THE EFFECTIVENESS OF CYBER COUNSELING TO ENHANCE STUDENTS' SELF REGULATED LEARNING

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Abstract

This research aims to determine the effectiveness of cyber counseling to improve students' self-regulated learning (SRL). This research method uses a pretest-posttest control group design. Data was collected by using self-regulated learning scale, which had been validated and its reliability had been measured. The research population were 195 students with 8 students selected using purposive sampling as its sample. The data analysis technique uses the t-test. The results of this research reveal that cyber counseling is effective in improving students' SRL as seen from the difference in the average of SRL's score between students who were given cyber counseling and students who were not given cyber counseling.

Keywords: cyber counseling, Self-Regulated Learning, Students

Introduction

The increasingly rapid development of the times makes counseling a necessity in the world of education. Education has an important role in improving student development tasks and solving problems experienced by students. Guidance counseling exists as a forum to help students improve their development tasks and solve students' own problems (Sinaga, Qurrata, & Andini, 2022). Counseling is a process of relationship between a professional and an individual, where the individual is assisted by the professional in finding the problem (Jones, 1987). The implementation of counseling services is often carried out face to face between the counselee and the counselor in one room. However, the rapid development of technology makes all aspects of life present with different methods, including the counseling process. Counseling can be carried out remotely and assisted by technology connected by the internet network. This phenomenon in counseling is called cyber counseling or known as e-counseling.

In 1990 at the Bandung Institute of Technology (ITB) and University of Indonesia (UI), the internet entered Indonesia in the form of a Local Area Network (LAN). Since then until now, the development of the internet has been very rapid and has been widely used by all groups, including in the process of implementing virtual counseling. Cyber counseling has been around since 1970 with the Eliza and Parry application software abroad. The development of cyber counseling in Indonesia has seen the emergence of many applications that use the internet network. Cyber Counseling is a model of virtual counseling or counseling that takes place with the help of an internet connection where the counselor and counselee are not physically present at the same time and space, in this case the counseling process takes place via the internet in the form of a website, e-mail, facebook, video conferencing and other innovative ideas. The implementation of this service is carried out by counselors to provide comfortable assistance that counselees need in dealing with problems that cannot be carried out face to face (Helen, 2009).

The presence of cyber counseling provides counselors with the opportunity to develop counseling models and the counselor profession in facing global competition (Pasmawati, 2016). So, adapting to the times and technological advances requires counselors to continue to innovate in providing counseling services to the community. This is because society's need for counseling services continues to increase (Haryati, 2020). The condition of society which continues to be busy with work demands and the high access to virtual communication emphasizes the need for online counseling for society (Seechaliao & Yurayat, 2021). Counselees (clients) no longer need to come to the counselor's office and no longer need to pay transportation costs, because counselors and clients can meet virtually. The online counseling practice carried out by counselors has been widely discussed about its effectiveness, its curriculum, practices, models, and all the tools needed (Pipoly, 2013; Engel, Engel, & Mailoa, 2020; Ifdil & Ardi, 2013). It can be understood that this virtual-based counseling concept creates a special attraction for students in participating in the process of implementing guidance and counseling services at school because students can be more flexible in participating in learning at school. The virtual-based counseling process provides many conveniences for students and counselors in achieving guidance and counseling service goals.

Hussin et al., (2006) found that 90% of people sought online help by communicating with a virtual counselor. Online counselors have the responsibility to protect confidentiality as long as no other person can access the account or application used for counseling (Prasetiawan, 2016). The development of cyber counseling can improve students' self-regulated learning. Self-regulated learning, hereinafter referred to as SRL, is the active role of students in the process of compiling and controlling cognition such as motivation which can achieve learning goals by trying to control feelings, thoughts and behavior (Utami et al., 2020). SRL can be called independent learning, which is a learning situation where students/learners have control over the learning process through knowledge and application of appropriate strategies, understanding of their tasks, strengthening decision making and learning motivation. There are three phases in SRL, including (1) the planning phase (forethought), namely task analysis and self-motivational beliefs, (2) the performance/volitional control phase, namely self-control and self-observation of the individual. (3) self-reflection phase, namely self-assessment and self-reaction.

So success in learning is every student's dream. Learning is a process that consists of input, process and output. To get good learning achievement (output), the learning process needs to be paid attention to. Each individual has the goal of learning strategies for effective learning by arranging the right method and time. This is in line with the effectiveness of implementing cyber counseling, namely fast, practical, cost and time saving. Then Cyber counseling can make it easier for students to achieve learning goals, the learning activities carried out can change students' attitudes, skills, increase knowledge and habits in learning. SRL is needed by students in carrying out learning activities. With SRL, students can design strategies to increase their learning potential, in the sense that self-control in learning makes students motivated. Students who have high SRL have a high probability of achieving success in their learning (Latipah, 2010). Based on the explanation above regarding the development of cyber counseling to improve students' self-regulated learning, this research is of interest as the aim is to reveal the effectiveness of cyber counseling to improve students' self-regulated learning.

Method

This research used a pretest-posttest control group design method. In this design there were two groups. Both the first group (experimental) and the second group (control) were given a pre-test and post-test. The experimental group was given cyber counseling and the

control group was not given cyber counseling. Data was collected using the SRL scale and analyzed by using T-Test. The SRL scale is a Likert scale (5 options) has 3 indicators or phases namely forethought phase, performance phase, and self reflection phase. Harahap (2017) had validated the scale with 24 items that showed $r_{count} > r_{table}$ (0.250). The population of this study were students of the Islamic Education Guidance and Counseling Study Program, Faculty of Tarbiyah and Teacher Training (BKPI FITK) involving 8 samples selected through purposive sampling with the criteria of low and medium SRL scores. To implement cyber counseling between counselors and counselees using a counseling application called CurBarYuk.

Result and Discussion

SRL is a skill needed for students to organize themselves in relation to existing academic tasks and demands. SRL provides an overview for students to manage their schedules and academic demands based on their individual capacities. The pre-test was carried out to obtain an overview of the SRL conditions of the students as many as 195 students. In general, the description of SRL for BKPI study program students can be seen from the following table:

Table. 1 Students' SRL Condition

Interval	Category	f	%
>119	High	32	16.41
97-118	Medium	134	68.72
<96	Low	29	14,87
Total		195	100

From the table above, data was obtained that as many as 32 students (16.41%) have SRL in the high category, as many as 134 students (68.72%) have SRL in the medium category, and as many as 29 students (14.87) have SRL in the low category. Based on this data, 8 students were selected as samples using SRL criteria with medium and low scores.

Implementation of cyber counseling, after carrying out a pre-test regarding the SRL condition of students, students who have low SRL were selected to be given cyber counseling with 3 sessions for each client. There were 8 students selected who had the lowest SRL.

After providing counseling services via cybercounseling to students, there was an increase in SRL in these students. The increase in student SRL after being given cyber counseling can be seen in table 2 below:

Table. 2 Students' SRL after cybercounseling

Interval	Category	F
>132	High	6 (75%)
122-131	Medium	2 (25%)
<123	Low	0 (0%)
Total		100%

The table above shows that there is a significant change in the sample with 6 students (75%) in the High category and 2 students in the Medium category (25%). The differences in the percentage and SRL category for each student before and after being given treatment can be seen in the table below:

Tabel. 3 The Difference of Students' SRL Before and After Cyber Counseling

Sample	Before cybercounseling		After cybercounseling	
	Score	Category	Score	Category
1	63,6	Low	92,9	High
2	63,6	Low	91,4	High
3	63,6	Low	87,1	Medium
4	63,6	Low	84,3	Medium
5	61,4	Low	93,6	High
6	62,1	Low	92,9	High
7	59,3	Low	91,4	High
8	61,4	Low	94,3	High

From the data above, it can be concluded that there is a significant change in students' SRL conditions before being given cyber counseling services and after being given cyber counseling services, which means that cyber counseling is effective in increasing students' SRL. To test its significance, further analysis was carried out using the t-test to support the effectiveness of cyber counseling carried out in this research. This t-test was then analyzed using the SPSS program. The results can be seen in the table below:

Table. 4 Mean of Control and Experiment Group

	sampel	N	Mean	Std. Deviation	Std. Error Mean
Eks-contr	eks	8	127.38	4.868	1.721
	contr	9	95.78	3.667	1.222

If we look at the average score, it shows that the control group (95.78) is lower than the experimental group (127.38). This shows that there is an average difference between students with low SRL who are given cyber counseling and students with low SRL who are not given cyber counseling treatment.

Table 5 T-Test Result

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Ekspk ontr	Equal variances assumed	1.193	.292	15.230	15	.000	31.597	2.075	27.175	36.019
	Equal variances not assumed			14.969	12.957	.000	31.597	2.111	27.035	36.159

Then, based on the results of the sig. Levene's Test for Equality of Variances is 0.292>0.05, which means that the data variance between the experimental group and the control group is homogeneous or the same (Sujarweni 2014). Then, based on the independent samples test output table, the Sig value is known. 2-tailed is 0.000<0.05. So it can be concluded that there is a significant difference between the experimental group and the control group.

SRL is an important part of the learning process. This is because SRL plays a role in self-regulation related to daily learning activities (Ozyer and Altinsoy, 2023; Mustajab, Baharun, and Fawa'iedah, 2020; Nix, et al, 2019). With SRL, students can carry out academic activities better because the academic activities they carry out involve planning, self-control and reflection. In the planning aspect, students can know well the things they

need to do immediately. This aspect encourages them to understand the priority scale in carrying out academic assignments given by lecturers. The form of this planning is then executed in every activity carried out by students. Students can work effectively and efficiently because they have a thorough plan so that there is no more work on assignments that are sudden, late, or even unworkable. In the final aspect, after planning and self-control have been carried out, students can carry out self-reflection. In this self-reflection activity, students evaluate or assess the planning and self-control they carry out (Ozyer and Altinsoy, 2023). This is to assess the extent of the success of his planning and self-control. Not only that, reflection also provides guidance for students to reformulate the goals they want to achieve. The initial findings obtained were that students' SRL was in the medium and low categories, which means this finding could have a negative impact on their learning outcomes at the end of the semester.

For this reason, students' SRL must be improved in order to obtain optimal learning outcomes. One effort to increase students' SRL can be done by implementing various guidance and counseling services for students. However, the implementation of guidance and counseling for students is considered to be less effective considering that access to guidance and counseling services in schools is different from universities (Ardi, Yendi, Ifdil, 2013). In school units, it may be easy for guidance and counseling teachers to meet the students directly to carry out counseling. However, in Higher Education, students' busy and uncertain schedules make the implementation of guidance and counseling services be difficult. In addition, in higher education, guidance and counseling services managed under the Guidance and Counseling Management Unit (UPBK) may not be available. For this reason, we need a platform that makes it easier for students to access the guidance and counseling services available at universities. The platform is an application that is easy for both students and counselors to use to carry out the guidance and counseling process. Implementation of guidance and counseling using information media and technology which is then referred to as cyber counseling (Ifdil and Ardi, 2013).

Cyber counseling is the implementation of counseling services using information media and technology (in the form of applications) that can connect counselors and clients. In this case, cyber counseling is carried out to increase the students' SRL of the Islamic Education Guidance and Counseling Study Program, Faculty of Tarbiyah and Teacher Training, North Sumatra State Islamic University, Medan. Students who experience low SRL are then grouped to be given cyber counseling. After being given cyber counseling to students, their SRL increased significantly. Students' SRL increased to the Medium and High categories seen from the post test results. This means that the use of cyber counseling is effective in increasing students' SRL.

Increasing student SRL with counseling services has proven to be effective (Utami, et al, 2020; Heriyati, Caraka, 2022; Nisa, 2021; Pranoto, et al, 2022; Priyambodo, 2019; Warni and Firman, 2020; Vauziah, Fitriany, and Suherman, 2020; Hasna and Prasetiawan, 2022). Even increasing SRL with various information media and technology is also effective (Fahyuni, et al, 2020; Ozyer and Altinsoy, 2023; Ozdal, et al, 2022; Mahmud and German, 2021; Barth, 2019). Students who receive cyber counseling feel the benefits of counseling services for themselves. Not only that, the access they get is also easy (Li, et al, 2023; Karacan, Yildiz, Atay, 2022). So far, they have had problems meeting with counselors due to busy schedules and distance for students who come from outside the city. With cyber counseling, they can contact a counselor at any time and carry out the counseling process (Lee, Watson, and Watson, 2020). On the other hand, the cyber counseling used with the application developed by this researcher was assessed by students as an application that is easy to use, like an online motorcycle taxi application or an online shopping application. In general, online counseling developed based on a website is considered not to provide many benefits to students due to the limitations of the website

which is not communicative to the counselor or at least to the admin. On the other hand, cyber counseling which is carried out with the CurBarYuk application makes it easier for students to be able to communicate with the admin at any time and be connected to the counselor on duty compared to the website. However, cyber counseling with the Curbaryuk application still needs development. Some items and displays seem monotonous and untidy. Not only that, for prospective clients (not students) who need to pay counseling fees, the payment process is not yet connected to the e-wallet applications that are currently widely available. Students (clients) still use manual payments to the e-wallet account of one of the admins and then confirm. It is best if payments can be made via various e-wallets that are widely used by the wider community and, if necessary, in collaboration with certain banks.

Conclusion

The condition of Self-Regulated Learning (SRL) of Islamic Education Guidance and Counseling Study Program students, Faculty of Tarbiyah and Teacher Training, North Sumatra State Islamic University, Medan, is in the High category with 32 students (16.41%), the Medium category with 134 students (68.72%), and the Medium category with 134 students (68.72%), and Low category as many as 29 students (14.87%). Implementation of cyber counseling to improve student SRL starts from pre-test activities to determine students' SRL level. The pre-test results were analyzed and used as a reference for grouping into control and experimental groups. The experimental group received cyber counseling for 3 sessions via the CurBarYuk application downloaded on the Google Apps Store. Counselors and clients meet in the CurBarYuk application to carry out the counseling process in order to improve student SRL. After the cyber counseling session ends, the SRL assessment is carried out again through a post test. The implementation of cyber counseling is effective in increasing students' SRL. This can be seen from the post test conducted by researchers in the experimental group, namely 6 students (75%) were in the High category, 2 students (25%) were in the Medium category, and there were no students (0%) in the Low category.

This research still needs to be continued, especially in perfecting client-friendly applications. It's caused the appearance of the application still makes some clients confused about its use. Not only that, sometimes this application experiences problems so that it involves third party applications in carrying out counseling sessions when this application should be able to accommodate these needs. Because this research increases students' SRL through cyber counseling, it is possible that there are other variables that influence increasing students' SRL besides cyber counseling. For this reason, further research needs to be carried out in order to find out what aspects influence the increase in students' SRL during the therapy period outside of online counseling sessions.

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Author Contributions Statement

ACP presented the idea. MHP and NH helped ACP in designing the research steps. ACP focused in some theories and previous research about this theme while MHP and NH investigated the SRL to the students and computing the data. Then, ACP and MHP delivering cyber counseling to the counselee. Last, all authors discussed the results and contributed to the final manuscript

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