HOW TO BUILD SELF-DIRECTED LEARNING READINESS (SDLR) AS THE FOUNDATION FOR NURSING STUDENTS TO BE LIFELONG LEARNERS? A SCOPING REVIEW

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ABSTRACT

Background: Lifelong learning in nursing will be led to increased quality of education, development of nursing competency, and finally, increased quality of patient care. Nursing is a lifelong profession and Self-Directed Learning (SDL) is a valuable skill to remain relevant and productive professionals. Nursing students are expected to embrace SDL and develop these skills. This review aimed to discover determinant factors of Self-Directed Learning as a foundation for being a lifelong learner, **Methods:** The scoping review method adapted the Arksey and O'Malley framework. There were 11 out of 290 articles selected based on inclusion and exclusion criteria. **Results:** Self-Directed Learning Readiness built from three themes namely self-management, desire to learn, and self-control. Combining all the evidence, the results showed that SDL was shaped by internal factors (age, gender, self-efficacy, intelligence, desire, motivation, willingness to learn, level of education) and external factors (environment, learning opportunities, cooperation). In the SDLR method, the learning process changes from teacher-directed to learner-directed. **Conclusions:** Nursing institutions should provide the necessary resources to embrace SDL as a main-line teaching method to ensure competent lifelong professionals.

Keywords: Self-Directed Learning Readiness, lifelong learners, nursing students

INTRODUCTION

Self-directed learning is a necessary skill for students and staff to become lifelong learners. Self-directed learning allows nurses to remain flexible, open to change, and maintain their professional development Self-directed learning (SDL) is a learning method that is increasingly used in adult education colleges. Self-directed learning has been discussed in the literature in two ways aspects, process, and personal characteristics. Some researchers have defined it as a focusing process for student autonomy during learning, while others have defined it as a personal characteristic that focuses on the student's ability to organize learning (Knowles, 1975; Song & Hill, 2007) defined it as the process of learning, with or without the help of others, to know one's own learning needs, setting learning goals, defining human and material resources learning, choosing and applying an appropriate learning strategy for the knowledge to be learned and evaluation of learning outcomes. Self-directed learning (SDL) is a teaching method that can be defined as the responsibility that the learner acknowledges for his learning (Örs, 2018)

The characteristics of a self-directed learning individual are lifelong learning and independent learning, the ability to

self-regulate, control one's own learning, correctly define learning goals and evaluate one's own learning. (Boyer & Kelly, 2005) considered self-directed learning as a lifelong social system. According to this system, self-directed learning is a cyclical process involving inputs, processes, outputs, and feedback. Examining the features of this system, it is understood that individuals can continue to use self-directed learning in their professional lives. Because of their self-management, people can identify the areas in which they are lacking. They can learn to constantly improve their shortcomings and thereby become more suitable in their field. Although there are different descriptions of self-directed learning in the literature, (Straka, 2000) identified common points in that description where people take responsibility for their own learning, plan the learning, consider actual learning, and evaluate their learning. Currently, we live in the information age, from the point of view of the effectiveness of learning, it is important to choose the necessary information from the constantly growing accumulation of information, to define appropriate strategies, and to be able to manage one's learning process (Örs, 2018).

Readiness for self-directed learning is defined as the extent to which an individual possesses the attitudes, skills, and personality traits necessary for self-directed learning (K, 1983). The personality characteristics of many students affect their readiness for self-directed learning. For example, learner characteristics such as age, gender, and prior experience can act as facilitators or barriers to self-directed learning (Karimi, 2016). Additionally, (Cadorin et al., 2015) stated that the more clinical experience nurses have, the more self-directed their learning. Therefore, there is reason to believe that self-directed learning can influence nursing competence (Yang & Jiang, 2014). Nurses work in a complex healthcare environment where they constantly face challenges stemming from ongoing social and scientific changes in healthcare (Örs, 2018).

A self-directed learner embraces the freedom to learn what he or she considers important. In addition, self-directed learners acquire time planning, stress management, task preparation, exam preparation, and note-taking skills (Khiat, 2017). Self-directed learning is a necessary skill for students and staff to become lifelong learners. In the profession of midwifery and nursing, there is a growing need for professional nurses who update their knowledge, become independent, think independently, and make their own assumptions and decisions. Thus, more and more attention has been paid to self-directed lifelong learning in educational literature, and it is considered a critical educational goal (Stewart, 2007)

The nurses can use the principles of self-directed learning to develop their professional skills. Self-directed learning allows nurses to remain flexible, open to change, and maintain their professional development. It also helps to develop application skills, self-confidence, and professionalism (Hinchliff, 2009). It can be said that self-directed learning is an important part of the sustainability of midwifery and nursing education. There are many studies on self-directed learning in the literature. This study appears to be important because it contributes to this gap in the field. The results of this study are expected to contribute to the self-efficacy of nursing students, the understanding of the importance of lifelong learning, and the development of programs and literature that reinforce the tendency of lifelong learning.

METHODS

Scoping reviews are a type of research literature review framework for synthesizing both published and gray literature (Patterson, C., Crooks et al., 2015). The scope is similar to other forms of systematic review, and, like traditional systematic reviews, research reviews begin with the primary research question. These

questions are however vast and exploratory. Protocols for determining the scope of the review are developed forward and again as a traditional systematic review, inclusion and exclusion criteria, and procedures are predefined (Patterson, C., Crooks et al., 2015).. Due to the iterative nature of the process, however, deviations are allowed (Patterson, C., Crooks et al., 2015).. The main purpose of scoping is to identify gaps research the knowledge and report on the types of evidence to inform about industrial practices. Scoping assessments do not include formal methodological quality assessment (Joanna Briggs Institute, 2015) and do not contain much statistical information (Patterson, C., Crooks et al., 2015). Instead, the results are synthesized and presented narratively. Interval estimates allow researchers to identify a range of available research on the topic and how the research has progressed and therefore can be particularly useful as evidence related to the chosen topic still appears (Joanna Briggs Institute, 2015; Whittemore et al., 2014). Given the emerging evidence for the self-directed learning readiness for preparing lifelong learners, we decided that the scope would be revised would be the most appropriate way to identify whether step to build self-directed learning readiness, explain basic concepts, and report on the evidence base for determinant factor. We conducted this review methodically The framework proposed by (Arksey & O'Malley, 2005); this framework includes six steps, the sixth of which is optional. We decided to include the first five steps, which included: (1) Identifying research questions, (2) identifying relevant studies, (3) Selection of studies, (4) data mapping, and (5) compilation, summary, and reporting the results.

1. Identify research questions

Question Development is an important step that underlies all evaluation protocols for determining search strategies, inclusion and exclusion criteria, and data extraction (Butler et al., 2016). This review has population The Exposure, Outcome, Study Design (PEOS) framework was used as a tool. the key concepts of the focus overview are defined. The PEOS framework can be shown in Table 1.

Table 1. Framework PEOS

P (Population)	E (Exposure)	O (Outcomes)	S (Study Design)
Nursing students Medical Students Midwifery students	Self-Directed Learning Readiness	self-management, desire to learn, and self-control	All research studies/study design related the SDLR and lifelong learning

So the research question in this review is what are the determinant factors to build Self-Directed Learning Readiness for nursing students to be lifelong learners?

2. Identify the relevant article

There are three steps in identifying relevant articles. The first step is to determine the database. The databases used are *PubMed, ScienceDirect* and *Google Scholar*. The second step, determine the inclusion and exclusion criteria. Articles were filtered according to inclusion criteria, namely articles published from 2017-2023, articles published in Indonesian and English, primary research articles (original research), systematic reviews, cross-sectional studies and no country-specific criteria. The exclusion criteria are opinion articles and thesis manuscripts. The third step is to determine the focused keywords based on the framework, expanded by determining synonyms through the Thesaurus and Boolean (can be seen in table 2).

Table 2. Articles Search Keywords

Database	Keywords search
Google Scholar	SDLR in nursing or health students
PubMed	(Self-Directed Learning Readiness) AND nursing
Science Direct	(Self-Directed Learning Readiness) AND (Nursing Students)

3. Selection of articles

The screening process is used to assess the relevance of research identified in the search according to the desired characteristics of the literature A search using three databases found 290 articles. Then the articles were filtered based on duplication, abstract, and title as well as full-text reading. So found 11 articles that will be reviewed. Then a critical appraisal was carried out using the Quality Assessment Tool from Hawker and the classification of the total quality of the articles used the Lorenc assessment. The findings of the number of articles and the article screening process are contained in the PRISMA Flowchart in Figure 1.
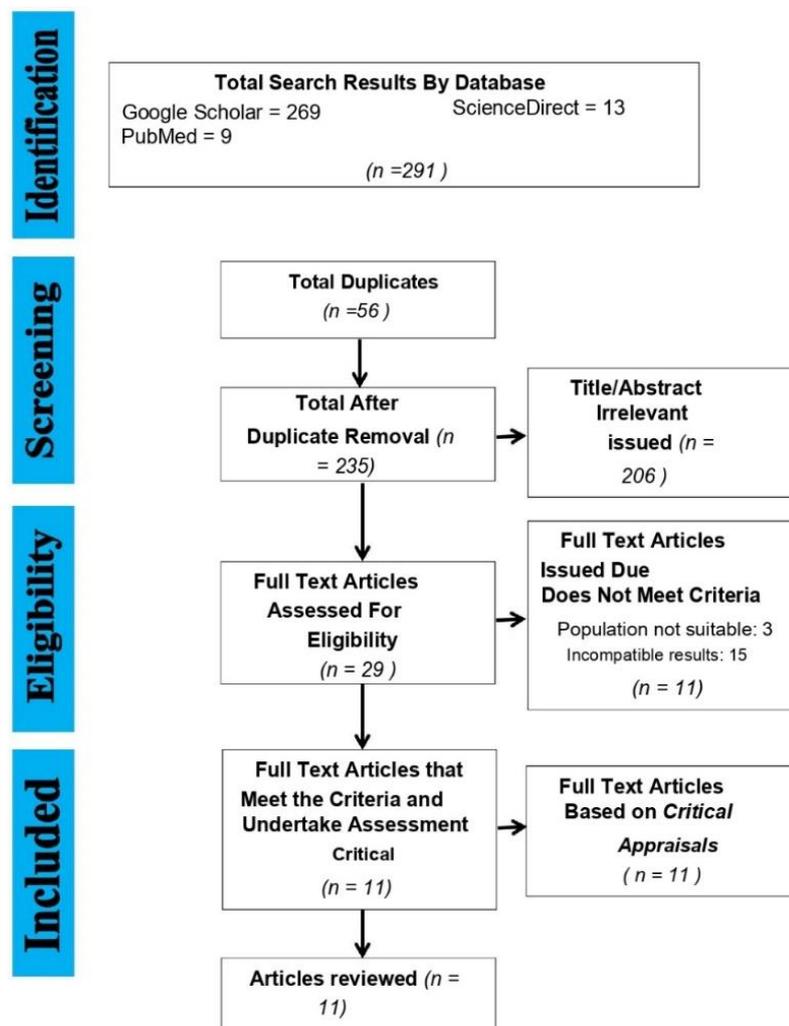

Figure 1. PRISMA Flowchart (The Joanna Briggs Institute, 2015)

4. Data charting

Based on the 11 selected articles, data charting was then carried out to include several key points from the articles such as author, location, research objectives, methodology, number of samples, and findings from the study. Charting data can be seen in Table 3 Data Charting.

Table 3. Data Charting

No	Title/ Researcher, Year/ Country	Objective	Method	Participant	Results
1	Self-Directed Learning Readiness (SDLR)For Students OfThe Faculty Of Medicine, University Of Muhammadiyah Semarang (Pradana et al., 2022)	To compare self-directed learning readiness (SDLR) on student Faculty Medical University Muhammadiyah Semarang force 2018, 2019, 2020 and 2021	comparative analytic observation with cross-design section	Faculty studentsMedical University Muhammadiyah Semarang generation 2018, 2019, 2020, and 2021 with total 246 respondent Age 17 – 23 Years	The results of the analysis obtained valueswhich mean 0.00 (meaningful comparisonSDLR scores in college students medical School University Muhammadiyah Semarang has an average of 144.85, on respondent force 2019 with an average of 141.15, on respondent force 2020 with an average of 134.66, and on the respondents
2	Self-Directed Learning On Student Nursing Semester II University Country Gorontalo (Paramata & Sabudi, 2020)	For know Self-image directed Learning On Student Nursing Semester II University Country Gorontalo	descriptive d reluctantly approach descriptive survey	student Nursing Semester II state University Gorontalo a number 103 person Age 17–20 Years	SDL level of students is in the high category by 86.4%. Based on gender, all male respondents have level SDL tall or 100%, based on age, respondents aged 18 years own SDL highest as big 48.5%, based on track enter university, SDL highest owned graduate of track SBMPTN as big 56.3%, based on the residence the highest SDL respondents owned by students reside at home by 61.2%. Conclusion research is Self-Directed Learning At Student of Nursing Semester II University Gorontalo in Country category tall.
3	Motivation And Task Value Relationship With Self-Directed Learning Readiness For First-Year Of Medical Students (Luailiyah, 2022)	to determine the relationship between motivation and task value with Self-directed learning readiness	Study cross-sectional design	The research sample was active first-year students of the Faculty of Medicine, Sultan Agung Islamic University. As many as 208 students	There is a significant difference between the task value of extrinsic motivation, intrinsic motivation, and self-directed willingness to learn (p-value <0.05). Internal motivation is the most important factor of readiness for independent learning, with an OR value of 4.274 (CI 95%: 1.608 - 11.355). Students with high intrinsic motivation

No	Title/ Researcher, Year/ Country	Objective	Method	Participant	Results
					were 4.27 times more prepared for independent learning. Intrinsically motivated students know how to manage time, enjoy learning and learn from mistakes to be better in any situation
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4	Perceptions About The Clinic Learning Environment With The Readiness Of Self Direct Learning In Nursing Professional Students (Ballad et al., 2022)(Puspitaningsih,2 022)	To know the connection between the perception students to environment learning clinic with readiness Self-direct learning	analytic quantitative with approach cross-section	42 nursing students	Application methods that learning varied in environment academic And environment clinic capable of creating an atmosphere learning comfortably with interaction Which Good, so that increase the effectiveness process learning And readiness SDL
5	Self-directed learning readiness and learning styles among Omanis nursing students: Implications for online learning during the COVID-19 Pandemic (Ballad et al., 2022)	explore study readiness independent (SDL) among student nursing in Oman, style learn them (LS), and connection variable demographics and LS with SDL.	design descriptive, cross-sectional	surveyed 236 student nursing Oman Age 18-37 Years	Academic probation status and analytic LS both generate the SDL score lower. Learners perceptive, solitary, competitive, or imaginatively inclined have higher SDL scores tall. Planning and deliberate strategy are needed to help probationary students cope with academic demands especially with emergence

No	Title/ Researcher, Year/ Country	Objective	Method	Participant	Results
					digital education intensive. Because there isn't one accessible learning environment to meet every need of LS, nurse educators should implement strategy teaching and learning addressed For SDL that appeals to a wide range of participant educate.
6	Association of learning environment and self-directed learning abilities among nursing undergraduates: a cross-sectional study using canonical correlation Analysis (Tang et al., 2022)	This research explores the relationship between perception environment study and the ability Of self-directed learning (SDL) on students nursing.	a study cross-sectional done on month December 2020	1096 students nursing junior undergraduate and senior (aged 16-22) from Wannan Medical College in Anhui Province, China.	Linear regression analysis double express that the perception of student learning (SPL), perception self academics (SASP), student perceptions about mood, and perception of social self students have a significant impact on SDL capabilities.
7	Factors Influence SDL Readiness And Self-Esteem In A Clinical Adult Nursing Practicum After Flipped Learning Education: Comparison Of The Contact And Untact Models (Cho & Kim, 2021)	this study measures study readiness self, price self, motivation learner, professor-interaction student and clinical instructor-student, self-confident in doing Skills core, participate in activity online stress clinical practice, and hospitality second model.	randomized control trial with two groups and studies pretest-posttest.	85 students in College nursing in Seongnam City in Korea	Three factors affect SDL readiness is FMCM, motivation learner, and friendliness environment, with power explanatory by 31.6% (F = 13.96, p <0.001). Motivation learner, lecturer interaction with students, and hospitality environment influence pride, with a power explanation of 54.7% (F = 34.86, p < 0.001).
8	Self-directed learning readiness and online learning self-efficacy among undergraduate nursing students (Salah Dogham et al., 2022)	Evaluate the relationship between study readiness independent and self-efficacy study online between student nursing bachelor in Arab Saudi.	Design study descriptive correlational	282 student nursing from 3 Colleges nursing selected in Arab Saudi	Self-learning readiness student part big range between average and above average . That relationship is significant between the second scale and discusses how self-efficacy is part important in readiness Study independent.

No	Title/ Researcher, Year/ Country	Objective	Method	Participant	Results
9	Factors Associated With Self-Directed Learning Among Undergraduate Nursing Students: A Systematic Review (Wong et al., 2021)	To identify factors associated with SDL ability among undergraduate nursing students	systematic reviews	-	The results of the review reveal SDL development with influence interaction environment/situation and personal influence. Educator nurses must be more aware of the effects of factors This on the development of SDL during various stages of studies.
10	Measuring self-directed learning readiness in health sciences undergraduates: A cross-sectional study (Rascón-Hernán et al., 2019)	To measure study readiness independent of science student health	Cross-study sectional descriptive observation l	1699 students enrolled in undergraduate sciences health	The sampled students exhibited good self-directed learning readiness. Training students in self-directed learning skills is a necessary part of the teaching-learning process. This kind of training in universities needs to be reinforced to develop learning autonomy, promote lifelong learning and prepare a competent future health professional.
11	Lifelong learning strategies in nursing: A systematic review (Qanbari Qalehsari et al., 2017)	to clarify lifelong learning strategies of nursing students with respect to international experience.	Systematic review	In this systematic review, an extensive investigation was carried out using Persian and English studies in Pub Med, ProQuest, Cochrane, Ovid, Scopus, Web of Science, SID, and Iran Doc using the following keywords: lifelong learning, self-directed learning, lifelong learning model, continuing education, nursing education, and lifelong program. Finally, 22 articles published from 1994 to 2016 were selected for the final analysis. Data extracted from the selected articles was summarized and classified based on the research questions.	In this study, 8 main themes, namely intellectual and practical independence, collaborative (cooperative) learning, researcher thinking, persistence in learning, need-based learning, learning management, suitable learning environment, and inclusive growth, were extracted from the article data.

5. Compile, summarize, and report results

According to what (Levac et al., 2010) did to compile, summarize, and report the evaluation results can be done by describing article characteristics and thematic analysis.

RESULTS

Thematic analysis :

The three main topics are divided into several subtopics. The results of these findings are presented in Table 3 below: Characteristics of the articles Based on the review of the ten articles, three main themes emerged: self-control, desire to learn, and self-control. Combining all the evidence, the results showed that SDL was shaped by internal factors (age, gender, self-efficacy, intelligence, desire, motivation, willingness to learn, level of education) and external factors (environment, learning opportunities, cooperation).

Table 4. Thematic Analysis

Themes	Sub-themes	References
the self-management, the desire of learning, and self-control	Internal factors (age, gender, self-efficacy, cleverness, will, motivation, readiness to learn, level of education) external factor (environment, learning facilities, collaboration).	1.2.3.4.5.6.7. 8.9,10,11

DISCUSSION

Three basic aspects of activities and program activities are important elements in Self-Directed Learning, namely as follows:

a. Self-management

The biggest change from teacher-directed learning to self-directed learning is the change in influence from the teacher to the student. For students, this means a transition from external to internal control. The student begins to form his own opinions and ideas, make his own decisions, choose his own activities, take responsibility for himself, and enter working life. Challenge students to develop their learning, develop them individually and help them practice for more mature roles. Self-directed learning not only makes students learn effectively but also makes students themselves change more (Riadi, 2021).

Establishing appropriate human relationships is key to collaborative learning, and the ability to communicate effectively is a prerequisite for lifelong learning. Another important theme of lifelong learning is persistence in learning, which is achieved through continuing education in today's nursing education systems. Continuing professional education has a positive effect on persistence in medical studies (Qalehsari,2017)

Learning management is another lifelong learning strategy. In this study, learning management refers to self-evaluation, goal setting, information management, time management, goal selection, strategy, and internal and external accountability. In a 2002 study by Patterson et al., they named self-evaluation, evaluation of others, reflection and knowledge management as self-directed learning skills (Qalehsari,2017).

b. The desire for learning

In self-directed learning, freedom of choice and freedom are linked to self-control and responsibility. The student learns to express self-control by finding and making responsibilities, interests, and aspirations. Self-directed learning requires conviction, courage, and determination to put in the effort. Students develop these qualities and become experts in managing

their time, effort, and resources. By facing obstacles, the student learns to face his difficulties, find alternatives and solve problems in order to maintain effective productivity. Self-directed learning requires a combination of internal resources and performance skills (Riadi, 2021).

Teaching from within serves no purpose unless students learn to focus and apply their talents and skills. Self-directed learning emphasizes the development of skills and processes that lead to productive performance. The student learns to achieve the results of the program, to think independently, and to plan and implement his activities. Students prepare and discuss with their teacher. The goal is to create a framework that helps students identify areas of interest and equip them for success (Riadi, 2021).

Cooperative learning was another theme of this study. Cooperative learning means group learning, interaction with students, rewarding interaction, learning from others, cohesion, and empathy. Since nursing is a group activity in a hospital, a suitable platform for group activities can be created in a society or university. In one study, trust and cohesion explained 37% of self-directed learning. Research also shows that working in small groups has a positive effect on motivation and self-directed learning. An appropriate platform for group activity is created by regulating faculty-student relationships and providing basic services such as adequate classrooms and a satisfactory physical environment (Qalehsari, 2017).

Students' high motivation (liking) of difficult and challenging lecture material, satisfaction with understanding the material in order to understand it, and choices that can encourage further learning are all positively correlated with self-study readiness. High intrinsic motivation enables students to improve all components of SDLR. The desire to learn comes from strong self-motivation (internal motivation), which plays an important role in creating passion, enthusiasm, and

enjoyment for learning so that those who are motivated have a lot of energy to perform learning activities (Lualiyah, 2021)

c. Self-control

The biggest change from teacher-directed learning to self-directed learning is the change in influence from the teacher to the student. For students, this means a transition from external to internal control. The student begins to form his own opinions and ideas, make his own decisions, choose his own activities, take responsibility for himself, and enter working life. Challenge students to22 develop their learning, develop them individually and help them practice for more mature roles. Self-directed learning not only makes students learn effectively but also makes students themselves change more (Riadi, 2021).

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CONCLUSION

The results of the review showed the evolution of SDL the interaction of environmental/situational influence and personal influence. There should be more nurses aware of the influence of these factors on the development of SDL at different stages of research. Strategies with independent learning and group learning effectively improve students' learning abilities. importantly continuous support and guidance from teachers are crucial to improving students' SDL lifelong learning while studying. Nursing institutions should provide the necessary resources to embrace

SDL as a main-line teaching method to ensure competent lifelong professionals.

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