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Making of Thinkgather.com As Collaborating and Networking Media for Researchers

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Abstract

This paper considers reasons why the number of scientific publications produced in Indonesia remain low in comparison to other countries, as is the number of scientific researchers. These issues are caused by many factors, including the fact that researchers often experience difficulties in obtaining references to both books and journals that support their research, and secondly that researchers find it difficult to find research partners who have scientific similarities and interests in one research topic. The purpose of this study is to answer the above problems through the design and development of an application called thinkgather.com, an interactive medium for researchers. One of the advantages of this application is being able to connect between one researcher and another researcher in one social media. This research was designed to have 3 stages of research, namely the preliminary study and data collection stage, the planning and building stage, the limited scale trial stage. It is expected that the thinkgather.com application can become a means of researchers as a media discussion and facilitate researchers in finding partners in the research that will be carried out.

Keywords: Application, Researcher, Thinkgather.com, Social Media

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1. Introduction

Research is very important for the advancement of human civilization. Through research, various new sciences emerged and technological innovations continued to develop. Similarly, through the results of research able to solve various problems faced by humans [1]. Therefore, an increase in the number and quality of research is a necessity as a condition to enhance the superiority of the cooperation of a nation [2]. Indonesia as a developing country continues to strive to move up to become a developed country. As a basic condition for these ideals is the readiness of Human Resources as the basic foundation of development. One indicator that can be used to view HR's current capabilities is the number of scientific publications from a country [3].

Based on data from SCImago, throughout 1996-2016, the number of publications indexed globally in Indonesia reached 54,146 publications. When compared to Singapore, Thailand and Malaysia, Indonesia's ranking is still far below the three ASEAN countries. In 2016, at the world level, Indonesia was ranked 45th for the number of documents published internationally. In the Asian region, Indonesia's position is at number 11, while at the ASEAN level it ranks fourth. In addition, the trend in the number of publication documents in Singapore, Thailand, Malaysia and Indonesia continues to increase. Starting in 2010, Malaysia shifted Singapore's position to second place [4].

Based on the data above, one of the factors that caused Indonesia's position to be defeated if compared with the countries in the Southeast Asian region was the number of researchers who were still very lacking. The latest data states that the number of researchers in Indonesia amounted to 9,685 people in 2017, if compared with the population of Indonesia, then the ratio of the number of researchers with population in Indonesia is 90 researchers compared to 1 million population. This number is still low compared to countries in Southeast Asia. For example, the ratio of the number of researchers with a population in Singapore is more than 7,000 thousand researchers per one million inhabitants. While Malaysia has 2,590 researchers per one million inhabitants. While in Indonesia, the ratio is 1,071 researchers per one million residents [5].

Arsyad et al. Mentioned that the biggest obstacle in writing scientific work comes from within themselves, especially the self-view that writing needs talent, writing ability is hereditary, and requires extra energy [6]. However, the opinion of Cargill & O'Connor (2009) which states several reasons why researchers experience difficulties in scientific publications are: (1) Research is not new or sufficient scientific interest. (2) Experiments don't always work: positive result are easier to publish. (3) Scientific journals have specific requirements which can be difficult: publishing is a buyer's market. Although there are internal barriers to writing or becoming a researcher, this does not mean there is no solution to increase the interest and ability of the Indonesian people to become researchers. A media that is capable of being an interactive means of communication is needed to establish relationships with researchers from various universities, both domestic and across countries. It is hoped that through this media can create culture and enthusiasm for research so that it can grow the number of researchers in Indonesia.

2. Research Method

The research stages of building thinkgather.com applications are done in several stages, (1) stage of preliminary study and data collection is the collection of information and preliminary studies from previous studies or related disciplines, (2) Stage of planning and making of the thinkgather.com application, It starts from planning the thinkgather.com application framework and then arranges the thinkgather.com application as the initial form of the product. (3) The expert and limited scale trial phase and revision of application thinkgather.com, is started from the first trial by experts to validate material, media, and applications. Then an improvement is made from the input given by the expert. After that, it was continued with a trial on a limited scale which was then carried out revision from a limited scale trial.

The type of data in this development uses qualitative and quantitative descriptive data. Qualitative data is generated from responses of media experts, material experts and lecturers' responses about the products made. The location of this study is in Malang, involving lecturers at Universitas Negeri Malang. In this study a total of 50 lecturers from various faculties were expected to be able to produce outcomes that could be used in this study. Data collection techniques used in this study were observation, questionnaires, interviews, and documentation.

3. Result

The results of the study will be elaborated according to the stages of this research.

3.1. Stage of Preliminary Study and Data Collection

The preliminary stage begins with a study of literature then continues with a field study. Literature studies are conducted by looking for references to the behaviour of researchers and the basis for making social media. While the field study is conducting observations in the field by identifying various business cases.

3.2. Stage of Planning and Building of The Thinkgather.Com Application

Data obtained from field surveys and supported by the theoretical foundations of the results of the literature study, the researchers compiled the model of the application

thinkgather.com. The following is an explanation of the simulation applications that have been compiled in this study.

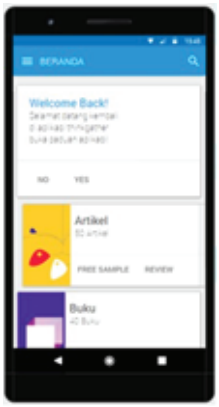

Figure 1: Home Interface

We can see from the figure above is the home interface. The Home Interface has the main feature to display the latest updates from other users, such as research updates or sharing references. Besides that, it also has functions to enter profiles, my library, and search.

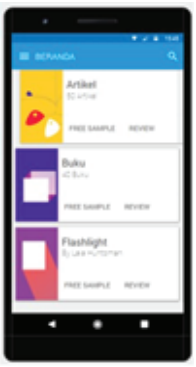

Figure 2: My Library Interface

We can see from the figure above is the My Library interface. On this page there is a collection of references, research, and intellectual property rights that we have uploaded from our own as well as choices from others. In addition, this page also allows users to discuss the references or research results that have been uploaded to this application.

We can see from the figure above is the Post and Comment Interface. On this page between users can comment on each other and express their opinions on a post made by other users so that scientific discussion will deepen. On this page there will also be a description of the uploaded post.

We can see from the figure above is the login interface. This page is the start page of the thinkgather.com application. On this page the user is asked to enter their username

Figure 3: Post and Comment Interface

Figure 4: Login Interface

and password to open profile access. If the user is not yet registered, then you can register on this page too.

3.3. Stage of The Expert and Limited Scale Trial and Revise Application

There are several tests which we done for data that we have collected

- Questionnaire Validity and Reliability Test

Validity shows the extent to which a measuring device to measure what is valid or not an instrument item can be known by comparing the Pearson Product Moment correlation index with a significance level of 5% with its critical value. Validity and reliability tests are divided into two, namely validity and reliability tests for experts and users. Based on the results of the expert validity test, it is known that the entire questionnaire question items for experts and users have a probability value (sig) of less than 0.05 so that it can be said that all question items in the questionnaire for experts and users are valid.

The reliability test used is Alpha Cronbach. Reliability test results show that the variables in the questionnaire have a Cronbach Alpha coefficient greater than 0.6 so

that it can be said that the question instruments used in users and expert questionnaires are reliable.

• Result of Expert Judgement

The assessment of thinkgather.com application is carried out by experts or practitioners through assessment instruments based on existing theories and then used as indicators in expert judgment.

Table 1: Result of Expert Judgement Score

Variable	Expert Score	Conclusion
Programming	81,5%	Proper
Content	79,6%	Proper

Based on table 1, it can be seen that the acceptance score is above 60%, so it is stated that based on two elements of assessment, aspects of programming and content. The thinkgather.com application that is made is considered good as a platform for collaboration and networking for researchers. Thus, the experts in this study agreed to accept the application thinkgather.com which had been made to function as a networking platform.

• Result of User Acceptance

An assessment of the level of acceptance of the thinkgather.com application by the lecturer was conducted to find out whether the lecturer was satisfied and helped in finding research partners conducted with the help of the thinkgather.com application. The results of the lecturers' assessment of the thinkgather.com application as a networking platform are explained in the following table.

Table 2: Result of User Acceptance Score

Variable	Expert Score	Conclusion
Display	82,3%	Accepted
Content	80,6%	Accepted
Benefit	81,7%	Accepted

The table above shows that the acceptance score of thinkgather.com application as a networking platform is more than 80% which means that based on the appearance, material aspects, and also the benefits of the thinkgather.com application that is made is very well assessed by lecturers and can attract lecturers' interest in using the application.

4. Conclusion

Objectives of this research to create thinkgather.com application as media networking and testing validity and effectivity, based on research results, then can be concluded as:

- Based on the three elements of assessment, namely the aspect of programming and the content of the thinkgather.com application, it was made good by experts as a networking platform.
- Based on the aspect of appearance, material, and also the benefits of the thinkgather.com application that is made can be very well received by users (lecturers) and can attract users to use the application

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