Digital transformation and university governance: assessing challenges and opportunities at ENSA Agadir, Ibn Zohr University

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Abstract. This research examines the impact of digital transformation on university governance at ENSA Agadir, focusing on faculty needs regarding digital decision support platforms. The study, conducted through a questionnaire survey among faculty members (Assistant Professors, Associate Professors, and Full Professors), reveals a significant gap between current digital tool usage and actual needs for administrative decision-making. Results show that 80% of faculty use course management systems and 90% use internal communication tools, but only 30% employ digital tools for administrative decision-making. The absence of dedicated platforms negatively impacts efficiency according to 80% of respondents, primarily due to lack of data to support decisions (70%) and delays in collective decision-making (50%). Faculty express a strong need for access to student evaluation data (80%) and pedagogical performance monitoring (70%). Despite a high recommendation rate for adopting such a platform (90%), obstacles persist, notably lack of training (60%) and resistance to change (20%). This study reveals an important need for a digital decision support platform that would improve coordination and data management, thus facilitating more efficient and collaborative decision-making within the institution.
Keywords: Digital transformation, university governance, decision-making platforms, higher education, ENSA Agadir.

This study is situated within the broader context of digital transformation initiatives across higher education institutions in Morocco, where modernization of educational systems has become a national priority. The Moroccan higher education sector is undergoing significant reforms aimed at improving quality, efficiency, and international competitiveness. Within this landscape, the National School of Applied Sciences (ENSA) Agadir, as a prestigious engineering institution, faces particular challenges related to integrating digital tools into its governance processes while maintaining academic excellence.

The research addresses a critical gap in understanding how digital transformation impacts university governance structures, particularly in the context of North African higher education institutions. The study explores the complex relationship between technological integration and institutional decision-making processes, focusing specifically on faculty perceptions, needs, and expectations regarding digital decision support platforms. This investigation is particularly relevant given the increasing

demand for data-driven decision-making in academic environments and the need for enhanced collaboration among university stakeholders.

The theoretical framework is grounded in contemporary digital transformation theory, drawing primarily on Vial's (2019, 2021) comprehensive definitions of digital transformation as a multifaceted process of organizational improvement through strategic integration of digital technologies. Vial's work emphasizes that digital transformation goes beyond mere technology adoption, encompassing fundamental changes in organizational structures, processes, and value creation mechanisms. This perspective is complemented by Bianchi et al.'s (2023) emphasis on cloud computing, artificial intelligence, and big data as key technological drivers of process improvement and innovation.

Governance is conceptualized through Johnson's (1997) framework, which defines it as a comprehensive set of mechanisms and processes aimed at maintaining institutional systems, empowering stakeholders, and facilitating collective ownership of management processes. This definition is particularly relevant in the university context, where shared governance models require effective coordination between academic and administrative functions. UNESCO experts further emphasize the critical importance of effective university governance to prevent negative consequences of insufficient regulation, including increased costs, decreased quality, and widening inequalities in access to educational opportunities.

The methodological approach employed a comprehensive online questionnaire survey (Google Forms) designed to capture detailed insights from ENSA Agadir faculty members. The survey instrument was carefully structured to assess current digital tool usage, perceived needs, and expectations for future platform development. The studied population represents a diverse academic hierarchy, including Assistant Professors (20%), Associate Professors (65%), and Full Professors (18%), ensuring representation across different career stages and perspectives. Notably, the majority of respondents (63%) possess 5-10 years of experience at the institution, indicating a substantial cohort of mid-career academics who have witnessed the institution's evolution and can provide valuable insights into its transformation needs.

The findings reveal a striking dichotomy in digital tool adoption patterns across different functional areas. In pedagogical applications, faculty demonstrate remarkable engagement with digital technologies, with 80% utilizing course management systems and an impressive 90% employing internal communication tools. This high adoption rate suggests strong digital literacy and comfort with technology-mediated teaching and learning processes. However, a significant gap emerges in administrative decision-making contexts, where only 30% of faculty use digital tools, revealing a critical lack of appropriate technological infrastructure to support governance processes.

Faculty articulate specific and prioritized needs that reflect their desire for evidence-based decision-making capabilities. The demand for access to student evaluation data (80%) and pedagogical performance monitoring tools (70%) demonstrates a strong orientation toward data-driven academic management. Additionally, the expressed need for planning tools (60%) and collective consultation mechanisms (50%) indicates a recognition of the importance of coordinated decision-making processes. The most frequently requested data types–student performance statistics (80%) and course success rates (60%)–underscore faculty commitment to continuous improvement and accountability in educational outcomes.

The absence of appropriate digital tools generates significant organizational dysfunctions that impact institutional effectiveness. An overwhelming 80% of faculty report negative impacts on their efficiency, primarily attributed to insufficient data availability for decision-making (70%) and delays in collective decision processes (50%). These findings suggest that current manual and fragmented information systems cannot adequately support the complex coordination requirements of modern university governance. Faculty expectations center on improved information organization (80%) and enhanced collaborative decision-making capabilities (70%), pointing toward a vision of integrated, transparent, and efficient governance systems.

Despite strong enthusiasm for platform adoption, evidenced by a 90% recommendation rate, significant implementation challenges remain. The primary obstacle identified is insufficient training (60%), followed by resistance to change (20%). These findings highlight the critical importance of comprehensive change management strategies that address both technical skill development and cultural adaptation. The study's recommendations encompass developing a dedicated platform with priority functionalities, implementing robust digital training programs, and establishing collaborative decision-making tools that can bridge current governance gaps.

This research illuminates a fundamental paradox within the institution: while faculty demonstrate advanced digital maturity in pedagogical contexts, there exists a pronounced lag in the digitalization of administrative decision-making processes. This disconnect reveals both the challenges and opportunities inherent in university digital transformation initiatives. The findings suggest fertile ground for technological innovation, provided that implementation is accompanied by structured support systems that address identified barriers and leverage existing digital competencies.

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