

Research Article

Impact of CiteGuru Mobile Application on Referencing Competency

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Abstract: Reference competency is the ability, skills, and knowledge to properly write, interpret, and communicate referencing styles and standards. Reference competency is an important predictor of individual impacts such as performance, satisfaction, and net benefits. Thus, CiteGuru mobile application was developed as an effort to improve the ability, skills, and knowledge of an individual in relation to referencing competency. The mobile application was developed based on Android Studio 3.1.17 and released to Google Play Store. However, since its inception the impact of the application has never been investigated. Therefore, the purpose of this study is to investigate the impact of CiteGuru application on its stakeholders.

Keywords: information system development; reference; competency; performance; impact



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1. INTRODUCTION

Referencing competency is the ability, skills, and knowledge to properly write, interpret, and communicate referencing styles and standards (Rosman et al., 2022a; Rosman et al., 2022b). Referencing competency helps to produce a better writing, high quality publication, enable linking of past and present knowledge, as well as increase the transparency of publication. Kurtz (2002) define competencies as sets of behaviors that are instrumental in the delivery of desired results or outcomes. Competencies is the traits of individual that encourage or discourage specific outcome. On the other

hand, Hepp et al. (2015) indicate the importance of competencies framework to define professional competency, for example standards, code of ethics, and best practices.

However, critics especially academicians encourage more research on the competency framework, as it is a challenging process due to explicit of inclusion and selection criteria and how it should be measure. Thus, the importance of competency to individual impacts is highly expected due to various reasons; (1) competency ensure high quality standard, (2) competency shows sufficient performance measurement, and (3) competency ensure quality of work and performance.

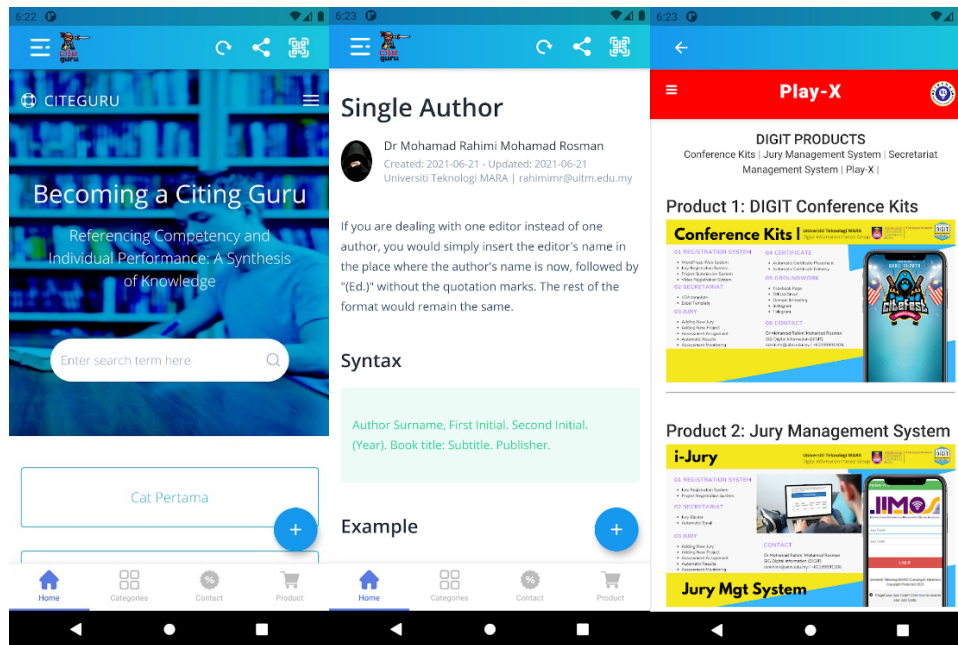


Figure 1. CiteGuru Mobile Application

As a response to the issue of competency measurement and enhancement, a mobile application was developed known as CiteGuru Mobile Application (see Figure 1). The application was developed using Android Studio 3.1.17, PHP programming language, MySQL database and jQuery. The application is available at the following URL <https://citeguru.uitmapps.com> or via the Google Play Store <https://play.google.com/store/apps/details?id=com.citeguru>. The application was designed to help spread the knowledge on referencing competency specializing in American Psychological Association (APA) 7th Edition. However, since its inception the impact of the application has never been investigated. Therefore, the purpose of this study is to investigate the impact of CiteGuru application on its stakeholders.

2. METHOD

A quantitative research methodology was adopted for the purpose of the study. Data was collected from all six campuses of Faculty of Information Management. A convenience sampling method was adopted due to researcher easy access to the sampling frame. An email invitation of survey was sent to all students enrolled at the Faculty of Information Management, Universiti Teknologi MARA. There are 6 branches involved in the study, namely Universiti Teknologi MARA Kampus Puncak Perdana, Universiti Teknologi MARA Cawangan Negeri Sembilan Kampus Rembau, Universiti Teknologi MARA Cawangan Kelantan, Universiti Teknologi MARA Cawangan Kedah, Universiti Teknologi MARA Cawangan Johor, and Universiti Teknologi MARA Cawangan Sarawak. To ensure

higher response rate, we seek the help of the assistant registrar and related lecturers. This method is proven effective because these stakeholders have access to the respondents.

Data collection took 2 weeks in August 2021. In total, 394 responses were received and usable for further analysis. Hair, Sarstedt, Hopkins, and Kuppelwieser (2014) suggest that PLS-SEM calculate sample size based on observed and latent variables, with minimum of 5 and maximum of 10. Thus, in the context of this study, the minimum sample size is 110 while maximum sample size is 220. To further confirm the sample size, A-priori Sample Size Calculator for Structural Equation Models by Soper (2021) was used. Therefore, based on both calculations, a total of 394 responses are deemed adequate for further analysis of measurement and structural model. The following table 1 shows the distribution of respondent's responses:

Table 1. Respondent

| University | Frequency | Percent | Cumulative Percent |
|---|-----------|---------|--------------------|
| UiTM Puncak Perdana | 63 | 16.0 | 16.0 |
| UiTM Cawangan Kelantan | 84 | 21.3 | 37.3 |
| UiTM Cawangan Sarawak | 46 | 11.7 | 49.0 |
| UiTM Cawangan Negeri Sembilan Kampus Rembau | 52 | 13.2 | 62.2 |
| UiTM Cawangan Kedah | 93 | 23.6 | 85.8 |
| UiTM Cawangan Johor | 56 | 14.2 | 100.0 |

3. FINDINGS

Based on the findings, it shows that referencing competencies that related to knowledge, skills, and ability to perform any task had significantly affect individual tasks performance and task satisfaction. Students agreed that competencies in referencing enabled them in completing their information searching task. The first finding for this study shows that students are preferring to use non-Digital Library resources such as Google and Yahoo! Search engine as their main reference sources. As stated by Arshad and Ameen (2018), user perceptions, abilities and facilitating circumstances are among of the factors that contribute to the intention in using non- Digital Library resources.

Second finding found that EndNote is the most preferable reference tools that being used by the students, followed by Mendeley and EasyBib. EndNote, Reference Manager, and RefWorks are reference management software that were used by 98% of authors (Lorenzetti & Ghali, 2013) and Endnote is found to be widely used by faculty, researchers, and students as a tool to collect, store, organize, manage their references, images, and PDFs, insert references into the manuscripts, placing figures and tables in the word document or other documents (Zhang, 2012; Valentine, 2009).

In terms of checking the accuracy of reference or citation, the finding indicate that students mostly are not sure of the accuracy of the citation that the refer from the Internet. Accurate citation is very important for students to prevent them from any plagiarism issues (Mohammad Rahimi et al., 2021). The study also found that the students have poor engagement with reference service that being provided such as reference librarians. Most of them were not frequently contact with the reference librarian.

The students also are aware and acknowledged the information skill class that being provided by the library as found in the finding. However, the number of students who give negative response is also high as 73 of them indicated that they are not aware with the service provided. Information skill class can help students to improve their information searching and retrieval and it also give impact to the writing ability and skills of the students who joined the class (Shao and Purpur, 2016).

The findings also found that students spend a lot of time in checking the accuracy of the references even though there are many referencing tools that being provided such as EndNote, Mendeley, etc in order to simplify reference management. It indicated that most of them spend almost 10 minutes to 15 minutes to check the accuracy of the citation. As for researcher, accurate references are

very crucial to help them to retrieve information needed as inaccuracies in referencing will be an obstacle in retrieving those information (Basak, 2014; Hinchcliff et al., 1993).

3.1 Impact of Ability on Individual Performance

Ability on referencing have a significant and positive relationship with individual performance. There are many types of referencing that can be referred such as MLA (Modern Languages Association) system, the APA (American Psychological Association) system, the Harvard system, and the MHRA (Modern Humanities Research Association) system but the most commonly used are Harvard Referencing & Citation and APA Referencing & Citation (Shibly, 2016). Students who are able to apply different types of citation standards will give impact in their performances as different standards require different skills of referencing.

Students who are able to recognize, analyze, and solve a variety of citation errors will enable them to locate original sources of information appropriately. Errors in referencing such as wrongly cited author's name, article title, improper use of abbreviations in relation to variations, incorrect volume, edition statements, pagination and year of the publications can be barriers in retrieving the source of information (Orlin et al., 1996; Hernon & Metoyer-Duran, 1992). Students who have the ability to minimize mistake in referencing will help them to complete their task successfully.

There are many types of citation software that are available such as EasyBib, RefWorks, Mendeley, EndNote and so forth that function to makes easy to read and record bibliographic information for the reference such as the author's name, year of publication, and the title of an article, edition statement, pagination and others (Reiss & Reiss, 2002). This software also found to help students to have accurate citation compared to manual systems among researchers (Basak, 2014) and this will result in producing excellence tasks.

Good referencing or citation enable students to review the accuracy of their works. Reference is one of the tools that can be used to indicate the quality, credibility and authority of the materials that being referred by the authors. Roig (2016) stated that reference helps reader to explore further and thoroughly the evidence and topics discussed.

3.2.2 Impact of Skills on Individual Performance

The analysis revealed that referencing skills have a significant impact on individual performance. People can write but not all of them know how to rephrase and edit their document. Student must have skills in editing document for correct citation in order to help them write properly. Similarly with study by Badenhurst (2018), that conclude that people with good referencing skills are those who can summarise a source piece in its entirety and utilise their own words and tend to write properly. Errors in editing document will have a negative impact on the final purpose of writing thus show that skills in editing documents for correct citation give impact on individual performance.

Findings also found that skills in communicating the correct usage of citation to others give impact on individual performance. To develop skills, librarians need to give the simple example or organize citation class to make student know how to do citation properly thus can communicate it to others. Same in Park, Mardis & Ury (2011) in their study state that several students expressed their dissatisfaction with the difficulty of citing electronic materials and their respondents stated that extra education, repeating the instruction numerous times for part-time students, and returning revised reference lists throughout the editing phase will improve their citation skills. Through this class, student can master in do citation thus can teaches others in doing it.

Skills to communicate with others also give impact to individual performance. Initially, users embraced citations primarily to improve retrieval of information (Hellqvist, 2010). In our study its show that majority of the student stated that their engagement with librarian is relatively poor thus cause them faced difficulties in doing citation. Clear communication with others can prevent plagiarism. Garfield (1996), in his study state that citations are essential for clear communication among researchers.

There are many commercial and open-source citation software that are available such as EndNote, Mendeley, EasyBib, Refworks, Zotero and many more. Based on descriptive analysis, the most preferred reference tool is EndNote. This study reveal that students are unsure of the accuracy of the citation download from the Internet. Skills in using citation software is important to help them cite properly. Supported by study that been done by Sungur & Seyhen (2013), where they conclude that with the help of various types of citation software allows researchers to quickly locate, cite, and save references. Student with skills to utilize difference types of citation software help them cite properly.

4. CONCLUSION

The purpose of the study is to investigate the impact of CiteGuru mobile application on the individual performance, satisfaction, and net benefits. To answer the problem, a quantitative analysis was conducted, and data was analysed based on descriptive analysis and data was interpreted with the support of previous literature. Our study found that the use of CiteGuru mobile application help to increase the skills and ability of individual especially in dealing with various citation and reference styles and standard. However, since this application only focus on APA 7th edition, the impact would only appeal to the one style only. Thus, it is suggested that future study and development to focus on multiple styles application especially those that currently utilize by high-impact journals. Adopting multiple reference styles may help to improve the efficiency of the application, and at the same time improve the skills, ability, and knowledge in relation to referencing competency.

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