THE RELATIONSHIP BETWEEN SELF-DIRECTED LEARNING SKILLS OF STUDENT TEACHERS IN SAGAING UNIVERSITY OF EDUCATION AND THEIR LIFELONG LEARNING TENDENCY

Aye Nyein Nyein Htay¹ and Wai Wai Oo²

Abstract

This study aimed to investigate the relationship between self-directed learning skills of student teachers in Sagaing University of Education and their lifelong learning tendency. The research design used in the study was correlational research design, one of the quantitative research designs. The participants in the study were first year and fourth year students in Sagaing University of Education. Data were collected by using two instruments, questionnaires for self-directed learning skills and lifelong learning tendency. There were 40 items for self-directed learning skills questionnaire and 27 items for questionnaire towards lifelong learning tendency. The quantitative data were analyzed by using descriptive statistics, independent samples t test to compare differences between gender and year of study, and Pearson product-moment correlation to examine the relationship between self-directed learning skills of student teachers and their lifelong learning tendency. The results revealed that selfdirected learning skills of student teachers and their lifelong learning tendency were at the high level and they were significantly different in terms of gender. However, there was found no significant differences based on year of study. The findings also showed that there was a moderate positive correlation between self-directed learning skills of student teachers and their lifelong learning tendency. Therefore, it can be said that student teachers had self-directed learning skills and these skills were related to lifelong learning.

Keywords: self-directed learning, self-directed learning skills, lifelong learning, tendency, student teachers

Introduction

The 21st century can be rightly regarded as a century of transformation, economic and cultural globalization and rapid technological development. It is vital to form a society which can adapt to the changes occurring in the environment by always acquiring and updating knowledge and skills necessary for everyday life and beyond. People are not able to lead their lives without continuing to learn or updating their knowledge to adapt with the changing world. The world is changing in such a frantic pace that if people do not continue to grow and develop; they will soon be left behind. Teachers and students must cope with the constantly changing era and therefore need skills to effectively cope in the 21st century.

Learning is a complex process. It has been variously described as accumulation of knowledge, improvement in an activity, solving a problem and adjustment to changing situations. Learning generally defined as the process by which behavior is developed or altered through practice or experience. New skills, changes in old responses, attitudes, rote memory, and highly complex concepts all represent learning (Khin Zaw, 2001). Learning is all about change, and change drives learning. For the learners, change is the process of recognizing gaps, setting goals, establishing a learning plan, and maintaining motivation for carrying out the plan to achieve the goals (London, 2011). Learning how to learn is among the fundamental skills of lifelong learning. Lifelong learning covers various skills known as twenty first century skills and self-directed learning skills are part of these skills.

¹ Department of Curriculum and Methodology, Sagaing University of Education

² Department of Curriculum and Methodology, Sagaing University of Education

Self-directed learning in its largest sense refers to individuals' ability to taking initiative to identify their own learning needs, their ability to determine their learning goals, their ability to define the sources they need in order to learn, their ability to choose and use appropriate learning strategies and evaluate learning outcomes with or without help from an outsider (Knowles, 1975). In order to achieve it, individuals take responsibility for their own learning and embrace individual autonomy and preferences. Moreover, one of the most important, fundamental goals of education may be to create the conditions that lead to intrinsic motivation and a lifetime of self-directed learning (Lewis, 1995).

Purpose

The main purpose of this study was to investigate the relationship between self-directed learning skills of student teachers in Sagaing University of Education and their lifelong learning tendency. The specific objectives were as follows:

- 1. To investigate self-directed learning skills of student teachers
- 2. To find out student teachers' lifelong learning tendency
- 3. To explore the relationship between self-directed learning skills of student teachers and their lifelong learning tendency
- 4. To make suggestions and recommendation based on the results of the study

Research Questions

The related research questions were described as follows:

- At which level are self-directed learning skills of student teachers?
- Does the level of student teachers' self-directed learning skills differ by gender?
- Does the level of student teachers' self-directed learning skills differ year of study?
- What is the level of lifelong learning tendency of student teachers?
- How does student teachers' lifelong learning tendency differ by gender?
- How does student teachers' lifelong learning tendency differ by year of study?
- To what extent is there a significant relationship between self-directed learning skills of student teachers and their lifelong learning tendency?

Definition of Key Terms

The key terms of the study were described as follows:

Self-directed learning is a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes (Knowles, 1975).

Self-directed learning skill is the ability to manage learning tasks without having them directed by others. It is the skill necessary for effective lifelong learning and is of many skills students are expected to develop (Weimer, 2010).

Lifelong learning is the continuing development of knowledge and skills that people experience after formal education and throughout their lives (Encarta, 2008).

Tendency is an inclination towards a particular characteristic or type of behavior (Hornby, 2015).

Student teachers are the individuals who are being trained to become teachers (Sessanga & Musisi, 2019).

Scope of the Study

This study was restricted to student teachers in Sagaing University of Education. The participants in this study were first year (second semester) and fourth year (first semester) student teachers in Sagaing University of Education during the 2022-2023 Academic Year.

Review of Related Literature

Self-Directed Learning

Education can allow individuals to transcend boundaries of space, identity, and culture by empowering learners with the ability to pursue self-directed, lifelong learning. Valuable new meanings and understandings can be created by the interaction between self-motivated, selfdirected learners, communities, and a wide range of organizations (Rogers, 2004). Self-directed learning is an approach to education where learners take responsibility for their own learning; as such, students who are actively involved in and take control of their own learning process can be referred to as self-directed students. Empowered with motivation, metacognition, self-regulation and knowledge of the learning process, self-directed learners are well equipped for lifelong learning (Mentz, Beer & Bailey, 2019). According to Knowles (1975), SDL as a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes. Individuals must have self-directed learning skills in order to be successful in the lifelong learning process. Learning how to learn is seen as one of the most fundamental skills of lifelong learning, which is an essential skill in the 21st century. They are skills necessary for effective lifelong learning and are of many skills students are expected to develop.

Responsibility for learning: The way students perceive personal responsibility and its impact on learning is an area that deserves special attention. Personal responsibility can be defined as peoples' skill of taking individual accountability for their decisions and actions, together with the outcomes they create and their impacts on others (Linley & Maltby, 2009, as cited in Ayish & Deveci, 2019).

Self-motivation: Motivation plays a significant role in the initiation and maintenance of effort toward learning and the achievement of cognitive goals. Motivation reflects perceived value and anticipated success of learning goals at the time learning is initiated and mediates between context (control) and cognition (responsibility) during the learning process.

Self-control: Students learn to express self-control by searching for, and making a commitment to, core personal interests and aspirations. Students develop these attributes as they become skilled in managing their own time and effort and the resources they need to conduct their work (Garrison, 1997).

Self-plan: The emphasis in SDL is on the development of skills and processes that lead to productive activity. Students learn to achieve course outcomes, think independently, and plan and execute their own activities.

Self-management: Self-management is concerned with task control issues. The term self-management is used here to indicate an aspect of external control specific to the management of learning activities, which are intimately linked with goal setting and metacognitive strategies.

Self-evaluation: Similarly, students learn to evaluate their own progress. They assess both the quality of their work and the process that they designed to conduct it. In SDL, assessment is an essential means of learning and learning how to learn (Gibbons, 2002).

Lifelong Learning

Lifelong learning is a concept that is significant for people's both private and professional lives. Education today has gained a status that cannot be limited to particular time periods in human lifespan, and even the most developed countries have begun a quest for constantly developing educational system and increasing the quality of education. To update knowledge, people become aware on the importance of ongoing learning. The essence of lifelong learning is meanwhile deeper and more beneficial for everyone. According to Longworth (2005), lifelong learning is about continuously acquiring new knowledge, skills and understanding. The tendency for lifelong learning is essential for education and the continuous development of the quality of life.

Motivation: The concept of motivation aims to build a bridge between external and internal motivation. The outer conditions must support and strengthen the individual's motivation (Elsborg & Pedersen, 2013). Furthermore, there are limited empirical studies on lifelong learning and motivation, as well as how motivation contributes to lifelong learning (Ng, 2016).

Persistence: Persistence is a learner-centered concept, focusing on how, the learner is supported throughout the learning journey, both during formal study and during periods of self-directed learning. Persistence is continuation of effort and striving in the face of difficulty, opposition, or failure: it is a key characteristic of successful people across professional and academic disciplines.

Self-regulation: Not only does motivation affect how individuals perform, it also shapes their identity into lifelong learning and is another key component of self-regulated learning. Self-regulated learners demonstrate initiative to advance their skill levels and have a commitment to learning as a lifelong learning process (Zimmerman, 1989).

Curiosity: Most teachers understand that curiosity supercharges learning. Curious people have an ongoing, intrinsic interest in both their inner experience and the world around them. Curiosity is also the engine of intellectual achievement and those who are more interested in a topic will learn faster and prime the brain better for learning.

Research Method

This section presented research method including the design of study, population and sample size, research instruments, data collection procedure, and data analysis.

Research Design

This study aimed to investigate the relationship between self-directed learning skills of student teachers and their lifelong learning tendency. The research design used in the study was correlational research design which is one of the quantitative research designs and it involved the collection of information from a sample of individuals by asking them to respond to the survey questions. The sampling technique in this study was cluster sampling method.

Population and Sample Size

The target population for this study was the student teachers in Sagaing University of Education. The participants in the study were first year (second semester) and fourth year (first semester) student teachers. The number of the participants was shown in Table 1.

Table 1 Participants of the Study

Academic Year -	No. of Participants				
Academic Tear	Male	Female	Total		
B.Ed. First Year	151	164	315		
B.Ed. Fourth Year	59	91	150		
Total	210	255	465		

Research Instruments

The instruments used in the study were questionnaires for self-directed learning skills and lifelong learning tendency. Questionnaire for self-directed learning skills was constructed on the basis of the questionnaires designed by Ayyildiz and Tarhan (2015) and Garrison (1997). It consisted of total of (40) Likert-type items for eight dimensions. There were five items for each dimension. Items in the questionnaire were scored by using a five point rating scale (Never = 1, Rarely = 2, Sometimes = 3, Often = 4, Always = 5).

Lifelong learning tendency scale designed by Coskun and Demirel (2012) and Pesen and Epcacan (2017) was developed in order to learn the lifelong learning tendency of student teachers. The questionnaire included five points Likert-type items for four sub-dimensions. There were 27 items in the instrument and the items were developed on five point Likert scale: Strongly disagree = 1, Disagree = 2, Uncertain = 3, Agree = 4, Strongly agree = 5.

Procedure

First of all, the relevant data and information was collected from the library and internet sources. And the instrument was constructed under the guidance of the supervisor for investigating self-directed learning skills of student teachers and their lifelong learning tendency. To get validation, the questionnaires were distributed to the experienced teachers in Department of Curriculum and Methodology. Then pilot testing was conducted with (50) student teachers in University for the Development and National Races of the Union in the second week of November. According to the findings of the pilot test, the Cronbach's alpha value of the questionnaire for self-directed learning skills was .899 and for lifelong learning tendency was .867. After getting the validity and reliability of the instrument, the questionnaires were distributed to the target student teachers in Sagaing University of Education. When the questionnaires were returned, the collected data were statistically analyzed and interpreted.

Data Analysis

After collecting the required data, quantitative data analysis was performed by using the Statistical Package for Social Science (SPSS) version (22). Descriptive statistics was to examine self-directed learning skills of student teachers and their lifelong learning tendency. And independent samples *t* test was used to compare student teachers' self-directed learning skills and lifelong learning tendency in terms of gender and year of study. Moreover, Pearson product-

movement correlation was used to explore the relationship between student teachers' self-directed learning skills and their lifelong learning tendency.

Research Findings

This was concerned with research findings based on the data taken from the questionnaires used to gather information regarding to the self-directed learning skills of student teachers and their lifelong learning tendency.

Findings for Self-directed Learning Skills of Student Teachers

This study was intended to investigate self-directed learning skills of student teachers. Descriptive statistics was used to determine the level of student teachers' self-directed learning skills. The findings of the study were shown in Table 2.

Table 2 Descriptive Statistics of Self-directed Learning Skills of Student Teachers for each Dimension

Dimension	Minimum	Maximum	M	SD
Learning responsibility	2	5	3.94	0.55
Motivation and self-confidence	1	5	3.94	0.65
Ability to plan learning	1	5	3.66	0.57
Ability to use learning opportunities	1	5	3.68	0.65
Ability to manage information	1	5	3.38	0.54
Ability to apply learning strategies	1	5	4.15	0.61
Assessment of learning process	1	5	3.52	0.75
Evaluation of learning success	1	5	3.86	0.63
Total	2	5	3.77	0.45

According to Table 2, the mean of students' ability to apply learning strategies was the highest and the mean of students' ability to manage information was the lowest. According to mean scores interpretation described by Landell (1997, cited in Woo et al., 2018), self-directed learning skill levels for most of the dimensions were at the high level. However, the ability to plan learning, ability to manage information and assessment of learning process were at the moderate level. Generally, self-directed learning skills of student teachers were at the high level.

Comparison of Self-directed Learning Skills of Student Teachers in terms of Gender

In order to know whether there was any difference in the self-directed learning skills of student teachers in term of gender, the independent samples *t* test was used and the findings were shown in Table 3.

Table 3 The Results of t test for Self-directed Learning Skills of Student Teachers in terms of Gender

001	34.24°								
	Gender	n	M	SD	t	df	p		
Self-Directed	Male	210	148.77	19.59	-2.01	463	.046*		
Learning	Female	255	152.16	16.33	-2.01	403	.U 4 0**		

Note. *p < .05.

According to Table 3, a significant difference existed between gender and self-directed learning skills (p < .05) in favor of female students. Therefore, it can be interpreted that the self-directed learning skills of female students was higher than that of male students. It can clearly be seen in Figure 1.

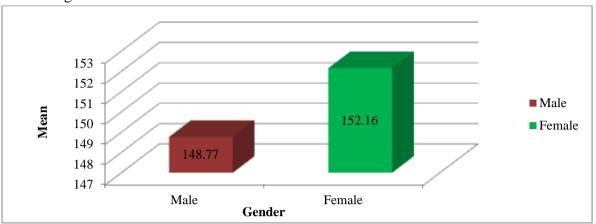


Figure 1. Mean comparison of self-directed learning skills of student teachers in terms of gender. Comparison of Self-directed Learning Skills of Student Teachers in terms of Year of Study

The participants in the first year and the fourth year in SUOE were selected for this study. The independent samples *t* test computed to determine whether there was a significant difference between them was shown in Table 4.

Table 4 The Results of t test for Self-directed Learning Skills of Student Teachers in terms of Year of Study

	Year of Study	n	M	SD	t	df	p
Self-Directed	First Year	315	150.5 4	18.85	0.15	163	.879
Learning	Fourth Year	150	150.8 1	15.91	0.15 463	403	(ns)

Note. ns = not significant.

The results showed that first year students' self-directed learning skills mean score was 150.54; while that of fourth year students was 150.81. Therefore, the analysis revealed that year of study did not cause a difference in self-directed learning skills. It was illustrated in Figure 2.

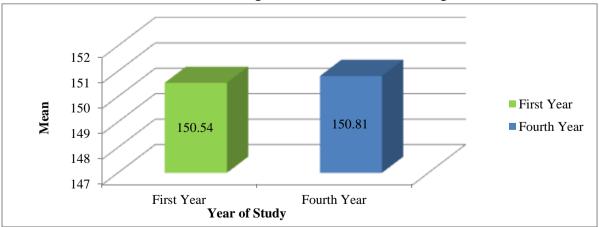


Figure 2. Mean comparison of self-directed learning skills of student teachers in terms of year of study.

Findings for Student Teachers' Lifelong Learning Tendency

This study was intended to investigate lifelong learning tendency of student teachers. The findings in the study were organized according to the subcomponents of the study and described in Table 5.

Table 5 Descriptive Statistics of Student Teachers' Lifelong Learning Tendency for each Dimension

Dimension	Minimum	Maximum	M	SD
Motivation	2	5	3.96	0.51
Persistence	2	5	3.60	0.60
Self-regulation	2	5	3.50	0.58
Curiosity	2	5	3.69	0.55
Total	2	5	3.69	0.41

Generally, when the tendency level for the whole scale was examined, it was seen that students' lifelong learning tendency level seemed to be at a high level. According to mean scores interpretation described by Landell (1997, as cited in Woo et al., 2018), for motivation and curiosity dimensions, the tendency level was high but for persistence and self-regulation dimensions, the tendency level was at the moderate level. Among them, motivation dimension was the highest and self-regulation dimension was the lowest.

Comparison of Student Teachers' Lifelong Learning Tendency in terms of Gender

Another aim of the study was to determine whether students' lifelong learning tendency differs according to various variables. The independent sample *t* test was utilized and the result was shown in Table 6.

Table 6 The Results of t test for Student Teachers' Lifelong Learning Tendency in terms of Gender

	Gender	n	M	SD	t	df	p
Lifelong	Male	210	97.93	11.74	2.94	162	005**
Learning	Female	255	100.86	10.48	-2.84	463	.005**

Note. **p < .01.

When the results were analyzed, it can easily be seen that there was a statistically significant difference among students about their lifelong learning tendency in terms of gender. The girls outnumbered the boys and this might reveal that the girls have more tendencies about lifelong learning than the boys. This data was shown in Figure 3.

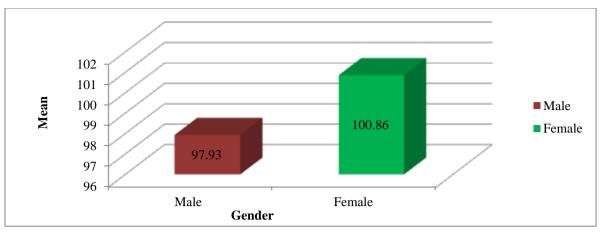


Figure 3. Mean comparison of student teachers' lifelong learning tendency in terms of gender.

Comparison of Student Teachers' Lifelong Learning Tendency in terms of Year of Study

The results of independent samples *t* test performed to determine whether the levels of lifelong learning tendency differ significantly according to year of study were presented in Table 7.

Table 7 The Results of t test for Student Teachers' Lifelong Learning Tendency in terms of Year of Study

	Year of Study	n	M	SD	t	df	p
Lifelong	First Year	315	99.32	11.48	0.50	162	.553
Learning	Fourth Year	150	99.98	10.44	0.59	463	(ns)

Note. ns = not significant.

In accordance with the results of the t test, lifelong learning tendency level of the participants seemed to get higher as the students' grade level increased but there was not a statistically significant difference according to the grade levels of them. It can clearly be seen in Figure 4.

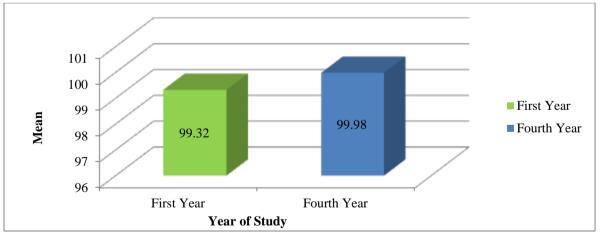


Figure 4. Mean comparison of student teachers' lifelong learning tendency in terms of year of study. Findings for the Relationship between Self-directed Learning Skills of Student Teachers and their Lifelong Learning Tendency

In order to study the relationship between student teachers' self-directed learning skills and lifelong learning tendency, the Pearson's product moment correlation was used and the findings were shown in Table 8.

		Self-directed	Lifelong
		Learning	Learning
	Pearson Correlation	1	.627**
Self-directed Learning	Sig (2-tailed)		.000
	N	465	465
	Pearson Correlation	.627**	1
Lifelong Learning	Sig (2-tailed)	.000	
	N	465	465

Table 8 Pearson Product Movement Correlation between Self-directed Learning Skills of Student Teachers and their Lifelong Learning Tendency

Note. **Correlation is significant at the .01 level (2 tailed).

It was found that there was a significant relationship between student teachers' self-directed learning skills and their lifelong learning tendency. According to Mills & Gay (2016), it can be interpreted that it was a moderate positive relationship (p < .01; r = .627). Therefore, the student teachers who are ready for self-directed learning will tend to have a higher level of lifelong learning.

Discussion and Suggestions

Discussion

The aims of this study were to examine student teachers' self-directed learning skills and their lifelong learning tendency and reveal how these skills and tendency vary based on gender and year of study. In addition, this study also examined the relationship between student teachers' self-directed learning skills and their lifelong learning tendency.

Research Question 1: At which level are self-directed learning skills of student teachers?

The results showed that the level of self-directed learning skill obtained from the sub-dimensions of the scale, namely ability to apply learning strategies, motivation and self-confidence, learning responsibility, evaluation of learning success and ability to use learning opportunities were at the high level. However, ability to manage information, assessment of learning process and ability to plan learning sub-dimensions were at the moderate level. Generally, the level of student teachers' self-directed learning skills was at the high level. According to Tekkol and Demirel (2018), students' self-directed learning skills arithmetic means were also above the median of the scale.

Research Question 2: Does the level of student teachers' self-directed learning skills differ by gender?

Analysis of self-directed learning skills with respect to gender showed that a significant difference existed between female and male students' self-directed learning skills. The results showed that female students had significantly higher self-directed learning skills than male students. However, it was found that the boys were better in the ability in managing information than the girls. Saban (2008, as cited in Tekkol & Demirel, 2018) studied teacher candidates and showed that female students have higher cognitive awareness and motivation levels than male students. Demirtas and Ozer (2007, as cited in Tekkol & Demirel, 2018) found that female have more effective time management and hold responsibility for their own learning. Therefore, it can be attributed to the differences between female and male students regarding issues that may be considered indicators of self-directed learning: using learning strategies, motivation for learning, time management and planning.

Research Question 3: Does the level of student teachers' self-directed learning skills differ by year of study?

The study also explored whether students' self-directed learning skills varied based on year of study. First and fourth year students' self-directed learning skills scores were very close. The analyses showed no significant difference between students' self-directed learning skills according to year of study. However, it was found that fourth years students have more abilities in planning learning, using learning opportunities, managing information and assessing leaning process than first year students in analyzing sub-dimensions of self-directed learning skills. The reason behind self-directed learning did not depend on year of study may be due to the fact that self-directed learning is not completely dependent on formal education, but individuals' own characteristics (Tekkol & Demirel, 2018). Gibbons and Phillips (1982) argued that self-directed learning occurs outside of formal education institutions. Therefore, the intrinsic motivation to learn may become a self-generating force for developing self-directed learning skills and encouragement needs to be increased. Moreover, it can be said that self-directed learning is a skill that can be developed informally.

Research Question 4: What is the level of lifelong learning tendency of student teachers?

In this study, it was aimed to investigate lifelong learning tendency of student teachers. Based on the findings, when the total mean score obtained from the scale was examined, it was seen that students' lifelong learning tendency level was at a high level. According to the mean scores of sub-dimensions, the tendency level for motivation and curiosity dimensions were at the high level and persistence and self-regulation dimensions were at the moderate level. Karakus (2013, as cited in Pesen & Epcacan, 2017) found out in their studies that lifelong learning proficiencies, tendencies and perceptions of the participants were at a high level.

Research Question 5: How does student teachers' lifelong learning tendency differ by gender?

The results of the study showed that there was a statistically significant difference in all subcomponents and lifelong learning tendency level of the students in terms of gender. A significant difference was obtained in favor of female students. It was also seen that lifelong learning tendency of female students was higher than male students on all dimensions: motivation, persistence, self-regulation and curiosity. Based on this, female students were found to be more enthusiastic and motivated to learn than male students. Similarly, Coskun (2009, as cited in Pesen & Epcacan, 2017) stated that females' lifelong learning competencies are more positive than males. Therefore, it can be interpreted that female students are more willing to learn new knowledge and skills, are more open to innovations, try to learn in a best way, create opportunities to learn and make more efforts in the lifelong learning process compared to male students.

Research Question 6: How does student teachers' lifelong learning tendency differ by year of study?

When the lifelong learning tendency of student teachers was examined according to year of study, there was no statistically significant difference in the lifelong learning tendency. Therefore, it can be interpreted that year of study did not depend on their tendencies towards lifelong learning. The results also showed that when lifelong learning tendency levels were analyzed with its subcomponents according to grade levels of the students, fourth year students had more curiosity, persistence and regulating learning than first year students. However, first year students had higher mean scores in motivation dimension. Pesen and Epcacan (2017) studies also showed that there was not such a difference among the students according to grade variables. Therefore, all the

student teachers had the tendency toward lifelong learning because they knew that lifelong learning is very essential for their life-improvement and plays a key role in fulfilling their learning needs and in keeping abreast with the changes in the world.

Research Question 7: To what extent is there a significant relationship between self-directed learning skills of student teachers and their lifelong learning tendency?

The study finally examined the relationship between university students' self-directed learning skills and their lifelong learning tendency. Students' self-directed learning skills and their lifelong learning tendency were found to be related with each other. According to Mills and Gay (2016), a moderate positive relationship existed between them. According to Tekkol and Demirel (2018), a moderate positive relationship was detected between self-directed learning skills and lifelong learning tendency. Lifelong learning and self-directed learning have similar properties and at times include one another. Moreover, the concepts of lifelong and self-directed learning are taken as related concepts (Brockett & Hiemstra, 1991). Students will continue their lifelong learning activities in order to develop their knowledge, skills and competencies by organizing their own learning with their readiness to self-directed learning and determining their own goals.

Suggestions

For achieving higher self-directed learning skills among student teachers, they should be allowed to identify their own learning needs and various learning strategies should be addressed in classes. Then, the students should be encouraged to monitor and evaluate their own learning processes. The educator has to motivate students so that they will have a positive attitude, a feeling of independence and a willingness to learn and improve their SDL skills. For self-directed-learning, the educator should encourage students to move out of their comfort zone by providing new challenges and unfamiliar learning conditions and creating problem-solving situations. Moreover, students should have the required amount of time for self-directed learning and sufficient learning resources because the implementation of SDL takes time and lack of sufficient learning resources is one of the challenges for self-directed learning.

Further awareness about the lifelong learning approach should be created through activities such as seminars, conferences and the teachers should support students to acquire various lifelong learning skills. Moreover, the teachers should also provide the ways on how to regulate learning and students should know them well. The lifelong learning recognizes that learning is not confined to childhood or the classroom, but takes place throughout life and in a variety of situations. So, it is important to be continuous learning for an individual's personal development as well as their occupational information in terms of basic characteristics and practice areas.

Based on the research that has been done, recommendations that can be given are as follows. It is important to carry out a qualitative and mixed method research to provide a deeper understanding of the phenomena in the study. Moreover, it is very important to determine factors that would positively develop lifelong learning tendencies of student teachers. Undergraduate and graduate students' self-directed learning skills and lifelong learning tendencies should be investigated comparatively. Furthermore, the self-directed learning skills of academics and teachers and students from different stages of education should be explored.

Conclusion

Education is an ongoing process throughout one's lifetime. Especially, the main purpose of education is transferring global values to individuals. In modern society, education is an important

factor in every individual's life in order that they sustain their lives in a qualified way. Furthermore, it is a leading concept which facilitates the development of all aspects of society. Therefore, both students and teachers need to be educated about the rationale of self-directed learning which is essential for the education system. Self-directed learning provides individuals with the knowledge, skills, values, attitudes and understanding they will need in life, and it makes communities more productive and innovative. Lifelong learning is a self-monitor, reflective, directed learning situation. Therefore, no one can deny that the terms lifelong learning and self-directed learning are important for teachers and students at the present time and in the future, because both terms emphasize the learner's role as an active learner, the effectiveness of teaching learning process and the improvement of their life.

Self-directed learning and lifelong learning are continuously supportive processes which stimulate and empower individuals to acquire all the knowledge, values, skills and understanding they will require throughout their lifetimes and to apply them with confidence, creativity and enjoyment in all roles, circumstances and environment. Both have been considered as the important parts of the education system in today's world. Moreover, students who enjoy self-directed learning and lead successful lifelong learning process will be able to make significant contributions to their individuals' lives, the communities and the country. The study also pointed out to be aware of student teachers' self-directed learning which is essential for lifelong learning and to improve self-directed learning skills. Therefore, this study will be the contributing factor to the effective teaching learning environment, the education system and the development of the country.

Acknowledgements

First of all, we are especially grateful to Dr. Myat Myat Thaw, Rector, Sagaing University of Education and Dr. Khin Hnin Yee and Dr. Cho Kyi Than, Pro-rectors, Sagaing University of Education, for their permission to do this study. We also wish to express our profound gratitude to Dr. Soe Than (Retired Professor and Head of Department of Curriculum and Methodology, Sagaing University of Education) for his valuable instruction, advice and guidance throughout this study.

References

- Ayish, N., & Deveci, T. (2019). Student perceptions of responsibility for their own learning and for supporting peers' learning in a project-based learning environment. *International Journal of Teaching and Learning in Higher Education*, 31(2), 224-237.
- Ayyildiz, Y., & Tarhan, L. (2015). Development of the self-directed learning skills scale. *International Journal of Lifelong Education*, 34(6), 663-679. Doi: 10.1080/02601370.2015.1091393
- Brockett, R. G., & Hiemstra, R. (1991). *Self-direction in adult learning perspectives: on theory, research and practice*. New York: Routledge.
- Coskun, Y. D., & Demirel, M. (2012). Lifelong learning tendencies of university students. *University of Hacettepe, Journal of Education*, 42, 108-120.
- Elsborg, S., & Pedersen, S. H. (2013). *Non-formal adult education and motivation for lifelong learning*. Copenhagen: Danish Adult Education Association.
- Encarta. (2008). Lifelong learning. Retrieved from http://encarta.msn.com/dictionary_561547417/ lifelong_learning.html
- Garrison, D. R. (1997). Self-directed learning: Toward a comprehensive model. *Adult education quarterly*, 48(1), 18-33. Doi: 10.1177/074171369704800103
- Gibbons, M. (2002). The self-directed learning handbook: Challenging adolescent students to excel. San Francisco: Jossey-Bass.
- Gibbons, M., & Phillips, G. (1982). Self-education: The process of life-long learning. *Canadian Journal of Education*. 7(4), 67–86.
- Hornby, A. S. (2015). Oxford advanced learner's dictionary (9th ed.). Oxford: Oxford University Press.

- Khin Zaw. (2001). Cybernetic analysis of learning theories. Yangon: Yangon Institute of Education.
- Knowles, M. S. (1975). Self-directed learning: A guide for learners and teachers. Cambridge: Englewood Cliffs.
- Lewis, C. (1995). *Educating hearts and minds: Rethinking the roots of Japanese educational achievement.* Cambridge: Cambridge University Press.
- London, M. (2011). The Oxford handbook of lifelong learning. New York: Oxford University Press.
- Longworth, N. (2005). *Lifelong learning in action: Transformation education in the 21st century.* London: Taylor & Francis.
- Mentz, E., Beer, J, D., & Bailey, R. (2019). *Self-directed learning for the 21st century: Implication for higher education*. Cape Town: AOSIS Ltd.
- Mills, G. E., & Gay, L. R. (2016). *Educational research: Competencies for analysis and applications* (11th ed.). Harlow: Pearson Education Limited.
- Ng, B. (2016). Towards lifelong learning: Identifying learner profiles on procrastination and self-regulation. *New Waves Educational Research & Development*, 19(1), 41-54.
- Pesen, A., & Epcacan, C. (2017). The analysis of high school students' tendencies about lifelong learning. *Universal Journal of Educational Research*, 5(12), 26-31. Doi: 10.13189/ujer.2017.051305
- Rogers, T. (2004). Towards conscious self-directed learning. Human Resources Magazine, 9(5), 22-23.
- Sessanga, J. B., & Musisi, B. (2019). The role of teacher education in developing employability skills in higher education. Retrieved from https://www.igi-global.com/dictionary/remote-university-supervision-of-student-teachers/64261
- Tekkol, I. A., & Demirel, M. (2018). An investigation of self-directed learning skills of undergraduate students. Frontiers in Psychology, 9(2324). Doi: 10.3389/fpsyg.2018.02324
- Weimer, M. (2010). *Developing students' self-directed learning skills*. Retrieved from https://www.faculty-focus.com/articles/teaching-and-learning/developing-students-self-directed-learning-skills/
- Woo, P. S., Ashari, Z. M., Ismail, Z. B., & Jumaat, N. F. (2018). Relationship between teachers' self-efficacy and instructional strategies applied among secondary school teachers in implementing STEM education. *International conference on teaching, assessment and learning for engineering*, 454-461.
- Zimmerman, B. J. (1989). Models of self-regulated learning and academic achievement. In B, J. Zimmerman, & D, H. Schuank (Eds.), *Self-regulated learning and academic achievement: Theory, research, and practice*. New York: Springer-Verlag New York Inc.