Contextual Factors Affecting Large-Scale Educational Technology Implementation: Policy Intention Versus Practice

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Abstract: Education policy implementation is a highly complex process involving multiple stakeholders, including policymakers, administrators, teachers, students, parents, and community members. The interactions and ongoing decision-making process by the different stakeholders can immensely affect the policy outcomes. The process being highly contextual, varying with culture, politics, and socio-economic conditions, it is crucial to study the role of different factors/determinants influencing the design and implementation of policies in different settings. The present study is a preliminary attempt to categorize and analyze some of the perceived realities of different stakeholders involved in the implementation of an education policy. Two determinant types extensively used in implementation research were used to analyze the data. When passed through multiple levels, the policy guidelines get shaped and reshaped by the local agenda and respective modus operandi of each stakeholder involved in the implementation process. The results emphasize the need to develop strategies to better understand the role of different contextual factors — how and why they influence the implementation of education policies involving technology.

Keywords: education policy implementation, stakeholders, perceived realities, determinants, contextual factors

1. Introduction

Policy implementation is considered as a continuous decision-making activity between policy choices and implementation strategies (Narain, 2018) and is a phase where maximum challenges occur (Thomas & Grindle, 1990). The diverse factors, including characteristics of the policy, implementation strategies, context, and stakeholders, affect how a policy is shaped and implemented in the education domain (Nilsen, 2015). Extensive research has identified various reasons for this disparity between policy rhetoric and actual implementation, such as differing stakeholder motivations, institutional constraints, inadequate training and support, and variations in local contexts and resources (Cerna, 2014). The challenges become multi-level regarding educational policy implementation (Viennet, 2017). For instance, in countries like India, the education policymaking and large-scale implementation process involves engagement between several stakeholders (Central govt., State govt., teachers, and students)

at multiple levels of administration. A lack of shared understanding and agreement on the policy objectives among the stakeholders involved can hamper policy implementation and make it unsuccessful(Narain, 2018).

According to Nilsen (2015), a determinant type includes the different independent variables that facilitate or hinder the implementation outcomes (dependent variables). Identifying the key determinants that drive and block the policy implementation process is important to design and execute different policy implementation strategies (Nilsen, 2015). Researchers classify determinants across various categories, including policy design, stakeholder characteristics, contextual features, and implementation strategies (Viennet, 2017), recognizing that these determinants operate at multiple levels—individual, organizational, and beyond—and often interact with each other (Nilsen, 2015). Though a determinant framework can be considered as an indicator of why policy implementation should succeed, it is necessary to examine whether it captures the right factors and how such factors interact to affect the implementation process (Caves, et al., 2023). The present study focuses on gathering and analyzing preliminary data on the perception of policy objectives among various stakeholders engaged in implementing an educational technology policy initiative in Kerala.

2.   Study Context and Method

This paper examines the implementation of an educational technology policy in India, specifically within the National Education Policy 2020 (NEP 2020) framework. NEP 2020 aims to achieve a Gross Enrolment Ratio (GER) of 50% in higher education by 2030 and emphasizes the need for flexible and innovative curricula across all higher education institutions (HEIs), including universities, autonomous institutions, skilling institutions etc. One key strategy for realizing this goal is using the SWAYAM platform of India, where learners can access a variety of MOOCs and transfer the earned credits to their registered HEIs.

The regulators of higher education in India, UGC and AICTE, have already issued necessary regulations that enable credit transfer from SWAYAM (UGC, 2021; AICTE, 2021). This initiative is structured to be operationalized across multiple administrative tiers: the course providers (National Coordinators in SWAYAM), the central regulatory bodies (UGC/AICTE), central and state-level universities, and local colleges affiliated with these universities. Stakeholders at different levels have their own realities about the policy intentions, and understanding them is crucial in translating policy recommendations into tangible educational practices. This policy applies to over 1000 universities and 45,000 colleges under AICTE and UGC across India (Ministry of Education, 2023). However, the scope of the present study is limited to the context of Kerala, a state in India.

We followed a case study method to further look into two key determinant types (Nilsen, 2015) - Characteristics of the Implementation object and Characteristics of the Users/Adopters, to answer the broad research question - "*How do the perceived realities of credit-transfer policy differ among the stakeholders involved in the implementation process?*". We have looked into the following artifacts and conducted thematic analyses to identify the policy intentions and perceived realities of different stakeholders:

● UGC & AICTE Credit Framework for Online Learning Courses through SWAYAM (UGC, 2021; AICTE,2021)
● Step-by-step guidelines for adopting credit transfer from MOOCs published by the regulator (University Grants Commission, 2021)
● Academic regulations published by the University (Kerala Technological University, 2019)
● Semi-structured Interviews and Focus Discussion transcripts with five college teachers and twelve students

3.   Results and Discussion

Our preliminary findings indicate that the credit transfer policy for MOOCs, while initially conceived as a mechanism for expanding learning opportunities, underwent significant

transformations during implementation. In the implementation process, the policy was molded and remolded by diverse stakeholder interests and perceptions (Narain 2018). The UGC framed the step-by-step guidelines to seamlessly integrate with existing systems, while the Kerala Technological University (KTU) had to link MOOC completion with activity points in their academic regulations to accommodate it within its structure. Based on the focus group discussions, students primarily viewed MOOCs as a means to earn activity points rather than an opportunity for multidisciplinary learning. Such differences in perceptions can be attributed to the lack of clarity regarding the goals and means among various stakeholders, as Fullan (2015) identified. While regulators provided the policy framework through gazette notifications, effective implementation required additional support at the college level, such as faculty mentoring, as understood from the interviews with faculty members. This underscores the importance of considering the broader context and involving key stakeholders early in the policy process to address potential implementation challenges.

4.   Limitations and Future Work

This study looked only into the two determinant types and was a preliminary attempt to understand how the perceptions of stakeholders at multiple levels affect the implementation of a large-scale education policy. A deeper analysis of the interview and focus group discussions from more stakeholders is required to fully understand the difference in perceptions and the reasons behind them. In future work, further analysis of the available data will be carried out to develop an instrument that will be used to gather deeper insights into understanding the role of contextual factors in education policy implementation.

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