

Chapter 14

Individual Privacy Should Be an Institutional Value: Socio–Technical Design of University Data Collection Systems

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ABSTRACT

The objective of this chapter is to create a comprehensive socio-technical system that facilitates data collecting, processing, and reporting procedures within a university. Socio-technical system design is an interdisciplinary method that integrates social and technical elements. Consequently, the system was modeled concurrently, encompassing both the users and stakeholders as well as the software and hardware components. Throughout the development process, a thorough analysis was conducted to understand the requirements and expectations of university personnel regarding the system. This was achieved through the use of qualitative and quantitative data-gathering approaches. Based on the collected findings, prototypes were produced, and input was sought once again. A system that prioritizes user needs and has a high level of reliability was designed in the last phase. The purpose of the system is to enhance the university's ability to make decisions and plan strategically based on data. Additionally, it is anticipated that the system will boost employee motivation and productivity.

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INTRODUCTION

Universities must adopt a more collaborative and stakeholder-focused strategy in order to effectively address the constant feedback from diverse stakeholders in the ever-evolving higher education landscape. For this purpose, several online feedback techniques, such as student satisfaction surveys, staff suggestion systems, and alumni relations management, are extensively employed. By integrating the data gathered in this manner into decision-making procedures, colleges embrace a more inclusive form of management. Nevertheless, according to scholarly sources, colleges often fail to give sufficient strategic consideration to online feedback systems and may have designs that are inefficient and lack clear objectives (Tadelis, 2016; Rabovsky, 2014; Shah & Nair, 2012). However, adopting an integrated socio-technical design approach that takes into account both technical and social aspects can greatly enhance the decision-making mechanisms of the institution and improve stakeholder satisfaction.

Universities employ a diverse range of online tools to methodically gather and examine input from their stakeholders (Hemsley-Brown & Oplatka, 2006). Student satisfaction surveys are the fundamental method of gathering data. The surveys, conducted at the conclusion of every semester, gather feedback on several aspects including courses, faculty, and infrastructure. Furthermore, employee suggestion and complaint systems are extensively employed, particularly for gathering data on administrative procedures. Through these tools, employees can conveniently submit their comments and concerns regarding any deficiencies or problems they observe. Alumni information systems are utilized for the purpose of establishing communication channels with former students and gathering their input regarding the university and educational programs. This information serves the dual purpose of enhancing alumni contacts and enhancing the educational experience. The data acquired from these various platforms are utilized as input in the decision-making procedures of universities, thereby contributing to stakeholder-centric management. Nevertheless, there can exist certain vulnerabilities in the design and operational procedures of these systems.

Given the stakeholders' worries and expectations regarding online feedback systems, certain challenges are particularly prominent. One of the primary obstacles to the utilization of such systems is the worry over the privacy and confidentiality of participants' data, as indicated by Howe et al. (2018). Employees prioritize maintaining the confidentiality of their identities and viewpoints to freely critique senior management, while students provide input to faculty members and university administration in a comfortable manner. Nevertheless, consumers also possess technological expectations, including the user-friendly nature of the data gathering instrument and its efficient and comprehensible structure. Hence, there is a distinct requirement for a comprehensive system architecture that can effectively tackle privacy and security issues at a societal level, while simultaneously offering a user-friendly data input framework at a technical one. Adopting such a design strategy is crucial in order to completely satisfy the expectations of stakeholders.

The online stakeholder feedback systems implemented in universities appear to be inadequate in facilitating a genuinely stakeholder-centered management approach by adequately resolving stakeholders' apprehensions over data protection and participation in the system (West et al., 2020). Universities' acquisition of student and employee data serves to facilitate administrative decision-making, although it also gives rise to concerns over individual privacy. Data use regulations in the majority of colleges are characterized by ambiguity and a lack of transparency (Hallak & Poisson, 2007), resulting in a sense of mistrust (Medina & Rufín, 2015).

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