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MEASUREMENT OF INDEPENDENT LEARNING READINESS OF PROSPECTIVE TEACHER STUDENTS

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ABSTRACT: Indonesia continues to be committed to improving the quality of human resources. This is realized through the Ministry of Education and Culture, which promotes and implements a curriculum that supports learning freedom. The application of this curriculum requires not only theoretical support but also more practical technical support, which cannot be ignored. In this regard, the Mandalika University of Education, especially the biology education department, has held workshops related to technical guidance for implementing the freedom to learn curriculum. However, it is essential to understand that there needs to be more information regarding the readiness of prospective biology teacher students to implement this curriculum. Therefore, this research was conducted to describe the level of readiness of prospective biology teacher students for independent learning. In this research, 53 prospective teacher students were involved voluntarily as respondents, including 42 women and 11 men, consisting of 12 (semester 1), 15 (semester 3), 17 (semester 5), and 9 (semester 7). The instrument used to measure the level of readiness for independent learning was adapted from the self-rating scale of self-directed learning (SRSSDL) questionnaire. Next, data regarding readiness for independent learning was analyzed descriptively and quantitatively. Based on the results of the analysis, it was found that 16.98% were not very ready (low or unprepared), 73.58% were not ready (moderate), and 9.43% were ready (high). These results also show that prospective biology teacher students have the same level of readiness for independent learning or that there is no significant difference in readiness for independent learning based on semester differences. Apart from that, of the SRSSDL components, self-awareness and learning activities have the lowest averages (32.51 and 32.09). Thus, our respondents (in this case, prospective biology teacher students) are not ready for independent learning. Regarding what will be done next, can be seen in the conclusions and recommendations section.

Keywords: Level of Independent Learning Readiness, SRSSDL, Biologi Prospective Teacher Students.

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INTRODUCTION

Education as a humanizing institution continues to develop, not only in teaching methods but also in teaching objectives (Kurent & Avsec, 2023). We can see that in education in the current century (21st century), teaching is shifting from teacher-centred to student-centred. Likewise, the skills that are focused on, such as critical and creative thinking, problem-solving, communication, and

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collaboration (Miller et al., 2023), also include socio-emotional skills, such as mutual respect, identifying weaknesses and self-excellence, and making the right decisions (Maoulida et al., 2023). To achieve this original intense of education in the 21st-century, various efforts have been made, but the most important and fundamental thing is to provide students with an understanding of the nature of lifelong learning, and this can happen if students are motivated, equipped with independent learning competencies, helps improve the quality of students' learning and prepares them for the future (Sumuer, 2018), facing the world of work and adapting to the changing dynamics of society (Justus et al., 2022).

The term or concept of independent learning is synonymous with adult learning (Gillaspy & Vasilica, 2021; Mota & Scott, 2014; Walankar & Panhale, 2021) or transformative learning theory (Rodrigo et al., 2023), emphasizing the importance of lifelong learning, and significantly increasing professional competence in their respective fields (McGrath et al., 2015). Apart from that, experts and researchers also use different terms when referring to the term learning independence (Field et al., 2015), such as self-directed learning (SDL) (Alkorashy & Alotaibi, 2023; Li et al., 2022; Taylor et al., 2023; Tekkol & Demirel, 2018), some use the term self-regulated learning (SRL) (Kim & Moon, 2019; Mejeh & Held, 2022), learning autonomy (Hidayatullah & Csíkos, 2023; Hu & Zhang, 2017; Lin & Reinders, 2019; Yang et al., 2022), and deep learning (Zhao & Qin, 2021).

However, the minimum conception is no different; namely, the students take control and responsibility for their learning, have internal motivation to set learning goals, develop, apply, and evaluate approaches, processes and learning outcomes, and learn from their experiences and actions (Belawati et al., 2023; Chitkara et al., 2016; Liu & Sullivan, 2021; Okwuduba et al., 2021; Onah et al., 2020; Shao et al., 2022; Tang et al., 2022; Taylor et al., 2023), develop the attitudes, values, knowledge and skills necessary to make responsible decisions and take appropriate actions regarding their learning (Field et al., 2015). In short, independent learning refers to the learning process carried out by students while accepting or not asking for help from others (Gao et al., 2023; Strout et al., 2022; Örs, 2018; Tekkol & Demirel, 2018; Yang et al., 2021).

In higher education (HE), the concept of independent learning is identical to SDL (Cadorin et al., 2016; Chen et al., 2022), where students organize their learning according to their needs, utilize various learning resources, and choose their learning methods independently (Chen et al., 2022). SDL is a concept present in many of the current frameworks on 21st-century learning and has often been regarded as a critical part of individualizing learning experiences (Morris, 2019). SDL is associated with critical thinking, curiosity, understanding quality, making sound decisions, increased learning motivation, interpersonal communication, self-confidence, and independence. These skills are needed by prospective teacher students (Cadorin et al., 2016).

Naude et al. highlights the need for HE practitioners to enhance a growth mindset in students and an internal locus of control, ensuring that university settings encourage the development of intrinsic motivation. Hence, educators are responsible for instructing and instilling the development of these abilities through

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purposely included aspects of the curriculum (Cachia et al., 2018). Overall, SDL is an essential skill for educators to develop in their students. It can help promote lifelong learning, better equip students for the workforce and adapt to a fluid and dynamic society (Justus et al., 2022).

In connection with the above, the Indonesian government, through the Ministry of Education and Culture, is promoting independent learning through the independent learning curriculum. Of course, it does not only aim to help students understand the importance of independent learning and the nature of lifelong learning as one of the keys to success (Qizi & Kobiljanovna, 2021) but also as an effort by the Indonesian government to improve the quality of human resources. This policy pressures every educational institution, especially HE, to prioritize teaching independent learning. In its application, of course, it requires sufficient foundation, both theoretical and technical support. For this reason, the Mandalika University of Education, one of the private universities in West Nusa Tenggara, especially the biology education department, in January 2024 held a technical guidance workshop regarding the implementation of the independent learning curriculum.

However, it seems logical, important, and fundamental to measure students' independent learning readiness. The reason is, until the technical guidance workshop was held there was no information or research results at Undikma regarding students' readiness for independent learning. Apart from that, if the teaching of independent learning is implemented without first measuring readiness, various obstacles will certainly be found because not all students are ready for the implementation of the independent learning curriculum. Students who are ready will certainly adapt more easily, while students who are not ready will feel anxious, bored and frustrated (Justus et al., 2022). Therefore, measuring readiness for independent learning is the first step for the effectiveness and success of teaching independent learning, the results of which can be used to determine steps and methods to help increase the independent learning of prospective teacher students. Finally, this research aims to describe the readiness level of prospective teacher students for independent learning. The research questions to be answered are: 1) what is the level of readiness for independent learning of prospective biology teacher students?; and 2) is there a difference in readiness for independent learning between prospective biology teacher students based on semester differences?

METHOD

This research was conducted at the Mandalika University of Education. Then, a survey was conducted to answer the research questions. In survey research, researchers do not manipulate variables but only describe phenomena or characteristics of respondents, in this case regarding their readiness for independent learning. The total number of biology education students registered as active students in the 2023/2024 academic year is 91. Then, in this research, 53 prospective biology teacher students participated voluntarily, namely 42 women and 11 men. These respondents were collected during the odd semester lecture

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holidays for the 2023/2024 academic year. Consists of 12 (semester 1), 15 (semester 3), 17 (semester 5), and 9 (semester 7).

To measure the level of readiness for independent learning, we adapted the self-rating scale of self-directed learning (SRSSDL) questionnaire developed by Williamson (2007), which consists of 5 components: self-awareness, evaluation, learning strategies, interpersonal skills, and learning activities. Each element consists of 10 statements. After the questionnaire has been compiled on Google Forms, it is then sent to students via a WhatsApp group coordinated by the head of the biology education study program department. Then, respondents gave their responses to each statement by giving a score based on a Likert scale, namely 1 (strongly disagree), 2 (disagree), 3 (agree), and 4 (strongly agree).

Then, the data that has been obtained is analyzed descriptively and quantitatively. Descriptive analysis aims to see our respondents' readiness level for self-directed learning by paying attention to the total SRSSDL score as shown in Table 1 and to identify SRSSDL components (low and high) based on the average of each SRSSDL component. Meanwhile, SPSS 22 for Windows was used in quantitative analysis to see differences in each SRSSDL component based on semester differences, carried out using the Kruskal Wallis test.

Table 1. The Criteria for Readiness for Self-Directed Learning.

Score	Criteria	Interpretation
50 - 116	Low	Unprepared to self-directed learning, and really need help.
117 - 183	Moderate	Towards the stage of self-directed learning while still needing help and identifying deficiencies that need to be improved.
184 - 250	High	Demonstrates an effective self-directed learner.

RESULTS AND DISCUSSIONS

To get a clear picture of this research, the information is presented in two parts, namely the results and discussion sections.

Results

The results regarding the level of readiness for self-directed learning can be seen in Figure 1, namely 9.43% of respondents are ready for self-directed learning. Meanwhile, 16.98% were very unprepared, and 73.58% were not ready (moderate). Thus, it can be said our respondents are not ready for self-directed learning. Then, the results regarding the status of each SRSSDL component can be seen in Table 2, where the learning strategies have the highest average (32.62), and the lowest average is the learning activities component (32.09). Furthermore, from the information shown in Table 3, it is stated that there are no significant differences in each SRSSDL component based on semester differences. These results indicate that our respondents have the same level of readiness for independent learning.

Table 2. General Average Scores of Readiness for Independent Learning.

SRSSDL Component	n	Mean	Std. Deviation
Self-awareness	53	32.51	4.02
Learning strategies	53	32.62	4.37
Learning activities	53	32.09	4.47
Evaluation	53	32.55	4.49

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SRSSDL Component	n	Mean	Std. Deviation
Interpersonal skills	53	32.60	4.19

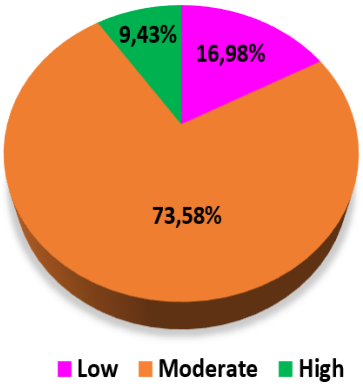

Figure 1. Diagram of Our Respondents' Level of Independent Learning Readiness.

Table 3. Readiness for Independent Learning Based on Semester Differences.

	Self-Awareness	Learning Strategies	Learning Activities	Evaluation	Interpersonal Skills
Chi-Square	1.83	.71	.75	.88	.54
df	3	3	3	3	3
Asymp. Sig.	.61	.87	.86	.83	.91

Discussion

The analysis results, especially those seen in Figure 1 and Table 3, show that our respondents need more time to be ready for independent learning. The results of this study are consistent with previous findings by Mufti et al. (2022) that most medical students have a moderate level of readiness, while nursing students are at a moderate level (Abdelhafez et al., 2020). However, these results are slightly different from the findings of Gürçayir et al. (2019). They show that most nursing students have self-directed learning scores above 150, indicating they are ready for independent learning.

Looking at these results, there are at least two very influential factors. First, is the relationship between students and lecturers, namely how students perceive themselves as learners and lecturers as teachers. Students with close relationships with their lecturer demonstrate higher achievement than their peers without such close relationships (Prewett et al., 2019). The findings Firdaus et al. (2021) show that most students view lecturers as the only source of knowledge. They (students) position themselves as recipients of knowledge. This kind of student perception can hinder their thinking process, creativity, and self-directed learning, where, in the end, whatever they do is up to the lecturer. Likewise, the student's motivation influences his learning outcomes (Chai et al., 2021) and how he focuses and represents himself in the learning process. Students who focus on understanding will focus on developing their knowledge and skills. Meanwhile, students who focus on performance will try to demonstrate their abilities to others.

Second, the relationship between lecturers and students, namely how lecturers view their students and themselves as teachers. What lecturers perceive

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and how they perceive their duties substantially impacts their performance (Chia & Goh, 2016; Jaya et al., 2023) and strongly influences student attitudes and learning outcomes (Brandmiller et al., 2020). Lecturers' perceptions or attitudes towards students cannot be ignored, whether as an attribute or factor of student success (Tandler & Dalbert, 2020). Bol and Berry found that teachers' expectations and perceptions significantly impacted outcomes. Lecturers' perceptions or valence towards students can be harmful and positive (Kahveci, 2023; Purković & Kovačević, 2020; Tandler & Dalbert, 2020). If positive, it can have a positive impact on student achievement. Lecturers with a positive attitude tend to work hard to fight for the success of their students (Purković & Kovačević, 2020). In addition, lecturers' perceptions of students and their duties influence them in designing effective teaching (Tandler & Dalbert, 2020), having new points of view, being proficient in a subject, being able to interpret information, being fair, respectful, and encouraging their students (Kahveci, 2023). This confirms various arguments regarding the potential role that teachers can play in bridging students' learning experiences in the classroom and outside the classroom (Lai et al., 2017).

Although from the results we obtained, it can be stated that most of our respondents were not ready for independent learning, which could be caused by various factors addressed to them, such as perceptions, attitudes, motivation and family background (AlRadini et al., 2022). However, it must be understood that whatever about them, attitudes, perceptions, motivation and independent learning must be viewed as a scientific reality, an effect of the teaching process (Purković & Kovačević, 2020). So, the main factor must be addressed to lecturers. Apart from that, we also did not deny or become discouraged when we saw these results. However, on the contrary, through these results, we realized that we, as teachers, had been ignoring the active involvement of students in the teaching process. The results we found suggest that teaching reconstruction should be carried out by involving students in the teaching process (Tajane & Varghese, 2021), not only allowing them to interact or discuss with their friends and lecturers but also involving them in taking over and determining his learning. In this way, it is hoped that it can positively impact students' learning independence, awareness of their learning process, and the learning strategies used to achieve their learning targets (Saeid & Eslaminejad, 2016).

From these results, we can see the strengths and weaknesses of our respondents (see Table 3). Therefore, to help them become independent learners, we must focus on their deficiencies, especially the components of self-awareness and learning activities. Some experts say that self-awareness is not just knowledge about what is happening but is also a dynamic process (Kurent & Avsec, 2023). Lin et al. said that responsibility and awareness of learning are essential competencies in independent learning (Diteeyont & Yu, 2023). Recent research on independent learning shows that self-awareness and high motivation have better learning outcomes or performance than learning that only emphasizes active learning (Chen et al., 2022). As lecturers, we not only aim to help them become independent learners but also continuously monitor their learning progress and provide feedback on their learning results so that they can reflect on their

weaknesses (Lin & Reinders, 2019; Sukkamart et al., 2023), determine the steps they need to take to improve their learning outcomes, develop a deeper understanding of their learning process, and ultimately, they can increase their self-awareness independently (Sukkamart et al., 2023).

CONCLUSION

Before we draw conclusions from our results, of course, the research we conducted is only free of all its shortcomings. The respondents involved in this research only came from one department (biology education), so these results cannot be generalized. In other words, these results could be very different if measurements were carried out in other departments at the Universitas Pendidikan Mandalika or on other campuses. Then, regarding respondents who only included students majoring in biology education, we had yet to receive approval from the heads of different departments (such as chemistry, physics, and mathematics education).

Finally, from the results of the analysis that has been carried out, whatever the findings of this research, it cannot be denied that our respondents, who in this case are students majoring in biology education, were declared not ready for independent learning. However, this unpreparedness is not absolute. The results of this research are imperative, especially for lecturers, to continue raising our respondents' enthusiasm to become independent learners. This can be done by maximizing their active role in learning, combining various learning models, and emphasizing the importance of independent learning and lifelong learning.

RECOMENDATIONS

The absence of information or research regarding readiness for independent learning is the main reason for declaring this result normal. However, these results are seen as an effect of the teaching process. In other words, the learning carried out so far does not accommodate independent learning. Therefore, further research, as an effort to train and increase student learning independence, begins by focusing more on student self-awareness.

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