



The Influence of Information Technology, the Web, and Knowledge on Information Systems

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Abstract: The Influence of Information Technology, Web, and Knowledge on Information Systems is a literature review focusing on the ESSB field. The purpose of this paper is to develop hypotheses regarding the correlation between variables that will serve as the foundation for future research. The method applied in this study is literature analysis using electronic sources such as e-books and publicly available journals. The analytical approach used is qualitative descriptive. Here are the findings from this analysis: (1) Information Technology influences Information Systems; (2) Web influences Information Systems; (3) Knowledge influences Information Systems.

Keywords: Information Technology, Web, Knowledge, Information Systems

INTRODUCTION

Each student at the undergraduate, master's, and doctoral levels is required to conduct research in the form of theses and dissertations. This requirement also extends to lecturers, functional staff, and other researchers who must actively engage in research and publish scholarly articles in scientific journals.

Scholarly work is a crucial requirement for students to complete their studies in the majority of universities in Indonesia. This applies to all levels of education, starting from writing undergraduate theses, master's theses, to doctoral dissertations.

However, based on common experience, many students and researchers face challenges in finding articles that support their scholarly work, whether to discover relevant previous research, support theory development, explore relationships between variables, or formulate hypotheses.

Based on this background, the aim of this article is to reconstruct hypotheses for subsequent research, specifically to formulate: (1) Information Technology influences Information Systems; (2) Web influences Information Systems; (3) Knowledge influences Information Systems.

METHOD

The method of writing a Literature Review article involves Library Research and Systematic Literature Review (SLR), which are then analyzed qualitatively. Information sources are obtained from online platforms such as Mendeley, Google Scholar, and other academic support applications.

Systematic Literature Review (SLR) is defined as the process of identifying, evaluating, and interpreting all available research evidence, aimed at providing answers to specific research questions (Kitchenham et al., 2009).

In qualitative analysis, it is important to use literature studies consistently based on methodological assumptions (Ali, H., & Limakrisna, 2013).

RESULTS AND DISCUSSION

From the context, objectives, and methodological approach employed, the conclusions of this article are as follows:

Information System

Information System represents a fusion of data and methods, utilizing hardware and software to disseminate valuable information (Anjelita & Rosiska, n.d., 2019). It integrates various components of information technology to establish communication channels within organizations or groups (Jonny Seah, 2020). Dimensions, indicators, synthesis, or factors influencing Information Systems include Organization, Technology, and People. This area has been extensively studied by previous researchers such as Abdul Kadir (2014) and Huda (2017).

Information Technology

Information Technology encompasses tools utilized by companies to generate, process, and distribute information in various forms, thereby supporting efficient business operations (Muafi, Roostika, & Ratna, 2014). It combines computer technology and interactions to develop software and hardware systems for processing, retrieval, storage, and manipulation of data. This capability enables the production of high-quality, accurate, and relevant information crucial for decision-making purposes within organizations (Samuel, 2019). Dimensions, indicators, synthesis, or factors influencing Information Technology include Technology Infrastructure, System Integration, and Application Development. Previous studies on Information Technology have been conducted by researchers such as Abrianto & Sitompul (2014), Budiman (2012), Hotman Panjaitan (2007), Pratiwi & Dewi (2022), and Giovani Huiser Mangalindung (2023).

Web

The Web can be defined as a collection of pages containing digital data such as text, images, animations, sounds, and videos, accessible globally via internet connections (Abdullah, 2018). Recent innovations include web database systems integrating audio and video formats, requiring interactive features responsive to user inputs. Essential requirements for implementing interactive web systems include independence from browser or server constraints, robust data access security, adherence to open system architecture principles, and minimization of application overhead. The Web's development and usage are influenced by technological advancements, content quality, user engagement, and functional capabilities. Economic, social, and regulatory factors also play significant roles in shaping web dynamics. Previous research on the Web includes studies conducted by Putri Primawanti & Ali (2022), Abdullah (2018), and Rusdiana & Irfan (2019).

Knowledge

Knowledge is a critical element in highly competitive, uncertain, and evolving business environments. It encompasses accessing experiences, knowledge, and skills to develop new

competencies, enhance performance, foster innovation, and create customer value. Creating an environment where individuals can utilize and share expertise facilitates improved task execution and maximizes organizational effectiveness (Bader et al., 2018). Effective Knowledge Management enables organizations to optimize limited resources and derive lessons from the surrounding environment, thereby enhancing business sustainability (Haridjono, 2020). Dimensions, indicators, synthesis, or factors influencing Knowledge include cognitive, affective, social, and contextual aspects contributing to how individuals acquire, store, and utilize knowledge. Indicators such as understanding, information mastery, knowledge development, and knowledge sharing gauge the effectiveness of knowledge acquisition and application. Previous studies on Knowledge Management have been conducted by researchers such as Bader et al. (2018), Haridjono (2020), and Putri Primawanti & Ali (2022).

CONCLUSION

In conclusion, the objective of this article is to establish hypotheses that will serve as the foundation for future research, namely:

- 1) Information Technology influences Information Systems
- 2) The Web influences Information Systems;
- 3) Knowledge influences Information Systems.

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DESCRIPTION OF TABLES AND FIGURES

Table

Reviewing relevant articles serves as the foundation for formulating research hypotheses by presenting the findings of previous studies, comparing similarities and differences with the planned study, as illustrated in Table 1.

Tabel 1: Results of Relevant Research

No	Author (Year)	Previous Research Findings	Similarities with This Article	Differences from This Article	H
1	Nanda Pratiwi., & Arlis Dewi.. (2022)	The Influence of Information Technology on the Quality of Accounting Information Systems at PT Reka Graha Semesta	Information Technology Influences Information Systems.	The Influence of Information Technology, Web, and Knowledge on Information Systems.	H1
2	Wahono, S., & Ali, H.. (2023).	Communication, Technology Acceptance, and Decision-Making in Employee Performance Evaluation (Literature Review Executive Support Systems for Business)	Information Technology's Impact on Information Systems	The Influence of Information Technology, Web, and Knowledge on Information Systems	H1
3	Anggoro, D., & Hidayat, A. (2020).	Design and Development of a Web-Based School Library Information System to Enhance Librarian Service Effectiveness	The Impact of the Web on Information Systems.	The Influence of Information Technology, Web, and Knowledge on Information Systems.	H2

4	Putri Primawanti, Eka, & Ali, Hapzi (2022).	The Influence of Information Technology, Web-Based Information Systems, and Knowledge Management on Employee Performance: A Literature Review of Executive Support Systems (ESS) for Business	The Web impacts Information Systems.	The Influence of Information Technology, Web, and Knowledge on Information Systems.	H2
5	Joshua Octara Venthio, dan Ilzar Daud. (2022).	The Role of Knowledge Management, Knowledge Sharing, and Job Innovation on Employee Performance.	Knowledge Influences Information Systems	The Influence of Information Technology, Web, and Knowledge on Information Systems	H3
6	Adietya, K., Miyasto, & Sugiarto, Y. (2015)	Analysis of the Impact of Information Technology and Innovation on Competitive Advantage to Enhance Organizational Performance.	<i>Knowledge influences Information Systems.</i>	The Influence of Information Technology, Web, and Knowledge on Information Systems.	H3

Figure

Based on the problem formulation, discussion, and relevant studies conducted, the conceptual framework of this article is depicted in Figure 1.

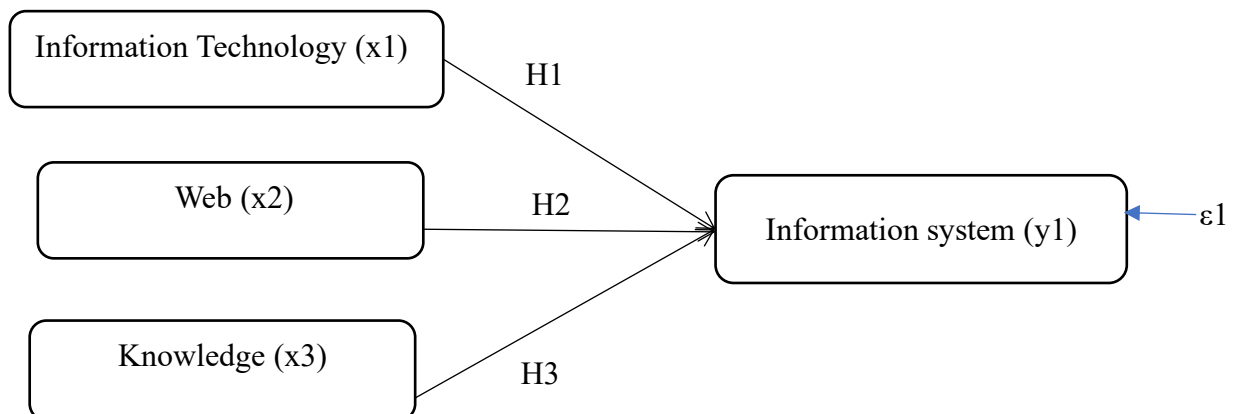


Figure 1. Conceptual Framework