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Modeling and Simulation Library's Service for Net Generation: A System Dynamics Framework

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The existence of a university library as an information center is required to provide services in accordance with the criteria and the needs of users being served. Users who utilize the services of university library are dominated by students who are classified as net generation. Today's generation called "Net generation", has different behavior pattern in seeking information compared to the previous generation. Understanding this will help librarians make innovations in library services that will ultimately improve number of the library visitors from this net generation. This study focused on modeling in the front office library service, designing the projection and analyzing the simulation results with cost benefit analysis. The system dynamics method allows writers to conduct comprehensive research to study the behavior and improve system performance.

From the simulation results of pessimistic and optimistic projections, the total physical visitor of optimistic projection can achieve 23% higher than pessimistic projection. The increase in total website visitor on optimistic projection reached 169.701 visits at month 36. Meanwhile in the pessimistic projection, total website visitors reached 118.440 by the end of the 36th month.

According to cost benefit analysis, the pessimistic projection provides a B/C ratio of 0.97, meanwhile the optimistic projection provides a B/C ratio of 1.38152. Optimistic projection has a better value than the pessimistic projection in terms of cost benefit analysis. Optimistic projection proposes the implementation of visual search, online acquisition, upgrading the server hardware, installation of Wi-Fi, improved comfort furniture, improved sanitation, additional opening hours, friendliness and expertise of library staffs in delivering services and a library exhibition.

Keywords: system dynamics, information systems, library, net generation, cost benefit analysis

1. INTRODUCTION

Basically, users who use academic library services are composed of non-students (faculty and administrative staff) and students. Student population is now dominated by a generation who are classified as net generation. The net generation is the generation born in 1985 to the present. Net generation is very different from previous generations, especially the ability in using technology. They know how to explore the technology independently^{7,11,14}.

Thus they has different behavior pattern in seeking information compared to the previous generation, concern to the usage of information technology to access information. In 2005, OCLC (Online Computer Library Center) conducted a study of library user perceptions found that users prefer to search using the search engines than information resources in the library. This indicates the library began to lose its position as the primary information source.

The librarian recognized the needs to accommodate the net generation users, it was necessary to understand

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