

Relevant Accounting Information Systems: User Perspective and Information System Designers

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Abstract—This study aims to understand users and information system designers in designing and implementing relevant accounting information systems. Qualitative research is selected using an interpretive approach that focuses on exploring awareness from the perspective of users and accounting information system designers. The results showed that system users realized the importance of using accounting information systems to anticipate the number of transactions and errors in recording. From the system designer side, the designed information system must adapt to the conditions and culture of the system users. The relevant accounting information system occurs when the system implementation is based on mutual understanding and commitment between the user and the system designer.

Keywords—component, accounting information systems, relevant, system designer, system users, interaction, commitment

I. INTRODUCTION

The information system is an input-output process and integration between components that aims to produce relevant information for decision making. Information systems are like a means of controlling business processes in a company. The more complex the company's business processes, the presence of information systems will make it easier to control the company [1]. The importance of the involvement of users and system designers in the success of the system [2]. They explain that user involvement in information system development should be seen as contributing to the successful implementation of information systems. The minimal involvement of users and system designers has resulted in conflicts that are often neglected in information system development. The potential for conflict in system development is very likely to occur because it involves high interdependence among group members in an organization.

Building a relevant information system involves not only mechanistic components, but the behavior of information users, information system designers, and company owners as end users. Information systems are said to be relevant when companies successfully implement and develop information systems that have an impact on superior financial performance by strengthening company revenues and or reducing company costs [3,4]. So far, many previous studies have focused on quantitative approaches to measure the quality of information produced [5,6]. In fact, relevant information can only be produced by relevant information systems.

Information systems are the integration of components of input, output, process, control, database, technology is a collective interaction that involves fighting, perceptions, culture, and the psychological burden of each individual involved in creating, implementing, and evaluating information systems. Therefore, the information system is described as a system of technologies that have relevance and impact on human behavior that is socially organized [7]. Nasution who observes user psychology focuses more on the involvement of user subjectivity in creating and developing information systems that will affect the quality of information produced by the information system itself [8]. In the context of this research, the subjectivity of user behavior and system designers in creating and implementing information systems is an interesting phenomenon to be the object of research. The subjectivity of user behavior and system designers is the implementation of experiences resulting from awareness that leads to behavior as a result of intervention of motives, values, personality traits, interactions between people, and interactions with the environment in which humans are present will influence human behavior [9].

There's not many studies have explored the phenomena behind efforts to present relevant information systems to produce relevant decisions that are reliable, accurate and able

to make a difference in decision making, are able to predict, evaluate, and control, so that users can make decisions. Exploring the subjectivity of users and system designers in creating, implementing, and operating information systems is an interesting discourse in building relevant information system concepts. In order to understand this condition through the perspective of system designers and users, this study uses a transcendental phenomenological analysis tool initiated by Edmund Husserl, a study that focuses on individual awareness as a result of experience. The purpose of this study is how users of the system and as a designer of information systems interpret the relevancy of i based on experience in developing and implementing information systems in this case information system Accounting (SIA).

II. LITERATURE REVIEW

A. *Phenomenology Studies in Revealing The Awareness of Information System Designers and Users of Information Systems Perform Social Actions*

Phenomenology was born as a reaction to a positivistic methodology [10]. Thus, the tendency of positivistic methodology to see phenomena from the skin outside and is less able to understand the meaning behind these visible symptoms. Phenomenology itself, said Husserl as pure subjectivity [11]. So that the truth obtained departs from the mindset of subjectivism, which not only looks at the visible symptoms, but tries to understand and explore the meaning in these symptoms. Husserl's phenomenology carries the concept of "I" as the center of the entire environment (Umgebung) which emphasizes the existence of "I" which is different from one human to another [12]. The difference is because the experience of each "I" will form different memories, perceptions, and imaginations. "I" in phenomenology is not an experience, but an individual who experiences it himself. Kamayanti mentions "I" as the one who does not the action [13].

It is the power of this understanding of "I" that distinguishes phenomenology from other methodologies, namely what Husserl called pure consciousness. Pure consciousness is not an interpretation of the world or a substitute for the truth of the objective world, but a result of the relationship between noema and noesis, which exists by experience. Therefore experience is an important point why humans have a certain awareness.

A gap in the interpretation of information needs will be exacerbated if the company uses a finished information package that is directly imported from developed countries to be applied in our country. This phenomenon will exacerbate the large gap between the user and the designer of the "Illusion" Information System. This is most likely because users and system designers have different points of view due to differences in culture and background [14], which will lead to different specifications and emphasis on work patterns.

III. METHODS

Systems designed by system designers in practice cannot be separated from technical expertise alone, but also knowledge of system user behavior which is no less important is required in the process of designing information systems. The majority of organizations are more focused on technical and mechanistic matters, psychological problems are still marginalized [15]. Therefore this study uses a qualitative approach to reveal social realities in the process of implementing information system technology starting when the system designer is designed and when the system is implemented by system users.

A. *Data Analysis Stage*

Phenomenology uses interviews as the main technique in data collection. The data analysis stages follow the concepts developed in phenomenology and combine with the data analysis stages that have been widely used by other studies, namely the stages of Husserl's phenomenological data analysis which have been developed by Moustakas [16], Creswell [17] which focuses on forming big themes through important statements as a result of the interweaving of noema and noesis. In the next analysis, the researcher formed the meaning as the first finding (first order understanding). Recent analysis done by constructing the entire explanation of the meaning and essence (essence) which is the second discovery (second order understanding).

IV. RESULT AND DISCUSSION

Developing an accounting information system in a business organization is not as easy as one might imagine. Generally, people think that implementing information systems is costly and disrupts the comfort in the work environment. Not to mention the mismatch between designers and users of information systems can cause conflict, because each individual in the information system circle will bring their perceptions and psychological conditions in responding to the existence of information systems.

A. *Implementation of AIS: Awareness to Overcome Information Distortion*

The use of information systems is a reflection of the acceptance of technology by users which is the main driver in defining information needs. The need for accurate, fast and reliable financial information made PT Wina decide to use information system technology in October 2013 to organize all sales and purchase transactions of building materials. Murtoyo, as the owner of the company, explained that the decision to implement the system was imperative to anticipate thousands of transactions and anticipate recording errors, as stated below:

"We used to use manual transaction recording. Over time, with thousands of data, we used the excel program. But data is often erro r ... Finally I decided to make my own SIA which can be designed in such a way as to meet the information needs I wanted by using an SIA consultant "

As a company owner, the need to use SIA in recording transactions at PT Wira is very important. This decision making is an explicit awareness based on experience so far when faced with the situation of many document issuances that are not accompanied by a tidy recording and storage process, making it difficult to identify. Murtoyo's role as owner does not just leave the process of controlling SIA in terms of development and control. In fact, the owner can hand off and fully hand over the AIS control process to the Accounting division but this is not done, because of the importance of the information generated by SIA to help the owner identify, solve, evaluate a problem to produce decision-making information or in the context of strategy creation. Business.

B. Shedding Resistance: Understanding the "I" Reaction in the Early Stage of AIS Implementation

Initial SIA implementation did not go smoothly. Resistance arose from SIA users who were PT WINA employees named Hariyanto as in the following explanation:

"A walnya I have trouble adapting to the new system and I got m enolak. because he is accustomed to using a manual system that does not bother typing. I had time to protest , because SIA troublesome ... System new , this is not easy because the input transaction requires the high discipline. But gradually, I started to feel the huge benefits that were generated through the implementation of the AIS ..."

The implementation of SIA is not necessarily directly accepted by employees, especially by Hariyanto. The difficulty in inputting data that is already a lot and creating discipline is a factor in the difficulties experienced by Hariyanto as a system user. This rejection is reasonable considering that PT Wina employees are accustomed to being in a comfort zone without using a computerized SIA. A computerized AIS for Hariyanto is very troublesome because it uses integrated computer technology, eliminates the convenience of using the old SIA, adds jobs, and requires high discipline [18].

Although initially refused, the experience of manually inputting large amounts of data which actually caused a complicated problem has created a deeper awareness that the use of SIA will facilitate work patterns in companies and guarantee the availability of timely information according to company owners' wishes and make it easier for companies to report tax obligations.

C. Understanding the "I" System Designer When Building AIS: Maintaining System User Habits

The birth of SIA cannot be separated from the role of system designer. The need to use system design services by the management of PT Wina, has gone through technical considerations related to the gap in needs and adaptation of ready-to-use AIS software that is not implemented with company conditions. Pak Tomi is a system designer whose services are used by PT Wina. The partnership has been going on for four years. Tomi not only designed the SIA owned by

PT Wina but also supervised the implementation and evaluated the SIA on an ongoing basis. The following is an excerpt from an interview with Pak Tomi when designing an information system for PT Wina.

"At the beginning I was asked to do SIA for PT Wina, I started using an excel application-based information system ... In less than 3 months, I realized that the SIA which was built on an excel basis could no longer be done due to limited excel capabilities. ... Understanding employee psychology for me is very important, because the user is the first party who will operationalize AIS. Employee psychology is seen when they refuse to change their behavior because from the start they are used to a simple manual accounting system."

As a system designer, the psychological constraints of the user were anticipated from the start by not drastically changing user habits. The system designer has taken a backward stance by creating an AIS without changing the existing operational flow. Lack of knowledge which is supported by low educational background becomes a precondition for those who refuse to leave their comfort [19]. The understanding of "I" by the system designer is "I" which must adapt the system to company conditions so that the wishes of system users are facilitated by the presence of SIA. System designers realize that technical and administrative matters are not the main factors the system can run, but user psychology must be anticipated immediately to avoid further rejection that will cause internal conflicts and harm the company.

D. Digging Relevance Concept System Information

This study explores the concept of relevance based on the perspective of users and information system designers. The effort to build the concept of relevance departs from a thought in the research by Tang and Solomon which explains that relevance is basically multidimensional which does not only involve the relationship between data requests and document readiness [20], but more than that. This provides a concept that evokes awareness from individual perceptions, especially "I" as a user and "I" as a system designer.

1) Relevant information system concept: Experience leads to commitment to change: The information system is relevant when the experience experiences an error that results in a loss to the company that triggers SIA users to commit to making changes by leaving the manual AIS behind and switching to the use of a computerized AIS. The manual system, which previously had been glorified by employees, broke when SIA was present as an integrated information system because it could detect irregularities related to the amount of company money and supplies. Kim et.al. describe commitment as a psychological binder of SIA users that generates high motivation to implement and fully utilize AIS [21]. The commitment of system users in this study is formed when they realize that the experience of using a manual AIS is costly for the company and the experience of using

a computerized and integrated AIS provides many benefits for company performance. The user experience of the system has formed a binding commitment to its action to implement AIS.

2) *Concept System Information Relevant: Designer Engagement System In Business Process Company:* System designer perceptions play a role in creating relevant information systems. For system designers, information systems are relevant when their design results can be traced back to the specifications of the system user requirements. System designers are given the flexibility to build SIAs that can meet user needs and information needs of company owners. The system designer's perceptions in this study are in line with Kendall and Kendall who argue that system designers in developing information systems must use a positive lens [22], not only pursue profits, be able to take an organizational approach, adopt positive habits in the organization, and always do continuous development of information systems according to user information needs.

3) *Concepts Relevant Information Systems: User Participation Actively Engaging with Pattern Maintaining Old M compassionate to Support the Implementation of SIA:* Building the concept of relevance from the perspective of information users is very important [20], because the exploration of the relevance approach through the user perspective is an approach to finding definitions of information based on their perceptions as individuals and users of information. The success of developing information systems is obtained by involving information users [23]. Involving system users in developing AIS is an effort to get the expectations of those who play an important role in operationalizing AIS. For Miller et al., user expectations are actually a determining measure of the quality of the services they offer [24].

4) *Concept System Information Relevant: Harmonization Between Designer and the User Information System:* The process of implementing SIA is not stagnant but constantly changing, along with intensive user interaction and development of corporate transactions. The accounting information system itself is a combination of work procedures, information, people, and information technology organized to achieve organizational goals. This combination in its application involves a series of processes that occur sequentially by involving various components that interact in an integrated manner.

Information system designers must realize that the system that has been created will continue to change and improve according to the information needs of users and company owners. Therefore the system designer has a state to play an active role in the system, by continuously updating the information system. The intense interaction between system

designers and users is no longer mechanistic, but interactive, based on mutual understanding between parties. So that there is a gap in the information system, more emphasis is placed on solutions regarding how the system can work as needed.

V. CONCLUSION

The concept of relevance in accounting always protects the inherent linkages in information, which is reliable and relevant so that it helps users make decisions. But the relevant concepts are not much related to the relevance of information systems. Presenting relevant concepts in building information systems is a must in order to produce relevant information. The new SIA is not without guarantees. Unchanging user behavior complicates AIS implementation. Constraints are caused by the existence of educational regulations, knowledge of the reliability of computerized AIS, weaknesses in the skills operating computer information technology, failure to understand that AIS will help document transactions in fast time with a small error rate, and high discipline because SIA creates integration and connections between individuals in different divisions.

REFERENCES

- [1] L. Askenäs and A. Westelius, "Five roles of an information system: a social constructionist approach to analyzing the use of ERP systems," *ICIS 2000 Proc.*, p. 40, 2000.
- [2] M. Newman and F. Noble, "User involvement as an interaction process: a case study," *Inf. Syst. Res.*, vol. 1, no. 1, pp. 89–113, 1990.
- [3] A. S. Bharadwaj, "A resource-based perspective on information technology capability and firm performance: an empirical investigation," *MIS Q.*, pp. 169–196, 2000.
- [4] C. Yeh, G. Lee, and J. Pai, "How information system capability affects e-business information technology strategy implementation," *Bus. Process Manag. J.*, 2012.
- [5] N. V. Dung, "Value-relevance of financial statement information: A flexible application of modern theories to the Vietnamese stock market," *Q. J. Econ.*, vol. 84, pp. 488–500, 2010.
- [6] C. W. Nobes and C. Stadler, "The qualitative characteristics of financial information, and managers' accounting decisions: evidence from IFRS policy changes," *Account. Bus. Res.*, vol. 45, no. 5, pp. 572–601, 2015.
- [7] R. Hirschheim, H. K. Klein, and K. Lyytinen, "Exploring the intellectual structures of information systems development: a social action theoretic analysis," *Accounting, Manag. Inf. Technol.*, vol. 6, no. 1–2, pp. 1–64, 1996.
- [8] F. N. Nasution, "Penggunaan teknologi informasi berdasarkan aspek perilaku (Behavioral aspect)," *USU Digit. Libr.*, 2004.
- [9] S. Azwar, "Sikap Manusia Teori dan Pengukurannya, Edisi ke-2," Yogyakarta: Pustaka Pelajar Offset, 2007.
- [10] S. K. Cibangu and M. Hepworth, "The uses of phenomenology and phenomenography: A critical review," *Libr. Inf. Sci. Res.*, vol. 38, no. 2, pp. 148–160, 2016.
- [11] N. De Warren, *Husserl and the promise of time: Subjectivity in transcendental phenomenology*. Cambridge University Press, 2009.
- [12] E. Husserl, *The basic problems of phenomenology: From the lectures, winter semester, 1910-1911*, vol. 12. Springer Science & Business Media, 2006.
- [13] A. Kamayanti, "Metodologi Penelitian Kualitatif Akuntansi: Pengantar Religiositas Keilmuan," Jakarta: Yayasan rumah peneleh, 2016.

- [14] A. A. Verrijn-Stuart and K. Anzenhofer, "Information systems user-designer communication problems," *Inf. Manag.*, vol. 14, no. 3, pp. 133–142, 1988.
- [15] C. Clegg, P. Waterson, and N. Carey, "Computer supported collaborative working: lessons from elsewhere," *J. Inf. Technol.*, vol. 9, no. 2, pp. 85–98, 1994.
- [16] C. Moustakas, *Phenomenological research methods*. Sage publications, 1994.
- [17] J. W. Creswell, "Five qualitative approaches to inquiry," *Qual. Inq. Res. Des. Choos. among five approaches*, vol. 2, pp. 53–80, 2007.
- [18] M. Pourrajab, R. Basri, S. M. Daud, and S. Asimiran, "The resistance to change in implementation of total quality management (TQM) in Iranian schools," *TQM J.*, 2015.
- [19] R. Angonese and C. E. F. Lavarda, "Analysis of the factors affecting resistance to changes in management accounting systems," *Rev. Contab. Finanças*, vol. 25, no. 66, pp. 214–227, 2014.
- [20] R. Tang and P. Solomon, "Toward an understanding of the dynamics of relevance judgment: An analysis of one person's search behavior," *Inf. Process. Manag.*, vol. 34, no. 2–3, pp. 237–256, 1998.
- [21] H.-W. Kim, H. C. Chan, and S. Gupta, "Examining information systems infusion from a user commitment perspective," *Inf. Technol. People*, 2016.
- [22] K. E. Kendall and J. E. Kendall, "Forms of government and systemic sustainability: A positive design approach to the design of information systems," in *Positive Design and Appreciative Construction: From Sustainable Development to Sustainable Value*, Emerald Group Publishing Limited, 2010.
- [23] P. Christiansson, K. Svidt, K. B. Sørensen, and U. Dybro, "User participation in the building process," *J. Inf. Technol. Constr.*, vol. 16, pp. 309–334, 2011.
- [24] R. E. Miller, N. G. Brooks, T. W. Jones, and L. Winick, "Information systems service quality: An examination of user expectations," *Am. J. Bus.*, 2008.