorities-reports

O'Lawrence, H. (2006). The influences of distance learning on adult learners. Techniques: Connecting Education and Careers, 81(5), 47–49.

Patton, M. Q. (2002). Qualitative research and evaluation methods (3rd ed.). Thousand Oaks, CA: Sage.

Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), Handbook of self-regulation (pp. 451–502). San Diego, CA: Academic Press. doi:10.1016/B978-012109890-2/50043-3

Puzziferro, M. (2008). Online technologies self-efficacy and self-regulated learning as predictors of final grade and satisfaction in college-level online courses. The American Journal of Distance Education, 22(2), 72–89. doi:10.1080/08923640802039024

Stavredes, T. (2011). Effective online teaching: Foundations and strategies for student success. San Francisco, CA: Jossey-Bass.

Tsai, C. W., Shen, P. D., & Fan, Y. T. (2013). Research trends in self-regulated learning research in online learning environments: A review of studies published in selected journals from 2003 to 2012. British Journal of Education Technology, 44(5), E107–E110. doi:10.1111/bjet.12017

van Eekelen, I., Boshuizen, H., & Vermunt, J. (2005). Self-regulation in higher education teacher learning. Higher Education, 50(3), 447–471. doi:10.1007/s10734-004-6362-0

Wang, S., & Lin, S. S. J. (2007). The application of social cognitive theory to web-based learning through NetPorts. British Journal of Educational Technology, 38(4), 600–612. doi:10.1111/j.1467-8535.2006.00645.x

Whipp, J. L., & Chiarelli, S. (2004). Self-regulation in a web-based course: A case study. Educational Technology Research and Development, 52(4), 5–21. doi:10.1007/BF02504714

Yoo, S. J., & Huang, W. D. (2013). Engaging online adult learners in higher education: Motivational factors impacted by gender, age, and prior experiences. The Journal of Continuing Higher Education, 61(3), 151–164. doi:10.1080/07377363.2013.836823

Yukselturk, E., & Bulut, S. (2007). Predictors for student success in an online course. Educational Technology & Society, 10(2), 71–83.

Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. Journal of Educational Psychology, 81(3), 329–339. doi:10.1037/0022-0663.81.3.329

Zimmerman, B. J. (1998). Developing self-fulfilling cycles of academic regulation: An analysis of exemplary instructional models. In D. H. Schunk & B. J. Zimmerman (Eds.), Self-regulated learning: From teaching to self-reflective practice (pp. 1–19). New York, NY: The Guilford Press.

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), Handbook of self-regulation (pp. 13–39). San Diego, CA: Academic Press. doi:10.1016/B978-012109890-2/50031-7

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. Theory into Practice, 41(2), 64–70. doi:10.1207/s15430421tip4102_2

Zimmerman, B. J., & Moylan, A. R. (2009). Self-regulation: Where metacognition and motivation intersect. In D. J. Hacker, J. Dunlosky, & A. C. Graesser (Eds.), Handbook of Metacognition in Education (pp. 299–315). New York, NY: Routledge.

Zimmerman, B. J., & Schunk, D. H. (2001). Self-regulated learning and academic achievement: Theoretical perspectives (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.