

Development of an Android-Based Career Encyclopedia For Career Choice

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Abstract—This information service is becoming one of the important services provided to the students, which often happens is less accurate data source, less attractive implementation, not using media etc, which causes students to experience low career choices. The purposes of this research to produce a new product in the form of the development of information services in the field of career, which combine into android applications as one form of current technology. Design development research that focuses on the principles and steps of Borg & Gall. Product Development specifications: career information service module and Career Encyclopedia based on Android. The subjects of this research are X grade students from the vocational high school in Gresik. The results of this research are expert guidance and counseling, media, and practitioners explaining the material in accordance with the principles of counseling guidance, and products that are appropriate and feasible to apply. Based on the interpretation, it can be concluded that this media is suitable for students' career choices that are in accordance with previous research studies

Keywords—Career Encyclopedia; Android; Career Choice

I. INTRODUCTION

Humans have a variety of needs that must be met for survival, one of which is to have a job. When an individual has a job, it automatically has a road solution to meet its needs both for clothing and needs. In today's era of globalization, work is seen as a benchmark of an individual's success. This means the individual will be considered successful when the individual is well established to having a job that ensures his life. To achieve a decent job one is through education

When individuals enter the world of education, where various attitudes, skills, and ability will be honed, the goal is as a provision to live a useful life, especially for himself and general society. If connected with the era of globalization that the goal of education can also be interpreted as a way to choose, consolidate and prepare to enter into the world of work. Related to the world of work, to be one of the reviews of career guidance and counseling, there are various services that can be applied ranging from information services, consultancy services, cash handling services, etc [1]. The development of an increasingly advanced world like today, there are various demands to enter the workforce, the meaning to enter the work of the world requires accurate information from an accurate source as well as updated information, because it can facilitate in finding a job [2]. There is no

possibility that there is currently a wide variety of information about work especially in cyberspace, but the information is very vulnerable to hoax or fake information

Level of education that not benny directly into the world of work, students have to dig the ability and accurate information related to his department now [3]. For example in England, the role of government is plentiful in applying vocational education, as the labor market, training and higher-level studies are a top priority for the future of millions of young people in the England [4]. Even until the scope of university level even vocational education is still applied

In Indonesia, vocational education already exists, but the unemployment rate is still a lot, especially for graduates in vocational schools. The latest survey conducted by the Central Statistical Department in February 2017 shows that the Open Unemployment Rate decreased to 5.33% from February 2016 which amounted to 5.50%. Of the 131.55 million people who enter the workforce, there are 124.54 million people who work, and the remaining 7.01 million people ascertained unemployment (BPS, 2017). From the survey detailed to 9.27% of the highest came from Vocational High School, the next highest was in Senior High School at 7.03 % From the survey, the fundamental question is to get unemployed even graduate vocational High School can compete in MEA.

Need assessment in two schools: SMK PGRI 1 Gresik and SMKN 1 Dudukuampean, East Java. In SMK PGRI 1 Gresik, counselors carry out career information services only by using lecture methods but do not have accurate information, besides that 83.5% of students also want new innovations related to job information media, because they need it for their future.

While in SMKN 1 Dudukuampean, counselor rarely uses media on the implementation of career information service, proved as much as 81,9% of student data explains the counselor does not use media in providing career services. Although counselors use the media 77.9% of the students are less interested in media and information services provide by counselors, the reason they are less interested because the media is monotonous such as only using paper, leaflets about career information, so that their career selection becomes disrupt. As many as 20% of students who have career selection for the future. In addition, the counselor is also waiting for a new innovation in the career field in improving student career choice

Making career choice is a decisive stage in every student's life, when a chosen career is wrong, then the student's future life will be disturbed or even experience many obstacles [5]. Therefore the career choice becomes a very important thing to consider before choose [6]. Technology that is the current trend is android, can be seen in various kinds of smartphones must have an android operating system that merely a version of Android [7]. In various fields of android application is very helpful in human life, such as the health department, shopping department, education department (Jagtap & Hanchate, 2017). In the health field many applications can be used to check blood pressure, high blood pressure, etc [8].

In the field of education, there are studies supporting the use of Android as long as its use is positive and in accordance with the existing curriculum, this makes the students have extensive knowledge because the application has a lot of material [9]. Modern Android mobile app is one of the easiest applications to install and more responsible and more useful for students in the field of education.

The encyclopedia is one form of Information and Communication Technology (ICT) in education. Some research related to ICT related to encyclopedia there is some interesting things research. To develop more information technology to adapt to learners with the environment in order to meet the needs of students [10]. this is contrary to UNESCO which explains that ICT has failed to apply to some areas of Africa because some of these areas still use television and radio as media in the field of education [11]. In addition, another researcher produced findings that the implementation of ICT education failed because of lack of confidence, lack of competence, and lack of access to resources [12].

Therefore, by looking at the importance of student choice career cause by a counselor while implementing a monotonous career information service using only lectures and not using media. In addition, there is a research gap associated with the encyclopedia to make researcher take the initiative by making the media a career encyclopedia for career information service with an android base that is the current trend

II. METHOD

This research uses brog and gall development research design and uses the brog and gall research procedure until stage five. Testing using 3 experts that is guidance and counseling expert, 1 media expert and 3 experts of education practitioner or school counselor. Testing the application using 10 students of SMK from 1 school is SMKN 1 Duduksampean, East Java.

The instrument used was CDSE-SF with 25 items and 5 indicators: self appraisal, occupational information, goal selection, planning, problem solving with reliability of 0.786 and mCUE Scale with 33 items and 3 indicators: product perceptions, user emotions, consequences of use with a reliability of 0.792. Implementation of application testing using one group pretest-posttest design (Creswell, 2010)

III. RESULTS

Conditions of career information services in vocational schools

The data obtain at the SMKN 1 Duduksampean Gresik explained that the conditions of student career selection had decreased. With such conditions, the counselor is currently working hard to implement the services that have been designed and achieve the desired goals, but the limitations of wantu and other obstacles make counselors carry out services, especially information services only three to four times in one semester.

Providing career information services only deal with providing information from companies that collaborate with the school, for example by providing motivation and tricks rather quickly accepted in the company. The role of the counselor should not only be limited to that, based on observational data, the implementation of not using media is also one of the factors causing the decline in student career selection

The giving of the counselor does not use accurate sources, meaning that it only originates on the internet which in fact some information is still a hoax. In addition, it can be seen from the implementation in the class, the counselor also has not applied according to the RPL and the rules of the implementation phase is classical services. In general, there are 3 stages, namely introduction, content, and closing, but sometimes the counselor goes directly to the core regardless of the condition of the class at that time, whether the class conditions are ready to receive the material or not.

Expert Judgment of Guidance and Counseling

Implementation of the test conduct on 3 experts Judgment of guidance and counseling with several criteria such as minimal education S-3, has been a lecturer at least 5 years, guidance and counseling lecturers and Experts in the field of guidance and counseling. The purpose of testing is to test some aspects of guidance and counseling material contain in the android application, follow expert test results:

TABLE 1. EXPERT JUDGMENT RESULTS OF GUIDANCE AND COUNSELING

No	Expert Judgment	Score	Comment
1	Expert Judgment 1	44	Add material about job entry requirements
2	Expert Judgment 2	47	The language use is simplified because the reader is a vocational student
3	Expert Judgment 3	42	The order of matter is taken into account, whichever comes first to be given to the students

Based on these results the media developed averaged 44,33 with very good category and is ready to use with little improvement according to the advice given by experts. The advice given by experts has been implemented, most see the content of the material ranging from language and sequence

Expert Judgment of Media

Implementation of media test conduct on 1 expert Judgment of media with criteria: minimum education S-3 has

been a lecturer at least 5 years, Lecturer of education technology and technology experts. The purpose of the test is to test some aspects of an encyclopedia based android career application. Average score given is 101 with very good category and is ready to use with a little improvement according to the advice given by the expert.

The advice given by the specialist is the layout more attention, the color on the front view is more attention so as not to contrast with the color of writing, too many image views, so it needs to reduce or delete because it annoys the reader.

Expert Judgment of School Counselor

Implementation of the test conducted on 3 expert practitioners is school counselors with the criteria: minimum education S-1 guidance and counseling, has become a teacher at least 2 years. The purpose of testing is to test whether the media develop can be used by counselors, follow expert test results:

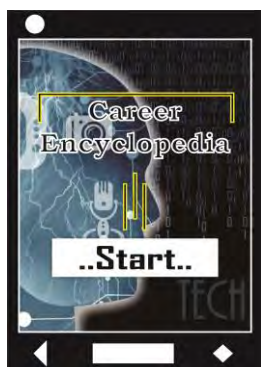
TABLE 2. EXPERT JUDGMENT RESULTS OF GUIDANCE AND COUNSELING

No	Expert Judgment	Score	Comment
1	Counselor 1	59	The colors in the app are improving to be more clear in reading them
2	Counselor 2	61	More work plus materials and references need to be added again
3	Counselor 3	52	Plus material relate to advanced study or college

Based on the results of the assessment of practitioners, developed media obtained an average of 57.33 with a very good category and is ready to use with a little improvement according to the advice given by the expert. Based on the comment given some revisions have been done starting from the color on the initial display and display the contents of the application, the addition of material and additional references

Display of Career Encyclopedia

Based on the advice given by the experts, the career encyclopedia specification includes front view, content (career interest, job definition, and duties, minimum educational requirements, job prospects, advanced study, tips on college choice, application letter), closing. Some views from career encyclopedia app:



Picture 1. The front view of career encyclopedia app



Picture 2. Display after the start button

The outer appearance and content of the encyclopedia are based on the suggestions and comments of various experts and ready for testing to the students, to see if the application can improve career selection or not

Effectiveness Testing

Test results were performed on 10 students using CDSE, can be seen in the following table:

TABLE 3. EFFECTIVENESS TEST RESULTS

No	Respondent	Pretest	Posttest
1	MIM	47	95
2	MRD	44	98
3	NM	42	89
4	NR	52	108
5	NZ	49	82
6	NIS	51	92
7	NFA	40	87
8	NR	37	96
9	NRF	53	104
10	NRF1	60	98

CDSE Indicators: self appraisal, on the basis of effectiveness test results after given career encyclopedia application can assess both the potential and the shortcomings they have, so that the selection of career can be increased; occupational information, based on the results of effectiveness test after given career encyclopedia application can see what information can be owned and how to get it; goal selection, on this indicator students can select Department or work that suits him either seen from the interest and prospects of the future; planning, students can make future career planning, steps to take, etc .; problem-solving, the student can determine the steps to be taken when experiencing a problem in his career or at the time of his career choice

IV. CONCLUSION

From the results of development research activities that have been implemented, the researchers can examine and draw a conclusion on the results of data obtained on media encyclopedia career. Based on the results of the test of 3 experts guidance and counseling explained that the material in the career encyclopedia in accordance with the development of vocational students and can be applied in career information services

The results obtained from media experts and practitioners also explain that career encyclopedia media can be applied in

the field of guidance and counseling. So it can be seen in the test of the effectiveness that 10 students who experience career selection that less can be increased after given career encyclopedia application.

The research of career encyclopedia development included in ICT in accordance with previous research that ICT can be applied in education and have a positive impact. For that in the next study can test into a larger area

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