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The Role of Scientific Consultant Librarians in Supporting Academic Research Case Study: Muhammadiyah University of Yogyakarta

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A B S T R A C T

Many university libraries have provided various facilities that support the information needs of the academic community. However, quite a few students still experience difficulties in finding the sources of information. In order to meet the demands of the information and research needs of the academic community, especially in the era of society 5.0, the University Library of Muhammadiyah University (UMY) provides scientific consultation services which have now developed into the AskMYLibrarian service. The purpose of this writing is to explain the role of consultant librarians at the UMY Library through the AskMYLibrarian service at the UMY Library. This research uses mixed methods. Data collection techniques used questionnaires and interviews. The research began by distributing questionnaires to 35 respondents consisting of 7 lecturers and 28 students who had used the AskMYLibrarian consultation service, both offline and online. Based on the results of the questionnaire, it was found that 77.1% of respondents strongly agreed that scientific consultation services were important to support academic community research. The consultation service menu provided includes consultation services related to searching for information sources, using a references manager, writing and paraphrasing techniques, guidance on submitting Sinta and Scopus indexed journals, simple data processing (SPSS, PLS, NVivo), and Vosviewer.

A R T I C L E   I N F O

1. INTRODUCTION

According to the Government Regulation of the Republic of Indonesia Number 24 of 2014 concerning the Implementation of Law Number 43 of 2007 concerning Libraries, Article 1 number 10 mandates that what is meant by a college library is a library that is an integral part of educational activities, research and community service and functions as a center for learning resources to support the achievement of educational goals that are based in colleges. Libraries have several functions in supporting the activities of the Tri Dharma of Higher Education including educational functions, information functions, research functions, recreational functions, publication functions, deposit functions and information interpretation functions (Pedoman Penyelenggaraan Perpustakaan Perguruan Tinggi, 2015). In line with these functions, especially in supporting research and publication functions, college libraries must provide facilities and services that can support the academic community by providing facilities and information resources for the research needs of library users.

Many college libraries have provided various facilities that support the information needs of the academic community. However, many students still have difficulty finding the information sources they need and sometimes do not have other alternatives to get the right information. In addition, the development of information technology in the field of research is also growing and making it difficult for students and lecturers to use various research support tools. The varied information needs of the academic community force librarians to be more creative and innovative in providing "helpful" services.

College libraries must adjust their service needs to the development of information technology so that college libraries can still maintain their credibility as information and research centers for the academic community (Qurotianti, 2020). Therefore, services are needed that can facilitate the needs of the academic community in accordance with the development of information technology in order to produce quality scientific research. Changes in the needs of library users in the college environment need to be understood by librarians and therefore libraries must be able to adjust to the dynamics of the needs of the college community (Istiana, 2017). One of the services that can support the needs of the academic community, especially in the field of scientific research and publication, is scientific consultation services. Scientific consultation services aim to assist librarians in compiling scientific works comprehensively. In practice, to run this scientific consultation service, college libraries must prepare librarians who have knowledge of scientific writing and publication.

The role of librarians, especially in higher education environments, is very important to help improve the academic research atmosphere (Rahmawati, 2019). In supporting this, libraries must provide consultant librarians who can serve users who want to consult about research and publication needs. Consultant librarians are librarians who have insight into the use of information resources and publications so that they can help and facilitate the availability of information resources that are relevant to user needs. The importance of the presence of consultant librarians in libraries is to facilitate the academic community in the process of solving problems related to scientific writing and publication, the accuracy of answers in overcoming problems, and as a form of self-application towards professionalism and advancing the image of the library.

In order to meet the demands of the information and research needs of the academic community, the University Library of Universitas Muhammadiyah (UMY) provides scientific

consultation services. At the end of 2021, the UMY Library has provided a consultation service called the Clinic. This service is still limited to providing education and assisting students in finding reference sources and using reference managers such as Mendeley, Zotero, and Endnote. The development of information technology in the digital era, especially in the field of research, has made the needs of the academic community increasingly varied. Seeing this phenomenon, the UMY Library began to develop this clinic service into a service with a consultation model that provides all the needs of library users, especially those related to information and writing needs by the academic community, namely the Ask MYLibrarian Scientific Consultation Service.

Along with the progress of the era that is increasingly developing, now it has entered the era of revolution 5.0 which is also called the era of society 5.0. In the era of society 5.0, libraries are required to balance the availability of physical services and services through the internet technology system carried out by librarians and library managers in providing information services to users (Wijonarko, 2020). Therefore, the UMY Library has developed a scientific consultation service with a more efficient and easy presentation format, namely in the form of an online scientific consultation service, namely AskMYLibrarian. This AskMYLibrarian service is intended to help students and lecturers in answering all needs related to scientific writing or publication, starting from finding and accessing relevant information sources for their research or final assignments to guidance to the publication stage.

To support the AskMYLibrarian service, a consultant librarian is needed to be able to run this scientific consultation service according to the needs of the library users. Referring to the research consultant program qualifications at Liberty University Online (LUO) Library explains that there are research consultant qualifications at the institution (Novianto, 2018), namely: (i) Minimum education of a bachelor's degree (S1) with 9 working hours per day or have experience conducting research in the library field or other relevant fields. It is expected that librarians who have a Masters degree in Library Science; (ii) Able to communicate effectively, both verbally and in writing; (iii) Understand and be able to speak and write English to convey messages professionally; (iv) Have knowledge of databases and library resources, and be able to teach others, both in one-on-one interactions and; (v) Be skilled and know how to use online technology for research consultation activities and tutorial creation; (vi) Master complete organizational information and good computer knowledge; (vii) Be able to solve problems related to assessing the quality of information and customer research and technology needs (to answer customer research questions); and analyze information and phenomena being studied (to solve problems, both simple and complex); and (viii) Be able to provide FAQ (Frequently Asked Questions) facilities.

The presence of a consultant librarian in the AskMYLibrarian scientific consultation service is expected to improve the quality of the compilation and publication of scientific works by the academic community. The academic community, both students and lecturers, can consult online with a consultant librarian via WhatsApp or make an appointment for a consultation via Zoom Meeting, so that users can be more free and comfortable to ask about everything related to the compilation of scientific works to publication.

Therefore, to support its implementation, UMY consultant librarians are required to be able to answer problems and provide guidance to librarians related to information access, preparation of scientific papers to publication. The purpose of this writing is to explain the role of consultant librarians at UMY Library in the AskMYLibrarian service at UMY Library.

2. METHODS

This study uses a mixed method or mix methods. Mixed research methods are research methods that combine two methods, namely qualitative and quantitative research in a research activity so that more comprehensive, valid, reliable, and objective data are obtained (Sugiyono, 2016). Data collection techniques use questionnaires and interviews. The study began with the distribution of questionnaires to 35 respondents consisting of 7 lecturers and 28 students who had used the AskMYLibrarian consultation service, both offline and online. After that, the researcher conducted interviews to explore the issues raised in more depth. In this process, the researcher conducted brief interviews with students and lecturers who had utilized the AskMYLibrarian consultation service, totaling 4 lecturers and 4 students who were willing to be interviewed.

3. RESULTS AND DISCUSSION
3.1. Consultant Librarians in Higher Education

Libraries must be able to see more deeply about the needs situation desired by the library users. According to Zins in Cucus (Cucus et al., 2019), consultation is a process that is usually based on the same relationship characteristics marked by mutual trust and open communication, working together to identify problems, uniting personal resources to identify and choose strategies that have the potential to solve identified problems, and sharing responsibilities in implementing and evaluating planned programs or strategies. The implementation of consultation services in college libraries can be developed to focus on scientific consultations that support research.

One of the consulting services that already exists abroad is at the Texas Tech University Library. Hufford (2017) explains that:

> *"..the librarian will be available to provide instruction to groups of undergraduate researchers as well as assisting faculty in mentoring individual students. Other liaison librarians wanting to mentor undergraduate researchers in addition to fulfilling the responsibilities of supporting the academic programs of their assigned departments will at some later time be established as a team that will be chaired by the undergraduate research programs' liaison librarian".*

Academic librarians at Texas Tech University Libraries provide individual student mentoring services to support student research needs, from providing guidance on how to create search strategies, retrieve information, cite sources correctly, and use retrieved information ethically, all the way through to publication.

According to the Oxford English Dictionary, ".. a consultant begins with a person qualified to give professional advice or services". According to Sarah Anne Murphy (2011) in her book entitled "The Librarian As Information Consultant: Transforming Reference for the Information Age" explains that, "Consultants focus on results, helping clients to define their needs, acquire the competencies and skills to address these needs, and take action.". A consultant must be able to help clients according to their needs, acquire the competencies and skills to address these needs, and take action.

Murphy also explained that as a library and information reference librarian, the librarian must be well-positioned to adapt to changing user needs and changes in the surrounding

environment. In addition, the consultant librarian must have the ability to actively listen to the information needs of clients and translate those needs into workable solutions. Reference librarians must also play their role as library and information consultants. They can first match consumer information needs with the resources available to meet those needs, and then adapt the models and practices of consultants working outside the library and information science profession. The following are the competencies that reference librarians can do to become consultant librarians in libraries:

COMPETENCIES OF SUCCESSFUL CONSULTANTS	COMPETENCIES OF SUCCESSFUL REFERENCE LIBRARIANS
Listening ■ actively hears and clarifies client's needs, as stated in client's own words Investigative ■ systematically seeks data or information Analytical ■ examines the data collected to identify sources of variation, solutions, and/or opportunities for improvement Action ■ implements solutions ■ manages change	Approachability ■ welcomes patron with verbal and nonverbal behaviors that put patron at ease ■ provides assistance at patron's point of need Interest ■ confirms understanding of patron's information needs Listening/Inquiring ■ allows patron to state information need in own words ■ rephrases or clarifies patron request Searching ■ formulates an effective search strategy with patron Follow-up ■ asks patron if her question was answered ■ encourages patron to return for assistance

Figure 1. Competencies of Reference Librarians and Consultants (Murphy, 2011)

To provide consultation and guidance to users, librarians must holistically understand the main problems of user information and then solve them using existing information resources (Rizkyantha, 2018). In developed countries, the role of libraries has become research support services. This means that libraries have provided services to researchers starting from research preparation, choosing research topics, providing information sources, research funding information, situation information to information, and publications (Puspitasari, 2015).

3.2. The Role of Consultant Librarians in UMY Library

The increasing climate of higher education research demands the responsibility of librarians to make libraries a source of supporting research data (Satriani et al., 2021). Consultant librarians at UMY Library in practice serve students and lecturers who have various needs and uses of scientific information. Not a few of them have different problems and difficulties, both technical and non-technical. Librarians, especially students, still have difficulty in finding reference sources that are relevant to their research topics. Not a few students do not know how or strategies to find reference sources that are relevant to their research topics. This makes students feel confused in finding references and hinders the work on their proposals or theses.

According to a survey by Worlock quoted by D'Couto and Rosenhan (2015) stated that:

> *".. student and faculty respondents reported that looking for information took about half of their total study time (the other half being analyzing and using information found). Additionally, finding enough time to sort through the information required to do their work is a top obstacle for students"*

From the statement above, it can be explained that in searching for information, students need about half of their total study time and the other half is used to analyze and use the information found. In addition, another obstacle is sorting the information needed. The amount of information we get through the internet or even Artificial Intelligence (AI) does not necessarily solve the problems faced by someone. Therefore, the role of a consultant librarian is very much needed to help students identify and analyze various information appropriately and relevantly to their needs so that they can provide the right solution.

The author conducted interviews with several students who had conducted face-to-face scientific consultations. Most of them already had research topics for proposals and theses, but they did not yet know how to find relevant, credible and quality journals. In addition, some of them did not understand the initial steps in compiling a proposal and were confused about finding a research topic. This is where the role of a consultant librarian is very important to provide direction and guidance to students who experience obstacles in brainstorming and searching for references.

In addition to the ability to search for information to obtain credible information, the next challenge for librarians is the use of tools to provide convenience in the learning process and scientific writing, in order to produce quality scientific writing in terms of content quality, novelty of information, originality, and writing techniques (Wiratningsih, 2020). Consultant librarians are also required to be able to assist students in technical matters of writing such as writing techniques, the use of writing support tools such as reference managers, paraphrasing applications, and data analysis software. From this it can be said that consultant librarians are not only present as source providers, but also as problem solvers of information and scientific writing.

In addition to students, there are also lecturers who use this consultation service, such as how to use or problems with References Manager (Mendeley, Zotero, Endnote), how to use and analyze bibliometrics using VosViewer, and how to install Smart PLS, SPSS, and NVivo data analysis software. On one occasion, the author interviewed one of the lecturers at the Faculty of Law, namely N, who uses the AskMYLibrarian consultation service. In the interview, he felt that this consultation service was important to support the needs of the community related to writing, starting from searching for references in various international databases to using the Zotero application for writing citations.

To see the effectiveness of the AskMYLibrarian consultation service, the author distributed a questionnaire in the form of a google form to students and lecturers who had used the AskMYLibrarian service. Based on the results of the questionnaire, it was found that 77.1% of respondents strongly agreed that this scientific consultation service was important to support academic research.

Based on the results of the diagram above, it can be seen that the AskMYLibrarian scientific consultation service can support academic community research which includes various consultation service menus such as searching for information sources, using references managers, writing and paraphrasing techniques, guidance on submitting Sinta and Scopus indexed journals, simple data processing (SPSS, PLS, NVivo), and Vosviewer.

The details of the percentage of use of each AskMYLibrarian consultation service menu by librarian users are as follows:
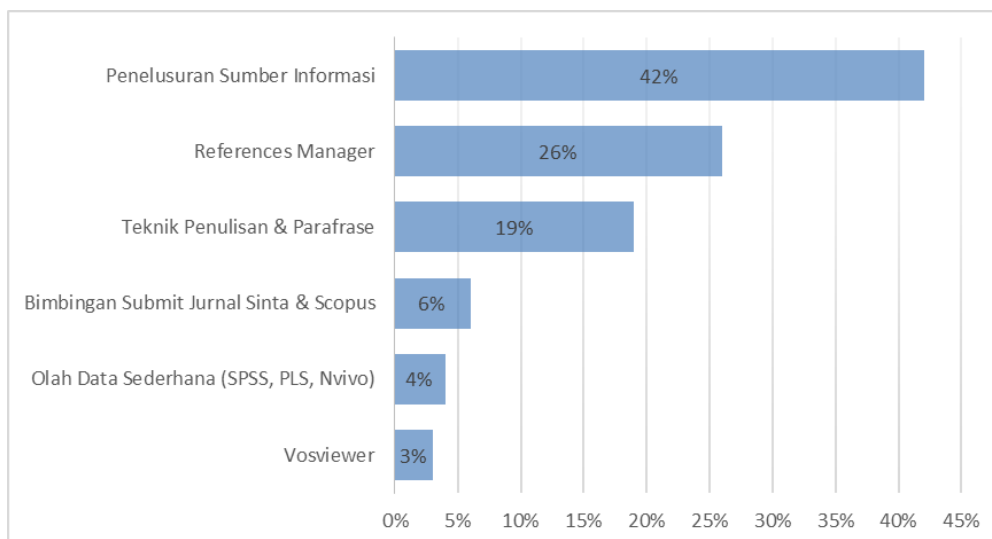
Figure 2. Ask MY Librarian Service Interest Data

Based on Table 1 above, it shows that in the era of technology that provides various information on the internet, the role of consultant librarians is still needed to help academics in compiling scientific works to publication. The results of the description of the questionnaire data above are as follows:

(i) Search for Information Resources

Based on Table 1, it shows that 42% of librarians mostly utilize the information resource search consultation service menu. These results show that despite the abundance of information on the internet, not many librarians have been able to find credible and relevant references to the topics raised. Therefore, consultant librarians must be able to answer the problems of librarians who have difficulty finding reference sources that are relevant to their research topics. The factor that makes it difficult for them to find the reference sources is the lack of information about the reference search portal. They are only fixated on the search portal on Google Scholar and do not yet know the strategy in searching for information. The role of the consultant librarian here is to provide various choices of nationally accredited and internationally reputable journal database portals. In addition, it must also provide alternatives to find references that remain relevant by describing the research variables.

The author conducted an interview with one of the students, namely MRH. In the process of preparing the proposal, he had difficulty in finding references that were relevant to his research topic. After that, the consultant librarian tried to help analyze the research topic and explain how to find the references needed to get the main journal and its supporting journals. In the interview, he felt that by consulting privately, he became more knowledgeable and knew the next steps in compiling a good proposal. "Thank you, miss. So I can find more journals, so I can make a proposal faster," explained MRH.

Sometimes students and lecturers have difficulty in the process of finding reference sources to compile theoretical foundations in research. Through this service, consultant librarians will help users find and process information through several search strategies, starting from the stage of identifying information needs, searching for information, to evaluating information in order to obtain credible and relevant reference sources. In addition, librarians also help in providing alternative solutions for keyword searches that remain relevant to their research topics.

Based on the results of an interview with one of the student informants, AF said that,"(through this service) I can get international journals easily, it helps when doing college assignments/research, the quality of my research feels better". In line with AF, lecturer RA also said that this service can help him in finding and accessing journals in international databases.

(ii) Scientific Writing Techniques and Paraphrasing

The next result is that 19% of librarians utilize the Scientific Writing Technique and Paraphrase consultation service. This service menu helps students and lecturers in compiling their thesis writing, starting from compiling the background, creating a research framework, creating a table of contents, index, to checking typos.

One of the students, VW, said that he became more knowledgeable about making proposals and searching for primary and supporting journals that were relevant to his proposal topic. "Alhamdulillah, I was able to successfully make a proposal correctly and more relevantly," he explained through a Google Form questionnaire.

In addition, this service also helps how to paraphrase a sentence to avoid Turnitin. Paraphrasing is the process of recreating a sentence or statement in another language without changing its meaning (Lawelai et al., 2022). The consultant librarian will teach paraphrasing techniques manually to automatically through several applications such as Quillbot, Spinner, Pharaphraser.io, etc.

(iii) Use of References Manager

Based on table 1 above, it was found that 26% of librarians utilized the References Manager consultation service. Through this service menu, academics can consult on how to install reference manager software such as Mendeley, Zotero, and Endnote. This service menu helps academics who have difficulty in using it and helps to fix software errors. One of the lecturers, namely PA, once experienced problems using Mendeley which could not be used to compile his dissertation when in Barcelona. After that, he asked for time to consult with a consultant librarian online via the Zoom platform. He said that this service could help the process of working on his dissertation which had to use Mendeley. "Alhamdulillah, my data storage was saved and the citation application was reinstalled properly," he explained.

(iv) Vosviewer

There are 3% of librarians who use the Vosviewer consultation service, where the users are UMY lecturers. Bibliometric research is one of the research methods that is starting to be widely used by lecturers and students. Therefore, consultant librarians must be able to use this Vosviewer software to analyze publication data and collaboration networks, and can even help researchers find novelty from a study. VOSViewer is a computer program used to visualize bibliometric maps. The text-mining function can be used to visualize a network or relationship (co-relation) in an article citation (Herawati et al., 2022). One of the lecturers who had consulted regarding bibliometric analysis using Vosviewer was IWL. He said, "I am very helped by the consultation service from the UMY library. The librarians are also very helpful and patient in teaching me.".

(v) Simple Data Analysis

There are 4% of students who use the simple Data Analysis consultation service. Through this service menu, academics can ask about how to install data processing software such as SPSS, Smart PLS, and NVivo. In addition, academics can also ask about how to analyze simple research data, starting from data tabulation, validity testing, to reliability testing using the software. One of the RW lecturers had difficulty in the validity test, many of which were insignificant. After that, the consultant librarian changed the significant values to get valid

results. He said, "I got the analysis results according to my dissertation research needs". However, in this data analysis service, the consultant librarian is still in the process of studying each software.

(v) Guidance on Writing Scientific Papers Indexed by Sinta and Scopus

There are 6% of librarians using the consulting services for guidance in writing scientific papers indexed by Sinta and Scopus. Research is a form of scientific development that is not only sufficient by thinking, but also needs to pour out ideas, concepts, and the results of these thoughts into a writing, one of which is in the form of a scientific article. Through this service menu, consultant librarians can help librarians find the right and accredited journal publishers according to the scope of the librarian's research. In addition, librarians can also direct the process of compiling articles according to templates, writing ethics, to the submission and review process. One student, YIA said that through this consultation service she can choose a journal indexed by Sinta to submit journal articles that are in accordance with the scope of her research and know the requirements and ethics in writing journal articles.

Thus, to support this scientific consultation service, consultant librarians must be able to move in a more strategic direction and dare to try new things in order to continue to get "recognition" in the era of society 5.0. The increasing demand for information and the use of various tools requires consultant librarians to always hone their skills and get out of their "comfort zone" so that the role of librarians remains in demand as research supporters or even research partners. Therefore, librarians must always follow research and writing trends in order to adapt and answer all the needs of library users which will become increasingly varied.

4. CONCLUSION

Based on the results of the explanation above, it can be concluded that the AskMYLibrarian scientific consultation service can support academic community research which includes various consultation service menus such as searching for information sources, using references managers, writing and paraphrasing techniques, guidance on submitting Sinta and Scopus indexed journals, simple data processing (SPSS, PLS, NVivo), and Vosviewer. Thus, consultant librarians must be able to become solution-oriented librarians so that they can solve problems with alternative choices, and can assist research activities by providing and analyzing the need for relevant information resources and tools. Therefore, in this era of society 5.0, UMY Library is developing a scientific consultation service with a more efficient and easy presentation format, namely in the form of an online scientific consultation service, namely AskMYLibrarian. This scientific consultation service is a challenge and opportunity for consultant librarians. Thus, consultant librarians must always follow research and writing trends in order to adapt and answer all the needs of librarians which will be increasingly varied. Librarians can improve their abilities by attending workshops and seminars related to writing and publication, creating journal articles to publication, routinely studying independently through YouTube channels or asking experts, to learning by doing.

5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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