

School Level IS Discontinuance Intention: A Case Study on Information System IS Discontinuance Of Surigao State College Of Technology

Vrian Jay V. Ylaya

Surigao State College of Technology, Philippines, vylaya@ssct.edu.ph

ABSTRACT

Educational institutions implement school information system (IS) solutions for efficient academic processes and improve the student experience, thus tend to upgrade to new school IS, ceasing the use of old school IS. Extant studies of information system discontinuance are in organizational in general. This study is solely a school organization setting, specifically a thorough understanding of contributing factors that facilitate the intention of school information system (IS) discontinuance. Organizational level IS discontinuance intention OLIDI model was used as a lens and anchored by grounded theory. Semi-Structured interviews with school administrators and users of the school information system (IS) in Surigao State College of Technology. A qualitative statistics approach and coding to the group and analyze the data. The findings show that system shortcomings, organizational initiative, environmental change, system investment, and institutional pressures were the critical determinants of increased intentions to replace the existing school information system IS. The study findings are useful to school administrators to identify long term flexibility required of policies to overcome the capability of shortcomings that emerge over the system life span and underline risk associated with continued use of unsupported systems.

Keywords: Organizational Level Information System Discontinuance Intention OLIDI, institutional pressure, organizational initiative, environmental change, system investment, Information System IS

1. INTRODUCTION

Teaching, learning, and administration in schools are now incorporated with the school information system to boost school performance and effectiveness (Seagraves & Kenesson, 2007). The use of the school information system to maximizing time in decision making from complex problems in school, such as staff and resource allocation, efficient processes, and monitoring (Castells, 2002). The school management information system was now vital to school operation as a whole (Shah, 2014). But even with the advent of this technology, the information system has its limitation were it suffers deterioration as the schools grow overtime (Kelly, Gibson, Holland, & Light, 1999).

School administrator's salience of inadequate attention to the discontinuance of obsolete information system because of the risk to the whole school operation will have an impact on the system complexity, system change, and resources (Furneaux & Wade, 2017a). Some research that says intention of discontinuance of information systems were personal view such as dissatisfaction of the user (Nawaz et al., 2018), shift of one's interest (Tang, Chen, & Gillenson, 2018), status quo (Recker, 2014) and ease of usefulness (Yuan, Liu, Yao, Development, & 2016, n.d.). This paper explores the IS discontinuance of Surigao State College of Technology in some depth with a view toward improving the understanding of what drives an operational system toward the end of its life.

The result of the study shows that the discontinuance of the old information system of Surigao State College of Technology was associated with the system shortcomings, organizational initiative, environmental change, system investment, and institutional pressures. This factors of school information system discontinuance can help school administrator overcome capability of shortcomings that emerge over the system life span and underline risk associated with continued use of unsupported system

2. research methodology

A priori framework has given considerations to technological, organizational, and environmental sources of change.

System Performance Shortcoming

System performance shortcomings is a technological issue that defined as the extent to

which system consistently and effectively accomplishes the task that it is expected to accomplish and therefore incorporates elements such as the functionality, responsiveness, and reliability of the system (Delone, information, & 2003, n.d.).

Organizational Initiative

The organizational initiative is defined as an internal organizational effort directed toward altering where and how an organization operates, organizational initiative, asserts a teleological perspective that sees goal-directed behavior and strategic choices as fundamental drivers of organizational change. Pressure on change in an organization's information systems include changing strategic plans, the replacement of key executives, the pursuit of a new product or market opportunities, the construction of new facilities, and change in organizational structure (Miller, journal, & 1980, n.d.).

Environmental Change

Environmental change can be defined as the change in the physical or social factors that lie outside of the boundaries of an organization which includes revised government regulations and the emergence of new and distinctive competitive threats (Oliver, 1992).

Continuance Inertia

Analogous to our efforts to adequately account for technological, organizational, and environmental drivers of change, we also sought to identify technological, organizational, and environmental sources of continuance inertia. This process led to the identification of the level of financial and other investments in an existing system, the degree of embeddedness of this system within organizational activities, and institutional pressures from the organization's environment as three potentially important contributors to continuance inertia.

1. System Investment

System investment is defined as the financial and other resources committed to the acquisition, implementation, and use of an information system. Building on the idea that commitment can escalate, the sunk cost effect is the tendency of decision-makers to continue making resource commitments to an endeavor once an initial commitment of resources has been made (Arkes, decision, & 1985, n.d.). Given that investments in an information system can be considerable, the sunk-cost effect suggests that organizations will be reluctant to discontinue their use of existing

systems since this would represent a "loss" of considerable sunk costs. The discontinuance of a system that has consumed considerable organizational resources can also threaten the reputation of those who have supported these investments, thus leading them to support continued system use.

2. *System Embeddedness*

System embeddedness is defined as the extent to which the use of an information system is an integral part of organizational activity. An organization that has successfully implemented an information system gains competence with the system (quarterly & 1981, n.d.).

3. *Institutional Pressures*

Institutional theory has traditionally been concerned with organizational legitimacy and how the need for legitimacy fosters the emergence of norms and practices that prove resistant to change (Tina Dacin, Goodstein, & Richard Scott, 2002). This emphasis on behavioral persistence serves to highlight the potential role that institutional pressures may have in fostering continuance inertia. Coercive, normative, and mimetic pressures have been identified by institutional theorists as the three key pressures that can lead organizations to conform to the practices of other organization (DiMaggio & Powell, 1983). Although pressures to comply with regulatory demands and conform to social and professional norms may also contribute to continuance inertia, it is mimetic pressures that rely on a degree of orthodoxy and taken-for-grantedness that are most suggestive of inertial tendencies (Tina Dacin et al., 2002). Mimetic isomorphism, seen as the tendency of firms to mimic or copy the actions of those organizations that are perceived to have high levels of legitimacy, was therefore identified as the institutional pressure most likely to contribute to continuance inertia (DiMaggio & Powell, 1983).

3. Theoretical Framework

Using a qualitative study and by the aid of the initial theoretical framework was a guide to develop a grounded understanding of organizational IS discontinuance. The motives of the framework will be the guide to sensitize factors that impede or facilitate IS discontinuance.

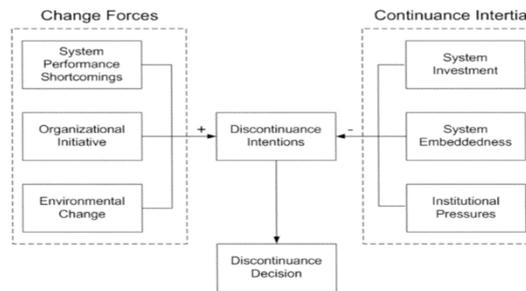


Figure 1. Theoretical Framework

(Furneaux & Wade, 2017b) develop a research model of general organizational level IS discontinuance intention as shown in Figure 2. The model show that organizational IS discontinuance were the systems performance shortcomings, organization initiative, and environmental change.

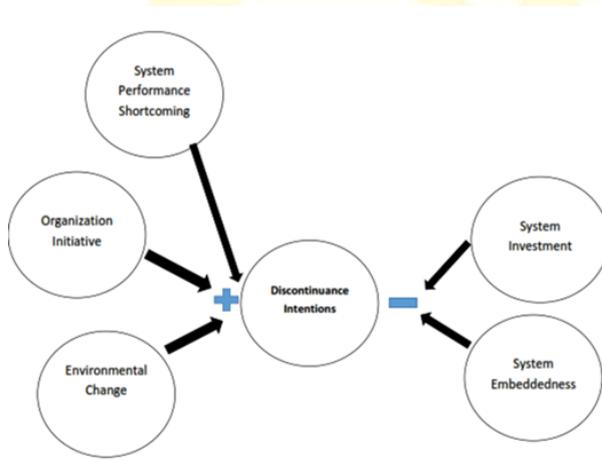


Figure 2. Organizational Level of IS Discontinuance Intention (Furneaux & Wade, 2017b)

To formulate a model specific to school level IS discontinuance intention, we need data. Data are collected via semi-structured interviews with school administrators and users of school information system IS (i.e., registrar's frontline, cashiers, and accounting clerk) who were familiar with the school IS discontinuance to adequately discuss the subject in an interview session.

4. Data Analysis

Analysis of interview transcripts was guided by grounded theory techniques. The data analysis process commenced with an impressionistic reading of transcripts text to develop some familiarity with recurring themes. I segregate words into two groups, the impede discontinuance and facilitate discontinuance. I used color-coding to the same theme at the

two groups. Then initial color code assignments were also revised, abstracted, and consolidated during this process. Once a relatively concise set of had been established, the relationships between color codes were reviewed to ensure that they did not exhibit inconsistencies. Another interview was conducted to double-check the consistency of the result. Then finalize the color coding and finally, the result was used to model school level IS discontinuance intention.

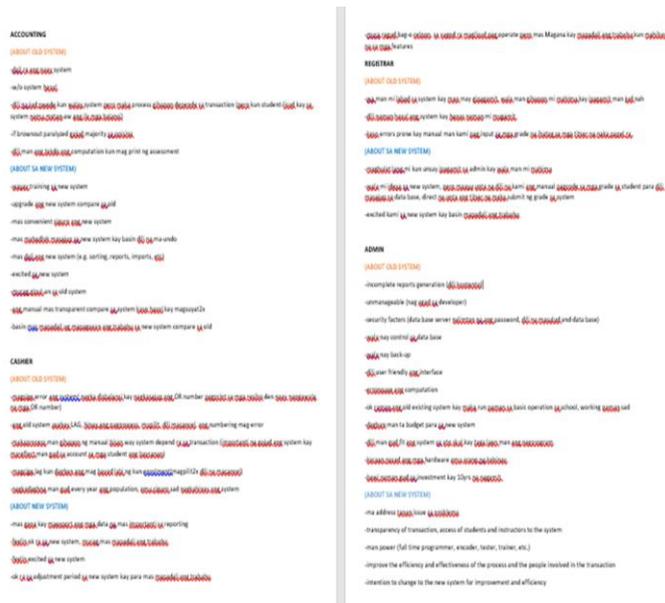


Figure 3. Transcribing Results from an interview

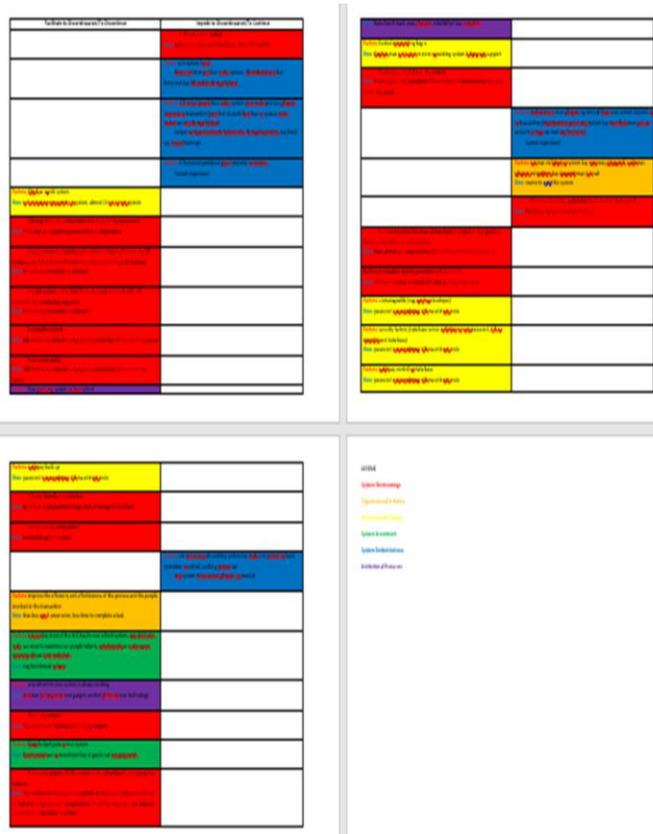


Figure 4. Color Coding with same themes of words

5. Results and Discussion

After a thorough selection, the grouping of word with the same theme, and color-coding to the similar factors a model was developed as shown in Figure 5. Which yield to the school level IS discontinuance intention which are system shortcomings, organizational initiative, environmental change, system investment, and institutional pressures. Since the system of the SSCT is made by MSU-IIT which has different processing procedures will result in system shortcoming and every school institutions possess a unique and different approach of the services. The president of the SSCT changes the organizational structure which results also to IS discontinuance. Implementation of ISO standards and accreditation where the environmental change that trigger IS discontinuance of SSCT. Numbers of students are increasing every year and SSCT offers an additional course that drives more income and willing to invest to a new IS that will fit the culture and system of SSCT thus contribute to IS discontinuance of older system. SSCT is aiming to be university and institutional pressures in the field of research and extension are rolled to which also influence the IS discontinuance.

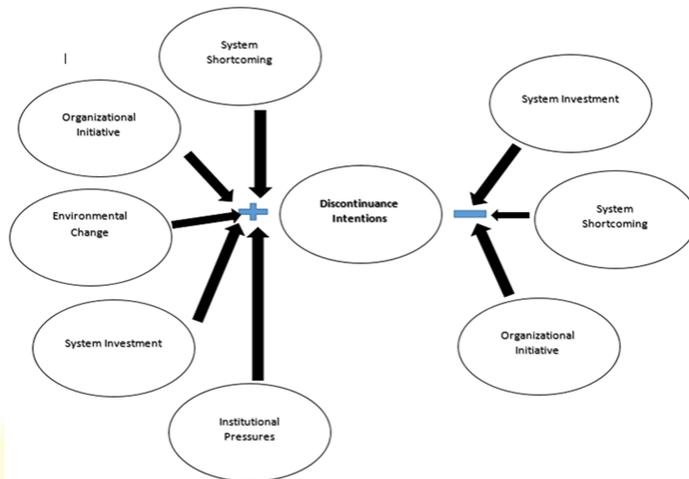


Figure 5. School Level IS

Discontinuity Intention

6. Conclusion

Surigao State College of Technology level IS discontinuity intentions are influenced by System Shortcomings, Organizational Initiative, Environmental Change, System Investment, and Institutional Pressures. Implementation of a new IS system was now implemented and these parameters are indicators that will help school administrators of a school institution shift to a new IS for the improvement of the services.

7. References

1. Arkes, H., decision, C. B.-O. behavior and human, & 1985, undefined. (n.d.). The psychology of sunk cost. *Elsevier*. Retrieved from <https://www.sciencedirect.com/science/article/pii/0749597885900494>
2. behavior, D. R.-R. in organizational, & 1985, undefined. (n.d.). Issues of level in organizational research: Multi-level and cross-level perspectives. *Wweb.Uta.Edu*. Retrieved from https://wweb.uta.edu/management/Dr.Casper/Spring2011/6311/Articles/WK_10_Rouseesau.pdf
3. Castells, M. (2002). *The Internet galaxy : reflections on the Internet, business, and*

- society*. Oxford University Press. Retrieved from https://books.google.com.ph/books?id=Q1Mo-3ObWWgC&dq=+The+Internet+Galaxy:+Reflections+on+the+Internet,+Business,+a+nd+Society&lr=&source=gbs_navlinks_s
4. DeLone, W., information, E. M.-J. of management, & 2003, undefined. (n.d.). The DeLone and McLean model of information systems success: a ten-year update. *Taylor & Francis*. Retrieved from <https://www.tandfonline.com/doi/abs/10.1080/07421222.2003.11045748>
 5. DiMaggio, P. J., & Powell, W. W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, 48(2), 147. <https://doi.org/10.2307/2095101>
 6. Furneaux, B., & Wade, M. (2017a). Impediments to Information Systems Replacement: A Calculus of Discontinuance. *Journal of Management Information Systems*, 34(3), 902–932. <https://doi.org/10.1080/07421222.2017.1373013>
 7. Furneaux, B., & Wade, M. (2017b). Impediments to Information Systems Replacement: A Calculus of Discontinuance. *Journal of Management Information Systems*, 34(3), 902–932. <https://doi.org/10.1080/07421222.2017.1373013>
 8. Furneaux, B., & Wade, M. R. (2011). An Exploration of Organizational Level Information Systems Discontinuance Intentions. *MIS Quarterly*, 35(3), 573. <https://doi.org/10.2307/23042797>
 9. Kelly, S., Gibson, N., Holland, C. P., & Light, B. (1999). Focus Issue on Legacy Information Systems and Business Process Change: A Business Perspective of Legacy Information Systems. *Undefined*. Retrieved from <https://www.semanticscholar.org/paper/Focus-Issue-on-Legacy-Information-Systems-and-A-of-Kelly-Gibson/6e999a43d79ccfdc360fa702829d6644050b6dc8>
 10. Miller, D., journal, P. F.-A. of management, & 1980, undefined. (n.d.). Momentum and revolution in organizational adaptation. *Journals.Aom.Org*. Retrieved from <https://journals.aom.org/doi/abs/10.5465/255551>
 11. Nawaz, M. A., Shah, Z., Nawaz, A., Asmi, F., Hassan, Z., & Raza, J. (2018). Overload and exhaustion: Classifying SNS discontinuance intentions. *Cogent Psychology*, 5(1), 1–18. <https://doi.org/10.1080/23311908.2018.1515584>
 12. Oliver, C. (1992). The Antecedents of Deinstitutionalization. *Organization Studies*, 13(4), 563–588. <https://doi.org/10.1177/017084069201300403>
 13. quarterly, J. M.-A. science, & 1981, undefined. (n.d.). Footnotes to organizational

- change. *JSTOR*. Retrieved from <https://www.jstor.org/stable/2392340>
14. Recker, J. C. (2014). Towards a theory of individual-level discontinuance of information systems use. *QUT Business School; Science & Engineering Faculty*. Retrieved from <https://eprints.qut.edu.au/78622/>
 15. Seagraves, L., & Kenesson, S. (2007). *The impact of ICT in schools-a landscape review Professor Rae Condie and Bob Munro*. Retrieved from www.becta.org.uk/research<http://www.becta.org.uk/publications>URL:<http://www.becta.org.uk>
 16. Shah, M. (2014). Impact of Management Information Systems (MIS) on School Administration: What the Literature Says. *Procedia - Social and Behavioral Sciences*, 116, 2799–2804. <https://doi.org/10.1016/j.sbspro.2014.01.659>
 17. Tang, Z., Chen, L., & Gillenson, M. L. (2018). Understanding brand fan page followers' discontinuance motivations: A mixed-method study. *Information & Management*. <https://doi.org/10.1016/J.IM.2018.07.004>
 18. Tina Dacin, M., Goodstein, J., & Richard Scott, W. (2002). Institutional Theory and Institutional Change: Introduction to the Special Research Forum. *Academy of Management Journal*, 45(1), 45–56. <https://doi.org/10.5465/amj.2002.6283388>
 19. Yuan, S., Liu, Y., Yao, R., Development, J. L.-I., & 2016, undefined. (n.d.). An investigation of users' continuance intention towards mobile banking in China. *Journals.Sagepub.Com*. Retrieved from <http://journals.sagepub.com/doi/abs/10.1177/0266666914522140>