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Development Computer Assistant for Evaluation Guidance and Counselling Program

Wirda Hanim, Djunaedi Djunaedi, Happy Karlina Marjo Program Studi Bimbingan dan Konseling Universitas Negeri Jakarta Jakarta, Indonesia wirdahanim10@gmail.com

Abstract—Evaluation is difficult to realize by previous researchers by developing guidance and counselling service evaluation software. The aim of the study was to develop an evaluation of web-based results so that it would be easier to use by the counselor of guidance and counselling in the evaluation. This research will use research and development methods with the waterfall model or squinal linear model. This model has four stages: analysis, design, code, and test. Based on expert evaluation of content and design (media), the average test results stated that the Evalgo software already had 83 % and 67% or a good level. The conclusion of the study shows that evaluation software has a good category.

Keywords—counselling; evaluation; program; software

I. INTRODUCTION

Industry 4.0 has introduced flexible mass production technology. The era of industrial revolution 4.0, that emphasizes the pattern of digital economy, artificial intelligence, big data, robotic, etc. or known as the phenomenon of disruptive innovation. Technological developments in the industrial era 4.0 make new ways of doing things in almost all areas of life, including in the field of counselling programs evaluation [1].

Since 1965 in the discourse phase to the takeoff phase in 2000, Guidance and counselling is still widely misunderstood in Indonesia [2]. This is an indication that guidance and counselling is not aware of its function, role and position in education by stakeholder's guidance and counselling teachers, in other words, fail to show the results of their performance to stakeholders

Evaluation is a fundamental way to show the results of work (accountability) in guidance and counselling services in schools [3]. The response to the development of service demands in the United States also influences evaluation activities in Indonesia. Badrujaman developed a specific evaluation model used in guidance and counselling programs [4]. In Indonesia, accountability demands are implicitly shown through Law No. 10 of 2017. Therefore, evaluation in the guidance and counselling program is a must, when guidance and counselling doesn't want to be completely removed from the national education system. Sudharno Dwi Yuwono Program Studi Bimbingan dan Konseling Islam UIN Sunan Kalijaga Yogyakarta, Indonesia sudharnodwi.kuliah@gmail.com

So far in Indonesia the evaluation of BK programs has been carried out without involving technology. This led to the evaluation of guidance and counselling programs becoming new problems for counselling teachers. In the industrial era 4.0 evaluation technology has been possible to be developed as a solution. This has been responded well by several researchers.

Based on Yuwono's research, to make it easier for guidance and counselling teachers in the program evaluation, he made evaluator meldba.1 evaluation software [5]. Developed by Luwao and Susi Fitri using an integrated evaluation model called evaluator counselor [6]. After that developed a prototype of advanced research called evaluators dw [7]. This research results a prototype and a system that used offline.

The first drawback regarding the model used in the tool does not cover aspects of planning, process and results. Both technologies evaluation is still difficult to use because offlinebased system. Based on usage tests, 97% of users have difficulty using the evaluation software appropriately. This weakness is the main reason why researchers conduct this research and development.

Online-based technology is considered to be easier than offline. The development of online web-based digital technology has become a concern in the field of Guidance and Counselling. For example, career services are shown by several career service studies in Italy [8].

This weakness is the main reason why researchers conduct this research and development. The study aims at the development of an evaluation of web-based results so that it would be easier to use by the counselor of guidance and counselling in the evaluation.

II. METHOD

This study used research and development method. The development model in the language of software development called the System Development Life Cycle (SDLC). The SDLC development model serves as a step to create a system with systematic and clear boundaries [9]. The SDLC is an approach to the analysis and user activities [10]. The development procedure is started from data collection, design, revision and testing. As per the target of the research output,



the results of the study are at the hypothetical stage. This means that no field testing or new stages have been carried out at the expert testing stage. The expert examinations conducted are media experts and content. The place for research and software development is in Jakarta. The duration of this research and development is conducted in 7 months from May to October 2018.

III. RESULTS AND DISCUSSION

Figure 1 shows that the system. The research produces in the form of software called evalgo. This software is able to calculate, analyze, help data management and report the results of evaluations automatically. Software can be operated into three operating options based on the type of actor, namely admin, guidance and counselling teacher user and student user. First, the admin has the authority to fill out a database program that allows the guidance and counselling teacher's user to create a student database and carry out other procedures. Second, the user of the guidance and counselling teacher can make a problem and determine the password. Third, student users can enter student data and fill out questions on the screen.



Fig. 1. The illustration of system (computer assistant system).

Figure 1 shows that system evaluation by software. As an illustration, the researcher describes the three operational relationships in the paragraph below. Questions are filled by students on the screen by "clicking" on the live screen. Students can fill anywhere near or far. The condition is that the user's hardware device must be connected via the web or the internet network with a server computer (guidance and counselling teacher user). The questions that have been filled automatically are processed and the results can be known at that time. Then the follow-up report can also be known in seconds.

Figure 2 and 3 shows the results data in measuring software. In accordance with the research objectives, the Evalgo software that has been produced is then tested for it. First the test of material experts, this test aims to find out the concept of software in accordance with the evaluation principle. This test was conducted by content experts.



Fig. 2. Result of content experts test.

The figure shows the aspects of content evaluation by the experts that are planning, process and result. The test results indicate 82% are planning aspect, 79% process aspect, and 87% are result aspect. The average test result is 83% or this considered in the good category. The score shows that all the assessment aspects of the material are included in the software properly.

Second, the software test from media experts. Based on the media expert test, this was found that software has a usability 83 %, functionality 71% and 43 % in visual communication. The average test result is 83% or this considered in the good category.



Fig. 3. Result of media experts test.

Almost all aspects are fulfilled except in visual communication which is considered to be poor. Visual communication in this software must be repaired. These are navigation, design and color in the software. Regarding to that, the experts recommend the improvement on the three indicators of visual communication. Thus, the developed software (Evalgo) can be more effective rather than the previous computer assistant.

The use of computer assistant to evaluate guidance and counselling program is a necessity. In the guidance and counselling program technology is often used. The use of technology, for example, in career services can improve the ability of career self-efficacy [11]; means of self-help in exploring various career information to choose and make career decisions and become a support system for career counselling activities [12].

The results of this study, in addition to the system that has been running according to the initial planning of the program, have also been developed in three areas of BK program evaluation. The field is evaluation of planning, process and results. Planning evaluation is an evaluation used to find out whether the service planning has been made well or not [13]. Process evaluation according to Stufelbeam process evaluation aims to see whether the program's implementation is in accordance with the planned strategy [14]. Results evaluation is an evaluation that aims to measure and assess program achievements [15]. In the system, Evalgo has been able to carry out the three functions of the BK evaluation objectives program itself.

The development of evaluations through the web is expected to be able to help the difficulties of BK teachers in conducting evaluations. According to Myrick there are five reasons the BK teacher did not conduct an evaluation. The five reasons are that the BK teacher does not have time, lacks knowledge and skills, BK teacher is afraid of service



accountability, feels comfortable with what is and the results are difficult to measure [15]. Hope this comes up because web evalgo can provide opportunities for many people to work together, correct and develop services.

In the research, technology have a same function. For that reason, the result of this research can be computer assistant for guidance and counselling teachers. Limitations in this study are the aspects of visual communication. Another limitation is that this research is only at the development stage, so it needs to be tested by the user. Development needs to be continued in the next research to know impact of software.

IV. CONCLUSION

Based on the research that has been conducted, it can be concluded that the purpose of this research was achieved. Evalgo software has the ability to input, analyze, and manage data, as well as helping to create a basic service evaluation report on the results of guidance and counselling at the junior high school level automatically. Evalgo software is also considered appropriate to be used by guidance and counselling teachers as a tool for evaluating the results of basic Guidance and Counselling services. Based on the expert evaluation of content and media, the average test results stated that the Evalgo software already had 83 % and 67% or a good category.

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