Developing a web-based online counseling service application

Ahmad Miftah
Guidance and Counseling, SMP Negeri 3 Bantaeng
Email: miftahppb09a@gmail.com
Farida Aryani
Guidance and Counseling, State University of Makassar
Email: farida.aryani@unm.ac.id
Arnidah
Educational Technology, State University of Makassar
Email: arnidahkanata@gmail.com
Muhammad Anas
Guidance and Counseling, State University of Makassar
Email: m.anas@unm.ac.id
Abdul Saman
Guidance and Counseling, State University of Makassar
Email: abdulsaman@unm.ac.id

Abstract: The purpose of this study is to develop *LAKON* (*Layanan Konseling Online)*, which is a web-based online counseling service application that provides guidance and counseling service for students and teachers at SMK Telkom Makassar (Telkom Vocational High School of Makassar). The approach of this research is R&D/Research and Development. This research was conducted through seven main stages, which are (1) research and information collecting, (2) planning, (3) developing preliminary form of product, (4) preliminary field testing, (5) main product revision, (6) main field testing, and (7) operational product revision. The product of this research, the application, was validated by a material expert and a media expert. A quantitative descriptive analysis technique with a predetermined score distribution and scale category were used in this study. Results of the validation are: (1) based on the material expert's judgment, the application is very appropriate with a total percentage of 88.88% and (2) based on the media expert judgment, the application is very appropriate with a total percentage of 79.1%. Based on these results, the online counseling service application that has been developed is suitable to be used as a means of providing counseling services at SMK Telkom Makassar.

Keywords: Online counseling service application, web-based, Vocational High School

Abstrak: Tujuan penelitian ini untuk menghasilkan aplikasi layanan konseling online berbasis *website* untuk siswa dan guru bimbingan dan konseling di SMK Telkom Makassar. Pendekatan penelitian ini adalah *R&D/Research and Development,* Penelitian ini dilakukan melalui tujuh tahapan utama, yaitu, (1) Penelitian awal dan pengumpulan informasi, (2) Perencanaan, (3) Penyusunan format model awal, (4) melakukan uji coba tahap awal, (5) melakukan revisi model utama, (6) melakukan uji coba lapangan model utama, (7) melakukan revisi model operasional. Pengujian produk aplikasi yang divalidasi oleh 1 ahli materi dan 1 ahli media penyebaran media pembelajaran yang telah dikembangkan. Metode yang digunakan untuk menganalisis data adalah teknik analisis deskriptif kuantitatif dengan distribusi skor dan kategori skala yang telah ditentukan. Hasil validasi media pembelajaran adalah: (1) Ahli materi menilai sangat layak dengan presentase sebesar (88,88%). (2) Ahli media menilai sangat layak dengan presentase sebesar (79,1%). Berdasarkan hasil tersebut maka Aplikasi layanan konseling online yang telah dikembangkan layak digunakan dalam pemberian layanan BK di SMK Telkom Makassar.

Kata Kunci: Aplikasi layanan konseling *online*, *website*, Sekolah Menengah Kejuruan

INTRODUCTION

Guidance counseling in Indonesia commonly refers to educational institution, such as vocational high school, with 16-18 years old students (Listiyani, 2021). Ismaya (2015) stated that vocational high school period is a transition period in the progress of becoming mature in which a person's self-developmental problems often arise. In dealing with the students' problems in an educational institution setting, school counselors play a role in solving them and thus a guidance and counseling service is needed.

Nowadays, information technology is developing rapidly, one of which is internet. The number of internet users in Indonesia is increasing each year and this can be seen from the data of internet use, especially the use of online media, which is accessed by all students, teachers, and parents (Habibah et al., 2021). The rapid development of information technology turns out to have a significant positive influence on the world of education. The development of the internet can give opportunities to develop an online application of guidance and counseling services (Harlina et al., 2020).

E-counseling services are not only limited to the implementation of counseling, but also extended to provide complete guidance and consultation with the help of technology (Hastuti & Tyas, 2021). Previous e-counseling service programs or applications that have been used to support the implementation of guidance counseling are Problem Revealing Tool (*Alat Ungkap Masalah*/AUM), Development Tasks Analysis (*Analisis Tugas Perkembangan*/ATP), Check List of Problems (*Daftar Cek Masalah*/DCM), IKMS App, Student Database Program, E-sociometry Program, Guidance and Counseling Management Information System (*Sistem Informasi Manajemen Bimbingan dan Konseling*/SIMBK) and so on (Wibowo, Milenia, & Azmi, 2019).

Initial interviews with the school counselor in SMK Telkom Makassar showed that the students are young people who are familiar with industrial revolution 4.0 (Firman, 2019), so they can easily access information through the internet, such as social media in which they can express their feeling personally and they do not really need school counselor to find solutions. Besides, the school counselor often experiences difficulties in providing their services regarding with the lack of supporting facilities and infrastructure as well as limited time to do face-to-face meeting. The counseling service in SMK Telkom Makassar was done only by face-to-face meeting. However, online counseling service that has been done was delivered through only commonly used social media app such as WhatsApp, Facebook, Line, and Instagram without the presence of any app specifically designed for counseling services (Mansyur et al., 2020). Therefore, the school counselors are encouraged to upgrade their knowledge of information technology in order to facilitate the provision of guidance and counseling service to the students (Arista, 2017).

Observations on school counselor showed that SMK Telkom Makassar has 1,161 active students compared to only 3 school counselors. The ratio of school counselor and the students is 1:387, whereas the ideal ratio in high school or equivalent is 1: 150-160 (Kemendikbud, 2016).

The rapid development of information technology and communication has become a part of lifestyle today. It also affects educational institutions in which guidance and counseling services are provided. Online counseling services are considered effective because they can facilitate counselors and students to conduct a counseling without distance and time constraints. The media that can be used in online counseling includes email, Facebook, asynchronous chats, RILIV application, video conferencing, mobile phones, and websites (Fadhilah et al., 2021). Online counseling service application is also expected to provide school counselors with convenience in storing and archiving their data, and to make their way of doing the counseling more efficient, especially for those at SMK Telkom Makassar. Cybercounseling services has been widely applied to a number of schools in Indonesia. Prahesti & Wiyono (2017) stated that one high school in Gresik has implemented online counseling services or cybercounseling by using a website. Based on all of the above, developing a web-based Lakon at SMK Telkom Makassar is an interesting topic to be researched.

METHOD

Research and Development (R&D) approach was used in this study. It means that the process of the study has gone through some stages with various methods. Procedural development model, which is descriptive model was implemented in this study. The development model refers to development strategies by Br Bangun & Hasan Saragih (2015) with the stages of: 1) research and information collecting, (2) planning, (3) developing preliminary form of

product, (4) preliminary field testing (expert validation), (5) main product revising (first revision), (6) main field testing (small group testing), and (7) operational product revising (second revision).

The web-based Lakon at SMK Telkom Makassar was developed in this research with an aim to provide convenience to the school counselors in providing guidance and counseling services. Here are the steps of developing the web-based Lakon. In expert judgment or expert validation stage, the web-based Lakon was tested by 2 school counselors, 1 field practitioner, and 1 expert of media design. Primary data of the subject was gathered from several data collecting techniques, which are interviews, observations, and questionnaires. Descriptive quantitative technique of data analysis was conducted in this research by making use of the data from the questionnaires for the experts and field practitioner. Quantitative data is real statistics – the number resulted from a calculation may come from additions, comparison with total number, and resulted in a percentage (Rijali, 2019). The formula for the percentage is set as follow (Sari et al., 2017):

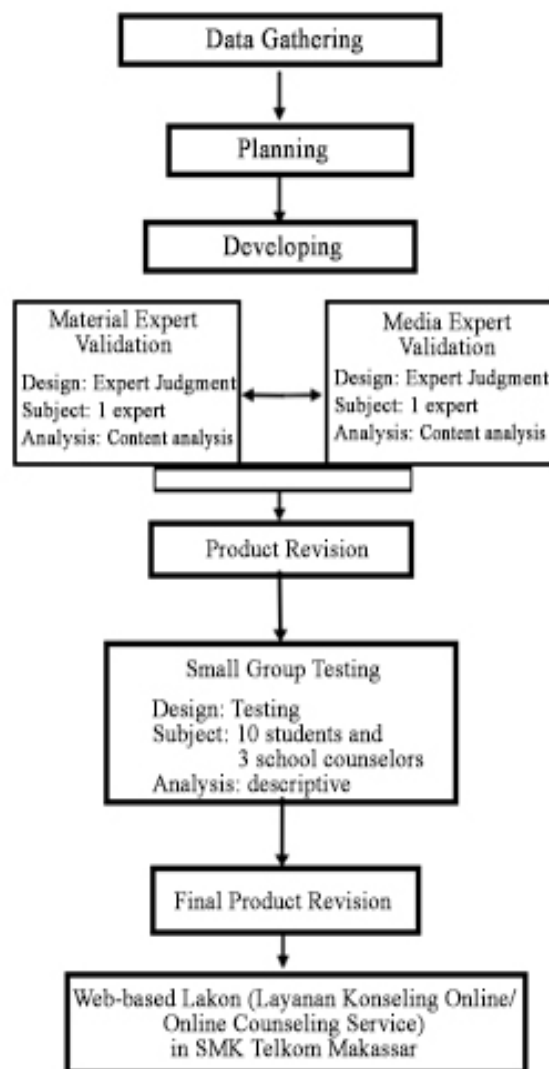$$x_i = \frac{\sum S}{S_{max}} \times 100\%$$

Diagram 1. The development stages of web-based Lakon

Table 1. Percentages and Appropriateness Categories

No.	Score in Percentage (%)	Appropriateness Category
1.	0% - 25%	Inappropriate
2.	26% - 50%	less appropriate
3.	51% - 75%	Appropriate
4.	76% - 100%	Very Appropriate

RESULTS AND DISCUSSION

This study was conducted at *SMK Telkom Makassar* and aimed to produce a web-based online counseling service to be used by school counselors to provide their service toward the students. Based on the observation and interview with the school counselors, it is known that the frequency of voluntary individual counseling was low and there was not any application to help school counselors to provide their services. Besides, the school counselors were limited to provide the services due to the lack of facilities

and infrastructure such as the absence of counseling room. The counseling was provided with conventional method and it made the students uninterested and bored. School counselors stated that there was not any specific media which can be used to help the providing counseling services virtually, so they used to face to face counseling. School counselors also stated that they need a certain application to provide online counseling services with interesting, interactive, effective, and fun ways for the students.

Based on the analysis of initial observation and interview, the counseling service application needs to include: 1) an online feature that can facilitate counseling without being hampered by distance and places, 2) a feature to input data about students and archive it, 3) an easy-to-use interface so the students can choose the school counselor, and 4) a data security to protect students' data. Based on those considerations, a web-based online counseling service needs to be developed with certain stages, purpose, and benefits. The developed web-based online counseling service is a website for an online counseling named Lakon. The name comes from the acronym of *Layanan Konseling Online* (Online Counseling Service). Lakon is specifically designed for the students and school counselors of SMK *Telkom Makassar*. Lakon is an online counseling service provider combined with the school's face-to-face counseling. Not only an interactive feature, but the students can also choose the school counselor on their own interest and use some other features. Moreover, Lakon also provides self-help feature with its articles written to help the students solving their problems regarding their individual or group. Besides, through Lakon, school counselor may post inspiring articles on home of the website and the students can also send their articles or drawings to the school counselors to be showed on Lakon's dashboard.

Lakon is web-based application which can be accessed by counselee, counselor, and super admin through any devices (desktop or mobile devices) and from any operating systems. Lakon has a logo with an icon of people talk to each other and communicate through bubble chats and also the words "Lakon (*Layanan Konseling Online*)" beside.

Diagram 2. Lakon's Logo

Guidance and counseling can be done virtually with chatting feature, in which the counselee just need to type a chat to the counselor and wait for the respond. To do a guidance and counseling in a group, counselee have to submit a request to the counselor through individual counseling option. When the counselee's request is accepted by the counselor, the counselor will then switch the individual counseling to group counseling and add several other counselees. To provide guidance and counseling individually or in groups, the counselee must first log in using the user id and password provided by the super admin.

The administration of the *LAKON* application is related to the registration and the log in process of the users. The user registration system is centered on one super admin who is in charge of adding and removing users. The super admin asks the guidance counseling teacher to fill out a form about personal data, email address, and password. There are three parts of procedures for using the Lakon application: 1) Counselor User Interface with 3 main features, which are uploading articles, responding to individual counseling from counselees, and switching to group counseling; 2) Counselee User Interface with 3 main features, which are viewing articles uploaded by counselors, creating new individual counseling, and joining group counseling created by counselors; and 3) User Admin Interface with 2 main features, which are managing users and managing chats.

To access the Counselor User Interface and the Counselee User Interface, the user must first login using the provided account and password then they can add articles with the *"tambah artikel"* menu, respond to individual counseling from the counselee, respond to the counseling chat from the counselee by selecting the *"konseling individual"* menu, and switch individual counseling to group counseling by clicking the *"alihkan ke konseling kelompok"* button. The counselor can change the profile data on the counselor's account by clicking *"nama akun"* as well as see notification of incoming

messages sent by the counselee through notifications. On the other hand, to access the Admin User Interface, the user has to log in using the provided account and password then the admin may create a new account or delete accounts using *"kelola pengguna"* menu.

The first test of the application was intended to get media expert validation and it was resulted in 79.1% of appropriateness level. Besides, the material of the website also got a validation from material expert with 88.88% of appropriateness level. A test involving the school counselors of SMK Telkom Makassar was also conducted and it resulted in 92.26% of appropriateness level. Moreover, the test on small group of 10 students yield in a satisfactory result with 92.14% of appropriateness level. Based on the established criteria, Lakon for SMK Telkom Makassar is in a very appropriate category.

CONCLUSSION AND SUGGESTIONS

Based on the whole research stages of developing web-based *LAKON* in *SMK Telkom Makassar*, it can be concluded that: 1) the students of *SMK Telkom Makassar* have a high level of need regarding with the application information technology. The information technology can be a solution to the students' need of guidance and counseling service by considering the use of website as its media; 2) the school counselors in *SMK Telkom Makassar* are now able to make use of internet as a medium to provide guidance and counseling; and 3) based on the feedback from the school counselors and the students, the web-based application of Lakon in SMK Telkom Makassar is very appropriate to be used.

Based on those conclusions, there are some suggestions as follows: 1) the school is expected to support the web-based counseling service, 2) the school counselors are expected to keep on using Lakon or even broaden its usage since the research statistics shows that it is appropriate, and 3) the students are expected to really utilize Lakon in order to help them solve their problems.

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