

DEVELOPMENT OF CYBER ACADEMIC GUIDANCE CONSULTING (CAGC) WEBSITE BASED ON DEPARTMENT OF EDUCATIONAL TECHNOLOGY UNIVERSITAS NEGERI MAKASSAR

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Abstract

Facing the digital transformation and cyber world that synergizes with the development of science, of course, the academic consultation process can also be improved in efficiency by utilizing information technology, especially the internet. The problem formulations in this study are: How is the description of student needs for website-based cyber academic guidance consulting (CAGC) for Students of the Makassar State University Education Technology Study Program? How is the product design of website-based cyber academic guidance consulting (CAGC) for Students of the Makassar State University Education Technology Study Program? What is the level of validity and practicality of website-based cyber academic guidance consulting (CAGC) for Students of the Makassar State University Education Technology Study Program? The type of research used is research and development or known as Research and Development (R & D). This development research refers to the steps of the S. Thiagarajan et al. development model. The adapted 4D model consists of three stages, namely: define, design, and development stages. The results showed that In the defining stage, identification of needs was carried out, where this research was conducted at the Education Technology Study Program at Makassar State University with the research subject of thirty Education Technology students. Moreover, from the identification results, many students often experience academic problems and conduct unstructured consultations or guidance, which can hinder the course program process. Digital media needed that can integrate with direct guidance methods. The next steps are carried out at the design stage based on the needs identification results. Namely, media selection was carried out to optimize the use of the website in the academic guidance consultation process. Format selection in developing website tools aims to formulate media design, content and feature selection, approaches, methods, and information sources. Moreover, the initial design is the overall design of academic guidance tools that must be done before the trial is conducted. In the development stage, the making of learning media is carried out. The resulting website shows valid results based on the results of the validation of learning content/material experts and the results of media expert validation and guidance design. Shows practical results in the process of guidance activities based on the results of small and large group trials.

Keywords: Cyber Academic Guidance Consulting, Website, Higher Education

Abstrak

Menghadapi transformasi digital dan cyber world yang saling bersinergi dengan perkembangan ilmu pengetahuan, tentunya proses konsultasi akademik juga dapat ditingkatkan efisiensi dengan memanfaatkan teknologi informasi terutama internet. Rumusan masalah pada penelitian ini adalah: Bagaimana gambaran kebutuhan mahasiswa terhadap cyber academic guidance consulting (CAGC) berbasis website Mahasiswa Program Studi Teknologi Pendidikan Universitas Negeri Makassar ? Bagaimana desain produk cyber academic guidance consulting (CAGC) berbasis website Mahasiswa Program Studi Teknologi Pendidikan Universitas Negeri Makassar ? Bagaimana tingkat validitas dan kepraktisan cyber academic guidance consulting (CAGC) berbasis website Mahasiswa Program Studi Teknologi Pendidikan Universitas Negeri Makassar?. Jenis penelitian yang digunakan yaitu penelitian dan pengembangan atau dikenal Research and Development (R & D). Penelitian pengembangan ini mengacu pada langkah-langkah model pengembangan S. Thiagarajan, dkk., model 4D diadaptasi terdiri dari tiga tahap yaitu: pendefinisian (define), tahap perancangan (design), dan tahap



pengembangan (development). Hasil penelitian menunjukkan bahwa, Pada tahap pendefinisian telah dilakukan identifikasi kebutuhan, dimana penelitian ini dilakukan di Prodi Teknologi Pendidikan Universitas Negeri Makassar dengan subjek penelitian tiga puluh mahasiswa Teknologi Pendidikan. Dan dari hasil identifikasi yang diperoleh, cukup banyak mahasiswa kerap mengalami masalah akademik dan melakukan konsultasi atau bimbingan yang belum terstruktur yang dapat menghambat proses program mata kuliah diperlukan media digital yang dapat berintegrasi dengan metode bimbingan secara langsung. Pada tahap desain, berdasarkan hasil identifikasi kebutuhan dilakukan selanjutnya yaitu, pemilihan media, dilakukan untuk mengoptimalkan penggunaan website dalam proses konsultasi bimbingan akademik. Pemilihan format, dalam pengembangan perangkat website bertujuan untuk merumuskan rancangan media, pemilihan konten dan fitur, pendekatan, metode, dan sumber informasi. Dan rancangan awal adalah keseluruhan rancangan perangkat bimbingan akademik yang harus dikerjakan sebelum uji coba dilakukan. Pada tahap pengembangan dilakukan pembuatan media pembelajaran. Website yang dihasilkan menunjukkan hasil yang valid berdasarkan dari hasil validasi ahli isi/materi pembelajaran serta hasil validasi ahli media dan desain bimbingan yang dilakukan. Menunjukkan hasil yang praktis pada proses kegiatan bimbingan berdasarkan hasil uji coba kelompok kecil dan hasil uji coba kelompok besar.

Keywords: Cyber Academic Guidance Consulting, Website, Perguruan Tinggi

How to Cite: Junaid N, Nurhikmah H, & Sinaga, A. V (2022). Development Of Cyber Academic Guidance Consulting (CAGC) Website Based On Department Of Educational Technology Universitas Negeri Makassar. *Indonesian Journal of Educational Technology*, 1 (2), xx-xx.

INTRODUCTION

Education is a field that is in charge of increasing the role of technology as one of the supports for increasing the effectiveness of the learning process, according to Salsabila, et al. (2021) that students are required to have digital literacy skills to use information technology effectively and efficiently in various contexts such as academic, career and daily life. Universities, as higher education institutions, make efforts to improve the achievement of optimal student development. The development of the implementation of educational services in higher education is also adjusted to the development of science and technology as well as the objectives of higher education as stated in Law Number 12 of 2012 concerning Higher Education to increase the nation's competitiveness in facing globalization in all fields. Higher education is needed that can develop science and technology and produce intellectuals, scientists, and professionals who are cultured and creative, tolerant, democratic, have strong character, and dare to defend the truth for the benefit of the nation.

Universities, as higher education institutions, make efforts to improve the achievement of optimal student development. Especially at the current student level who need services connected to lecturers, especially when consulting academic guidance and thesis guidance. Novaliyani (2021) said that providing academic guidance is an educational service process in the form of guidance according to student needs. Every campus or college has a service called academic guidance. This role is held by academic advisors, which has been stated in Permenristekdikti No. 50 of 2018 article 28 paragraph (3) states that: The workload of lecturers as the main supervisor in structured research in the context of preparing a thesis / final project, thesis, dissertation, or work of design/art / other equivalent forms is a maximum of 10 (ten) students.



Along with the times, consultation is not only done in person but can be done remotely using the internet network called online consultation or guidance. (Abdulghani & Gozali, 2020). The presence of online consultation is an alternative to providing consultation services for the academic community and students in Higher Education (Fadhilah et al., 2021). It is hoped that it will be able to develop academic guidance consultation models and skills in order to provide the best service for students. The current condition or manual system for student consultation in the Educational Technology Study Program is that every student who wants to carry out the academic guidance process or final project guidance must go to campus to consult with lecturers. The current pandemic that is occurring globally and then has led to new normal conditions requires us to adapt to all activities. These adjustments can eventually trigger mental health symptoms, such as anxiety, depression, stress, and so on (Al Eid & Arnout, 2020; Liebreuz et al., 2020). Therefore, digital learning is relied upon as a solution to the problem of face-to-face learning. All students need access to the internet.

Currently, services for student consultation in the Educational Technology Study Program still use records and are carried out in a face-to-face manner, which is effective, but there is no monitoring, and consultation books are not stored properly, so it is necessary to create an official website for academic consultation services through website-based cyber academic guidance consulting. The website is to monitor and evaluate student problems in student affairs and academic guidance in consultation effectively and efficiently with the use of technology. The facilitation of students in the academic guidance consulting service model through website-based cyber consulting will be able to assist students in communicating connected to academic assistance lecturers (Fahyuni & Romadlon, 2020) in getting guidance assistance anywhere, anytime, and with anyone. They can learn to optimize their potential. Web-based digital learning media has proven effective in optimizing student learning outcomes (Lampung, 2020) with a system that is able to integrate academic problems and also support the improvement of the quality of learning which is expected to be more creative and active.

Therefore, online consultation can be used as another alternative for students who want to consult without having to use too much time and can be done remotely. Higher education institutions also play an important role in building and maximizing the competence of their students. Based on the results of preliminary observations made on Makassar State University Educational Technology students in a google form in July 2021 that: 33 out of 34 students said it was important to have an online consultation service for academic guidance for students. These problems are summarised so that they have several problems, including First, there is no available academic guidance consultation service provided for students in the Education Technology Study Program at Makassar State University. Second, students also need academic consultation services that are more time and cost-efficient. And third, the unavailability of website-based academic consultation guidance services (official website) to answer the needs or solve student academic problems. Answering these problems



is expected to produce a student academic consultation service system that can provide convenience in consulting student problems with the relevant lecturers to improve service performance in lectures.

METHOD

This type of research is development research or Research and Development (R & D), referring to research methods used to produce and test the effectiveness of certain products. The development model used by researchers is the 4D development model (Four D Models) developed by Sivasailam Thiagarajan including stages: Define, Design, Develop, and Disseminate.

Product testing was carried out to determine the level of validity and practicality of the website developed. Product trials consisted of alpha tests and beta tests. Product testing is also to determine the extent of the achievement of the message/content conveyed through the website.

This research is located at the Faculty of Education, Makassar State University, precisely in the Educational Technology Study Program. The subjects in this study were two validators, namely learning design/media experts. In contrast, the subjects for the small group practicality trial were eight representatives of the 2017-2018 class of Educational Technology students who were in the course program and thesis, and the large group practicality trial by 22 representatives of the 2017-2018 class of Educational Technology students who were in the course program and thesis. The object of research studied here is the development of website-based cyber academic guidance consulting for students of the Makassar State University Educational Technology Study Program.

Data collection techniques using questionnaires and documentation. The questionnaires used by researchers are student needs identification questionnaires, media expert questionnaires, content/material expert questionnaires, trial questionnaires. Documentation as supporting data in the research in the form of photos or videos of activities when the research takes place in website demonstrations to respondents. Data analysis uses qualitative descriptive analysis and descriptive statistical analysis.

RESULTS AND DISCUSSION

Result

Table 1. Needs Level Analysis

No.	Needs Identification	Respondents	
		Yes	No
1.	Do you own and use a smartphone, PC/computer/laptop, or laptop? some kind of device to access the internet?	30	0
2.	Are you doing a course program or thesis?	30	0
3.	Have you ever experienced academic problems (lectures or thesis)?	21	9
4.	Are you not confident (anxious, tense) if you want to consult with your lecturer? Academic Supervisor?	21	9



5.	Has the academic guidance consultation in the Education Technology study program been effective?	14	16
6.	Are there frequent delays in scheduling guidance with the supervisor?	15	15
7.	Do you know how to deal with academic problems (lectures or thesis) experienced?	9	21
8.	Do you sometimes find it difficult to communicate academic problems with the lecturer directly?	22	8
9.	Do you find it difficult to get equal time between lecturers and students? to conduct consultations, thus hindering the academic process?	17	13
10.	Do you need the availability of specialized website facilities as media academic guidance consultation that is flexible without distance and time constraints?	30	0
11.	Have you previously used online media for academic guidance consultation (lecture or thesis)?	21	9
12.	Do you agree with the development of Cyber Academic Guidance? Website-Based Consulting (CAGC) as an alternative academic consultation media Flexible online is more practical?	30	0
13.	Are you interested in doing academic guidance consultation using Cyber Website-based Academic Guidance Consulting (CAGC)?	29	1
14.	Would you like to see an evaluation at the end to determine the extent of the progress during the online academic guidance consultation process?	28	2
15.	I understand the material more easily by reading and observing (visual)	29	1
16.	I understand the material more easily by listening (auditory)	21	9
17.	I understand the material more easily if I do it (kinesthetic)	29	1
Total Score		39	114
Average Presentation		78%	

Based on this data, it shows that 78% of student qualifications require *website-based* academic guidance consultation, students strongly support the existence of online guidance media because they need media that can be used independently which is flexible so that it adapts to the guidance process carried out offline.

Table 2. Material Expert Validation Results

Aspects assessed	Description	Score
Material/content	Clarity of content regarding the information presented.	4
	Suitability of the Educational Technology PA Book Guide with features	5
	Appropriateness of content related to needs	5
	Clarity of features containing consultation information	3
	The suitability of the content on the website with the needs of guidance consultation academic.	5
Language	Language used is in accordance with refined spelling	4
	Using simple and easy-to-understand language	4
	Completeness of sentences/information needed by students	4
Quality of Guidance	Providing new knowledge	5
	Easy for students to understand	5



Attracts interest and motivates	4
Total	48
Percentage %	87%

Based on the assessment of the material/content expert validator, it can be seen in the table above that the *website* is in the valid category and good qualifications, after improvements according to the input, suggestions, and comments of material experts who are impressed with the *website* so that the resulting development product is better.

Table 3. Media expert validation results

Aspects assessed	Description	Score
Content/Features	Accuracy of content selection.	4
	Well accessible	4
	Easily accessible	4
	Accuracy of content/features with needs	4
	Content and feature design level	4
View	Appropriateness of website background colour selection.	5
	The accuracy of the layout of each icon's link button on the cyber academy guidance website-based consulting (CAGC)	4
	Proportional layout	5
	Appropriateness of colour proportion	5
	Clarity of feature/content access	5
	Content/feature suitability	4
	Clarity of text, images displayed on instructions	5
Appropriateness of font selection	Appropriateness of text and images displayed	5
	Appropriateness of font selection	5
	Appropriateness of font size selection	5
	Appropriateness of text colour selection	5
Media	Harmony between text and background colour	4
	Conformity between the objectives of the academic guidance consultation and the product developed	4
	Diversity of features that users can access in cyber academic guidance website-based consulting (CAGC)	3
Linguistics	Operational media that is easy and concise to access	4
	Use of standardised language in cyber academic guidance consulting (CAGC) Web-based	4
Physical	Clarity of sentences/instructions (does not cause multiple interpretations)	4
	Ease of Operation of the cyber academic guidance consulting platform (CAGC) website based	4
	Ease of use on mobile devices and PCs	5
Total		105
Percentage		88%

Based on the assessment of media / design expert validators, it can be seen in the table above that the *website* using the *bootstrap platform* is 88% in the valid category and good qualifications, after



making improvements according to the input, suggestions and comments of material experts who are impressed with the *website* so that the resulting development product is better.

Table 4. Small group trial results

No.	Aspects assessed	Score	Category
1.	Physical or display	92	Very good
2.	Content eligibility	89	Good
3.	Linguistics	89	Good
4.	Presentation	92	Very good
5.	Graphics	89	Good
Average score		90	Very good

Based on **Table 4**. The media is in the **Very Good Qualification**. However, there needs to be improvements according to student input, suggestions, and comments regarding the *website* to improve the resulting development product.

Table 5. Large group trial results

No.	Aspects assessed	Score	Category
1.	Physical or display	87	Good
2.	Content eligibility	92	Very good
3.	Linguistics	91	Very good
4.	Presentation	89	Good
5.	Graphics	88	Good
Average score		89	Good

Based on **Table 5**. The *website* is in the **Good Qualification**, but there need to be improvements according to student input, suggestions, and comments regarding the *website* so that the resulting development product is better.

CONCLUSION

Based on the study's results, it can be concluded that the identification of needs shows that students of the Educational Technology Study Program need an online-based academic guidance consultation-liaison service. The identification results of the website developed by the researcher are in the required qualifications.

The product developed in the research is a website-based cyber academic guidance consulting that has specifications by accessing through the link <http://cagc.epizy.com/> then directed to log in, on the front page serves as technical assistance tools (such as: how to communicate, information sources, contact lecturers, and help desk), the middle page has guidelines and main features intended when going to do the course and thesis guidance (such as general consultation, thesis consultation, thesis archive and administration, guidance report), and the bottom page has several social media that are directly connected.



It gets good qualifications from the media expert validation of this website-based cyber academic guidance consulting (CAGC) product. While the results of the validity of material or content experts on this website product get good qualifications. From the material results, expert validation is in good qualifications, while media expert validation is in good qualifications so that the product is declared valid.

The results of the practicality trial of this website product were tested by students of the Education Technology Study Program at Makassar State University, namely, getting practical qualifications. Small group trials of website products are in very good qualifications and do not need to be revised. The results of the large group trial of the website were in good qualifications and were not revised. From the results of this statement, the product is declared practical.

Based on the research that has been conducted, it can be suggested that students of Educational Technology, Makassar State University, can disseminate website-based cyber academic guidance consulting products to be used in conducting academic consultation/guidance services in universities so that academic activities can run smoothly and flexibly so that their implementation streamlines distance and time. For further researchers, it is necessary to conduct further research on website-based cyber academic guidance consulting products as a medium for online academic guidance consultation services in the Education Technology Study Program in the future. It is hoped that it will be more effective.

This development research, was conducted at the Makassar State University Educational Technology Study Program, producing a website using the bootstrap + WordPress platform with Trello features as an alternative medium for academic guidance consulting used in the course and thesis guidance. The research development design has the aim of identifying how the needs of website-based cyber academic guidance consulting development, knowing the website design developed, and determining the level of validity and practicality of the website-based cyber academic guidance consulting that are being developed. The results of website development are obtained after going through validation tests and practicality trials so that they can be applied in the website-based academic guidance consultation process at the Makassar State University Education Technology Study Program.

The defining or planning stage is the initial stage for developing website-based cyber academic guidance consulting. Researchers begin to determine the purpose of making website-based cyber academic guidance consulting and prepare several parts used to start website development, such as initial analysis, student analysis, material analysis, task analysis, and goal specifications. (Nur Hidayah., et al. 2021).

The next stage designs, at design, the stage consists of three parts/steps, namely media selection, format selection, and initial design. The platforms that have been prepared for developing the website are bootstrap and WordPress. The content on the website contains text, images, audio, and video. The



website-based cyber academic guidance consulting will be able to be used on mobile or PC, or laptop using a programming language.

The next stage is the development stage. This is the last stage of the 4D development model adapted from S. Thiagarajan. This stage begins the production of the website, evaluating and revising the website. This stage is divided into several parts: website development, validity testing, and practicality testing. The next part is the development or practicality trial which is a test other than the validity test where the practicality test is carried out to get better results. The practicality test is the last test that will be carried out for students as potential users. The development trial of the practicality test uses two stages, namely small group trials and large group trials. The small group trial consisted of 8 students, and the large group trial consisted of 22 students. The results of the small group trial resulted in an average percentage of 90% with a very good category. In the large group, the test resulted in 89% with a good category.

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