บทความวิจัย

ความพร้อมในการเรียนรู้ด้วยการนำตนเองสำหรับทักษะในศตวรรษที่ 21 ของนักศึกษามหาวิทยาลัยในประเทศไทย

SELF-DIRECTED LEARNING READINESS FOR 21ST CENTURY SKILLS OF COLLEGE STUDENTS IN THAILAND

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บทคัดย่อ

การเรียนรู้ด้วยตนเองเป็นสิ่งสำคัญทักษะในศตวรรษที่ 21 และได้ถูกนำมาใช้ที่เน้นการฝึกฝนให้นักศึกษามีทักษะนี้ในหลายประเทศ วัตถุประสงค์ของงานวิจัยนี้คือการอธิบายถึงการเตรียมความพร้อมเรียนรู้ด้วยตนเองในปัจจุบันของนักศึกษาในประเทศไทยและเพื่อเปรียบเทียบความพร้อมในการเรียนรู้ด้วยตนเองของแต่ละชั้นปีและแต่ละสาขาวิชา ผ่านแนวความคิดทางทฤษฎีของ Guglielmino (1997) โดยผู้วิจัยได้ส่งแบบสอบถามไปยังนักศึกษาภาควิชาเทคโนโลยีและสื่อสารการศึกษาที่เป็นกลุ่มตัวอย่าง จำนวน 3 สาขาวิชาดังนี้ 1) สาขาเทคโนโลยีและสื่อสารการศึกษา 2) สาขาเทคโนโลยีสารสนเทศการศึกษา และ 3) สาขาคอมพิวเตอร์ศึกษา รวมทั้งสิ้น 231 คน โดยใช้ค่าเฉลี่ย เบี่ยงเบนมาตรฐาน และเปรียบเทียบชั้นปีและสาขาวิชา กลุ่มโดยใช้ สถิติ one-way ANOVA ผลการวิจัยพบว่า นักศึกษามีความพร้อมในการเรียนรู้ด้วยตนเอง ในด้านการเปิดกว้างต่อการเรียนรู้ในระดับต่ำ ($\bar{x}$ = 2.46, *SD* = 0.05) และด้านอื่น ๆ อยู่ในระดับสูง เมื่อเปรียบเทียบระหว่างชั้นปีและสาขาวิชาไม่มีความแตกต่างกัน

คำสำคัญ : ความพร้อมในการเรียนรู้ด้วยการนำตนเอง การเรียนรู้ด้วยการนำตนเอง นักศึกษามหาวิทยาลัย

ABSTRACT

Self-directed learning is an important skill in the 21st century and it has been used to train students in many countries. The purposes of this study were to examine self-directed learning readiness of college students in Thailand and to compare this readiness across years of education. Through the theoretical framework by Guglelmino (1997), the author administered a survey to 231 participants, from three majors: 1.Educational Technology and Communication, 2. Information Technology for Education, and 3. Computer for Education. The data analysis was conducted by using mean, standard deviation, and one-way ANOVA. The data revealed that the participants reported having self-directed learning readiness, ranging from low to high level. The dimension of openness to learning was at the low level ($\bar{x}$ = 2.46, SD = 0.05), and the other seven dimensions were at the high level. When comparing the readiness across years of education and majors, it was found that there was no significant difference.

Keywords: self-directed learning readiness, self-directed learning, college students

Introduction

In the 21st century, knowledge is rapidly changing because of technology advancement. The high speed of information change requires individuals to possess learning skills necessary for survival otherwise they may not be able to complete with others (Guglielmino, 2008). Prior researchers have pointed out the 21st century skills are necessary to cope with constant changes. The notion of 21st century skills has been the subject of educational policy in many countries for the last decade (Häkkinena et al., 2017). According to Binkley et al. (2012), 21st century skills are regarded as epistemology; ways of thinking, ways of working, tools for working, and living in the world. Different authors and organizations have attempted to decipher the characteristics of the 21st century skills. It becomes evident that the skills consisted of six core areas as follows: 1) creativity and innovation; 2) communication and collaboration; 3) research and information fluency; 4) critical thinking, problem solving, and decision making; 5) digital citizenship; and 6) technology operations and concepts (Larson & Miller, 2011).

Among the core areas of the 21st century skills, the notion of *self-directed learning* is widely researched (Häkkinena et al., 2017). Prabjandee and Inthachot (2013) said that prior researchers defined self-directed learning differently; it has been referred to as self-direction in learning, self-instructed learning, autonomous learning, self-regulated learning, self-managed learning, self-education, or independent learning. Regardless of different terms, self-directed learning is a learning process in which individuals take initiative responsibility for their learning such as identity their own needs, setting learning goals, identifying learning resources, choosing appropriate strategies for learning, and evaluating learning outcomes (Knowles, 1975).

Since self-directed learning is essential nowadays, educators attempted to train students to possess this learning. In Thailand, the need to equip students with self-directed learning reflected in educational goals in many institutions, especially in the college level. College students need to take responsibility for their own learning and be active to learn at any time and any place (Cohen, 2012). Even though self-directed learning is important, not every individual possess readiness to initiate self-directed learning (Klunklin, Viseskul, & Sripusanapan, 2010; Prabjandee & Inthachot, 2013). It is because self-directed learning requires individuals to change perception of their roles, which may cause anxiety and frustration in some students (Klunklin, et al. 2010). As a result, it is important to investigate self-directed learning readiness as the first step in order to provide a better understanding before training students to become self-directed. This paper attempts to fill the gap of such kind.

Self-Directed Learning Readiness as a Theoretical Framework

The notion of self-directed learning readiness means different things to different people, so it is important to understand what it means in this study. In this study, I employed the theoretical framework of self-directed learning readiness, proposed by Guglielmino (1997), in the context of adult learning. Guglielmino described self-directed learning readiness as a degree of inner states (e.g., attitudes, abilities, personalities) to initiate one's learning. Self-directed learning readiness consisted of eight dimensions: (1) openness to learning, (2) self-concept as an effective learner, (3) initiative and independence in learning, (4) informed acceptance of responsibility, (5) love of learning, (6) creativity, (7) positive orientation to the future, and (8) ability to use basic study and problem-solving skills. It is important to note that these aspects are not mutually exclusive; rather they are interconnected and interdependent.

For openness to learning, individuals who possessed this readiness seem to have a sense of enjoyment for learning, a greater interest in learning than others, and an attraction to sources of knowledge. For self-concept as an effective learner, individuals with this readiness seem to have confidence in self-learning and a self-perception as a curious person. For the initiative and independence in learning aspect, individuals are an active agent to pursuit new

knowledge and to initiate learning projects by themselves. For informed acceptance of responsibility, individuals are responsible for their learning and have a willingness to accept responsibility for their own learning. For love of learning, individuals admire the beauty of learning and express a strong desire to learn new things. For creativity, individuals tend to take risks in learning and think of different solutions to learn. For positive orientation to the future, individuals have a self-perception as a lifelong learning and they enjoy thinking about the future. Lastly, for ability to use basic study and problem solving skills, individuals have several abilities, such as writing, note taking, memorizing, or problem-solving skills (Guglielmino, 1997).

The eight components of self-directed learning readiness serve as a theoretical lens in previous studies (e.g, Klunklin et al., 2010; Prabjandee & Inthachot, 2013; Yuan, Williams, Fang, & Pang, 2012) to understand how individuals are ready to take charge of one's learning in different fields for many years. For example, Klunklin et al. (2010) and Yuan et al. (2012) used the notion of self-directed learning readiness by Guglielmino (1997) to examine the readiness of nursing students. Similarly, Prabjandee and Inthachot (2013) used this notion to investigate the level of readiness of college students in Thailand. Theses studies provide evidence to support that self-directed learning readiness is developmental, contextual, and individualistic.

Prior Research on Self-Directed Learning Readiness

The review of the literature found that self-directed learning readiness as been researched extensively in different contexts throughout the world, such as Saudi (e.g, Alotaibi, 2016; Gilany & Abusaad, 2013), China (e.g., Yuan, Williams, Fang, & Pang, 2012), Australia (e.g., Pillips, Turnbull, & He, 2015), Pakistan (e.g., Said, Ghani, Khan, & Kiramat, 2015), or Thailand (e.g., Klunklin et al., 2010; Prabjandee & Inthachot, 2013). It is evident that research on self-directed learning readiness in the context of Thailand is limited. Additionally, specifically to the context of education, the review of the literature has pointed out that previous studies have investigated nursing students and engineering students (Prabjandee & Inthachot, 2013). Little is known about the other fields, especially the field of education, where students are required to keep up with constant changes of information.

Generally, Guglielmino (2014) summarized that self-directed learning readiness correlates with academic achievement, completion, and performance. High level of this readiness seems to have higher achievement, completion, and performance. Guglielmino (2014) also pointed out that the self-directed learning readiness exists along the continuum and it is a developable capability rather than a stable characteristic.

Consistently across the literature, the goal of those studies was mainly descriptive: to understand a phenomenon of the readiness for self-directed learning. Prior research on self-directed learning readiness has focused on two areas: *levels* of readiness and *comparisons* of the readiness across gender, learning styles, age, years of education, and majors of study. It is noticeable that the comparisons were conducted to understand the complexity of this readiness and expand the knowledge base in this area.

For the levels of self-directed learning readiness, previous studies have pointed out inconsistent results: high, satisfactory, or low level. These inconsistent results were from the differences in contexts. For example, Prabjandee and Inthachot (2013) pointed out college students in Thailand reported having high to moderate level of self-directed learning readiness. Yuan et al. (2012) found that nursing students in China possessed high to low level of self-directed learning readiness. Said et al. (2015) found that nursing students in Pakistan reported having satisfactory level of self-directed learning. El-Gilany and Abusaad (2013) revealed that Saudi nursing students had a high level of self-directed learning readiness. Since inconsistent results were found, the need to further investigate this area is legitimate.

For the comparison aspects, prior research has found that there was no difference

in self-directed learning readiness across gender (Yuan et al., 2012). Also, there was no difference in self-directed learning across learning styles (El-Gilany & Abusaad, 2013; Philips et al., 2015). For the comparison across age, there is no correlation between age and self-directed learning readiness (Phillips et al., 2015). For years of education, Prabjandee and Inthachot (2013) pointed out self-directed learning readiness differed across years of education. Finally, for majors of the study, there was a difference in self-directed learning readiness across majors of study (Prabjandee & Inthachot, 2013). Based on the literature review of previous studies, it is evident that two variables that are underresearched: years of education and majors of study. The comparison of these two variables may expand the knowledge base in this area.

Research Questions

Since prior research has conducted in different contexts, but not Thailand, to fill in the research gap, this study attempts to answer the following research questions:

1. What is the level of self-directed learning readiness of students at a College of Education in Thailand?
2. Is there a difference in self-directed learning readiness of students at a College of Education across years of education?
3. Is there a difference in self-directed learning readiness of students at a College of Education across majors of study?

Statement of Hypothesis

The statements of hypothesis were formulated from the review of the literature (Alotaibi, 2016; Gilany & Abusaad, 2013; Klunklin et al., 2010; Pillips, et al., 2015; Prabjandee & Inthachot, 2013; Said et al., 2015; Yuan et al., 2012). The following statements are the hypothesis of the study.

1. The levels of self-directed learning readiness of students at a College of Education in Thailand are at the high level.
2. There is no difference in self-directed learning readiness of students at a College of Education across years of education.
3. There is no difference in self-directed learning readiness of students at a College of Education across majors of study.

Context of the Study

For ethical purposes of confidentiality, risk, and beneficence, the name of the institution is not included. This research was conducted at a College of Education at a four-year university in the central part of Thailand. This site was purposefully selected since it has the philosophy to prepare professional teachers, technologists, and educational personnel to reach international standards. The college also aims to prepare qualified technical teachers, computer teachers, technologists, and academic officers in the undergraduate and graduate level by emphasizing practice-based learning, equipped with virtues and ethics to provide academic services based on research and development.

To ensure that the graduates possess desirable characteristics, virtues, and ethics, the college has implemented practices with the main mission to prepare graduates for entering the teaching profession and other technical professions through research, social services, and cultural preservation. The college has also trained educational personnel to have maximum capability and to produce innovations to enhance the Faculty reputation. These practices are creative and aligned with the visions and missions of the college.

Methods

The participants were 231 undergraduate students from a College of Education, selected by using the purposeful sampling technique. Out of 231 participants, 35.1% were from fourth year, 30.3% were from second year, 22.1% were from first year, and 12.6% were from third years. These participants were from two majors: Educational Technology and Communication (63.6%) and Information Technology Education (36.4%). The two majors of study were purposefully selected.

The research instrument was the translated version of Self-Directed Learning Readiness Scale, developed by Prabjandee and Inthachot (2013) with the Cronbach's coefficient alpha of 0.85. The participants completed the questionnaire, delivered face to face, so the response rate was 100%. The data were analyzed by using descriptive statistics to determine level of self-directed learning readiness, one-way ANOVA to determine the differences across years of education, and an independent t-test to determine the differences across majors.

Ethical Considerations

Research ethics is an important aspect in doing research in social science. It is important for researchers to hold ethical values. In this study, the risks are not greater than any types of research in the education context. The participation was voluntary. Before the participants completed the questionnaire, they read the consent form and allowed me to use the responses for research purposes only. Additionally, the participants' confidentiality was protected. No identification was used. The participants were informed that they could withdraw from the study at any time without negative consequences. During the data analysis, the data were analyzed and reported aggregately, so identification could not be made.

Findings

This section presents the findings of this study, consisting of three sections organized based on the research questions as follows: level of self-directed learning readiness, comparison of self-directed learning readiness across years of education, and comparison of self-directed learning readiness across majors of study. Each section will be presented below.

Levels of Self-directed Learning Readiness

To determine the levels of self-directed learning readiness, I used the following criteria as follows:

3.26 - 4.00 means highest level
2.51 - 3.25 means high level
1.76 - 2.50 means low level
1.00 - 1.75 means lowest level

Using the criteria above, Table 1 presents the levels of self-directed learning readiness of student at a College of Education in Thailand.

Table 1 Descriptive Statistics of Self-Directed Learning Readiness

Dimensions of Self-Directed Learning Readiness	$\bar{x}$	SD	Level
1. Openness to learning	2.46	0.50	Low
2. Self-concept as an effective learner	2.93	0.39	High
3. Initiative and independence in learning	2.81	0.34	High
4. Informed acceptance of responsibility	3.08	0.41	High
5. Love of learning	2.92	0.36	High
6. Creativity	2.72	0.44	High
7. Positive orientation to the future	3.04	0.42	High
8. Ability to use basic study and problem-solving skills	2.80	0.38	High

As shown in Table 1, the participants reported having self-directed learning readiness, ranging from low to high level. The dimension of openness to learning was at the low level ($\bar{x}$ = 2.46, SD = 0.05), and the other seven dimensions were at the high level.

Comparisons of Self-Directed Learning Readiness across Years of Education

To determine the differences of self-directed learning readiness across years of education, a one-way ANOVA was performed. Table 2 presents the results of the comparison.

Table 2 Comparisons of Self-Directed Learning Readiness across Years of Education

Dimensions of Self-Directed Learning Readiness	F	Sig.
1. Openness to learning	9.178	.000
2. Self-concept as an effective learner	4.592	.004
3. Initiative and independence in learning	4.915	.003
4. Informed acceptance of responsibility	3.196	.024
5. Love of learning	10.633	.000
6. Creativity	6.917	.000
7. Positive orientation to the future	2.552	.056
8. Ability to use basic study and problem-solving skills	2.209	.088
Total	9.811	.000

Overall, the data showed that there was a statistically significant difference across years of education, $F(3,227) = 9.811$, $p = .000$. Considering each aspect of self-directed learning readiness, there was no difference across years of education in two aspects: positive orientation to the future, $F(3,227) = 2.552$, $p = .056$ and ability to use basic study and problem-solving skills, $F(3,227) = 2.209$, $p = .088$. To determine the differences, a Tukey post-hoc test revealed that self-directed learning readiness of students in the first year and the second year was lower than students in the fourth year. No statistically significant differences between students in the third year and the fourth year were found. This indicated that higher years of education possessed higher readiness for self-directed learning.

Comparisons of Self-Directed Learning Readiness across Majors of Study

To determine the differences of self-directed learning readiness across majors of study, an independent t-test was performed. Table 3 presents the results of the comparison.

Table 3 Comparisons of Self-Directed Learning Readiness across Majors of Study

Dimensions of Self-Directed Learning Readiness	t	Sig.
1. Openness to learning	4.613	0.000
2. Self-concept as an effective learner	0.022	0.095
3. Initiative and independence in learning	1.858	0.264
4.Informed acceptance of responsibility	0.787	0.195
5. Love of learning	4.765	0.666
6. Creativity	2.128	0.059
7. Positive orientation to the future	0.809	0.425
8. Ability to use basic study and problem-solving skills	1.503	0.147

As shown in Table 3, the data revealed that there was a difference across majors of the study in the aspect of openness to learning. For the other seven aspects, there was no difference in self-directed learning readiness across majors of study.

Discussion and Conclusion

The premise of argument in this study was that even though self-directed learning is important in the 21st century, it might not be appropriate for everyone. Therefore, the need to investigate self-directed learning readiness is legitimate. This study provides an understanding of self-directed learning readiness of college students in Thailand context. The findings revealed that the students in this study reported having low to moderate level of self-directed learning readiness. The findings were consistent with previous studies (El-Gilany & Abusaad, 2013; Prabjandee & Inthachot, 2013). This means that the students were likely ready to take charge of their own learning. Educators may consider this readiness as an important sign to train students to possess self-directed learning readiness.

Additionally, the findings also indicated that there was a difference in self-directed learning readiness across years of education. The finding was consistent with Prabjandee and Inthachot (2013). This study noticed that lower years of study tended to have lower readiness, so educators may start training students at the beginning of the study. Further, different majors of study was not a factor of different readiness, so it is understandable that everyone can be trained to have self-directed learning. Based on the findings in this descriptive study, I argued that it is important to investigate self-directed learning readiness before attempting to train students since it gives a better picture about current readiness for self-directed learning.

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