

# Faculty Resistance to Technology Integration

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**Abstract:** The following proposal is a response to the problem of faculty resistance that exists in many higher education institutions. There are many reasons for resistance and although the importance of technology integration is understood by educators, barriers and resistance to technology threaten effective and innovative implementation. Institutions of higher education are transitioning to meet the needs of the changing student population and as a result, increasing investments in distance and online education requires faculty to progressively utilize technology to support teaching and learning. This proposal discusses the barriers and resistance factors of technology integration in higher education, in addition to providing best practice solutions for integrating technology tools to better support pedagogical practices. This proposal specifically identifies the institutional-related barriers of institutional culture, faculty self-efficacy, and a lack of institutional support as the main causes of implementation and adoption challenges.

## Introduction

Institutions of higher education are increasing investments in distance and online education, which requires faculty to progressively utilize technology to support teaching and learning (Outlaw, Rice, & Wright, 2018). Although the importance of technology integration is understood by educators (Ertmer, 1999), barriers and resistance to technology threaten effective and innovative implementation. This paper discusses the barriers and resistance factors of technology integration in higher education in addition to providing best practice solutions for integrating technology tools to support pedagogical practices. Reid (2017) reported barriers that prevent significant and effective adoption of technology by higher education faculty as being technology, process, administration, environment, and faculty. Faculty barriers relate to “effective use, resistance to change, self-efficacy and background, perception of quality and effectiveness, and participation in professional development” (Reid, 2017, par. 9). While faculty barriers are often referenced, according to EDUCAUSE Vice President Susan Grajek, the institutional-related barriers (process, administration, and environment) are often the main causes of implementation and adoption challenges (as cited in Reid, 2017).

## Institutional Culture

According to Zhu (2015), an institution’s culture can be a main barrier to effectively implementing technology. An organization’s culture is complex and dynamic. It involves leadership, values, structures, policies,

and practices which can influence the selection, implementation, and support of technologies. If an institution's culture does not value or incorporate innovation and technology in a strategic and holistic manner, success can be stifled from the beginning. Often a top down approach in decision-making and implementation are used leading to complex technology infrastructure, unrealistic expectations, and ineffective support mechanisms (Daft, 1989, as cited in Uys, Nleya, & Molelu, 2004). This approach also fails to create perceived value and usefulness in the adoption of the technology (Davis, Bagozzi, & Warshaw, 1989, as cited in Zhu, 2015).

The culture of an organization often begins with the leadership; supportive leadership creates an atmosphere more inclined to the adoption and integration of technology (Zhu, 2015). Martins and Terblanche (2003) concluded that the culture of an organization is a main factor that can either support or hinder the adoption of innovation. Its culture affects the way innovations such as technology are encouraged, supported, and ultimately implemented. The goal of technology integration must be embedded as a part of the organization's basic assumptions, values, philosophies, ideologies, beliefs, expectations, attitudes, and norms (Zhu, 2015). Technology integration cannot be an afterthought and become an additional task on an already heavy workload for many staff and faculty. In an organization with a culture that is more supportive and innovative, staff and faculty may be more inclined and encouraged to learn and adopt new methods of teaching which include newer technologies (Zhu, 2015).

### **Faculty Self-Efficacy**

Self-efficacy in a general sense refers to one's belief or having the ability to succeed (Bandura, 1993), in this case, in the areas of academia, as it relates to the use of technology. Steps should be taken towards increasing computer self-efficacy or the confidence in using newly adopted technologies. Current knowledge and experience often determines success in using technology or the positive outlook on the ability to learn and adopt new technology initiatives. It may be ideal to examine current knowledge and obtain some type of measurement of self-efficacy as opposed to assuming everyone has had experience and past knowledge of how to use certain technologies.

Studies show that many faculty have low self-efficacy related to technology and integrating technology into transformative curricula (John, 2015). Their lack of comfort, exposure, and training further adds to this low self-efficacy, which is a significant barrier to change and adoption. Training in order to teach faculty on how to use specific technologies and how they can increase efficiency is needed in order to increase not only self-efficacy, but to properly integrate technology. The more familiar and comfortable faculty are with technology, the more inclined they are to use it. Increased professional development opportunities will also provide faculty with the opportunity to experience the usefulness of the technology which is often times a major concern. Further, when faculty-first-adopters of technology struggle finding support with their technology challenges, they often abandon their efforts which further reduces adoption by other faculty members.

### **Lack of Support**

Johnson, Wisniewski, Kuhlemeyer, Isaacs, and Krzykowski (2012) reported that many faculties find curricula development incorporating new technologies extremely time consuming, challenging, and anxiety-ridden. They do not have access to curricula designers who can help them modify or transform their curricula into a digital environment. Oftentimes, faculty do not receive additional compensation or recognition for technology based curricula and quickly revert back to more traditional curricula. One of the main concerns with the adoption of newer technologies is the lack of having a clear understanding of the type of support that is needed. To understand the type of support needed, there must be a commitment to building trust with instructional designers in order to be able to communicate exactly where support is needed.

Other issues that could affect the integration of technology could have to do with the pedagogical approach that faculty used or perhaps even the time it takes to actually use the technology. Without a clear understanding of what the problem is, appropriated and focused support is difficult to provide. It is crucial to have ongoing conversations once implementation has taken place in order to ensure continued support and that it is not only given in the beginning of the integration process. If those who adopt new technology experience setbacks and do not receive adequate faculty support, then the negative reports will lead to the majority becoming more skeptical about the usefulness of the new technologies.

## Conclusion

Understanding and implementing technology is an integral part of the higher education environment. It is equally important to recognize how technology integration is understood by educators, including the barriers and resistance faculty may experience. Through strategic reduction and elimination of barriers and resistance factors to technology integration, faculty can become more engaged and empowered to successfully improve student learning using technologically supported pedagogy.

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