

Curricular Differentiation Practice Based on the Assessment System in Higher Education of Nepal

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Abstract

This research explores the practices, challenges, and opportunities of curricular differentiation in higher education, with a focus on the assessment process. Nepalese students are growing more diverse, characterized by variations in their language, culture, socioeconomic background, and learning capabilities, too. Ensuring fair access to high-quality education has become a significant concern in the current situation. Based on sociocultural theory and culturally responsive pedagogy, this research has examined how assessment methods influence the execution of differentiated curricula in higher education. Similarly, relevant information is gathered through open-ended interviews, document analysis, and non-participant observations in the chosen classes, employing a qualitative approach and case study design. The findings show that assessments often continue to be summative and conventional, offering minimal opportunities to adjust teaching to address individual learning needs. Although some faculty members are engaging in informal efforts to differentiate, challenges such as a lack of institutional support, rigid curricular structures, a large number of students, and inadequate professional training hinder the effective implication of assessment for curriculum differentiation. Additionally, there is inadequate focus on students' linguistic, cultural, learnability, and regional diversity within assessment practices. This study has emphasized that without formative and comprehensive assessment approaches, curricular differentiation practices are narrow and less effective. For substantial improvements, higher education institutions are suggested to implement flexible assessment systems, encourage professional development, and adopt relevant policies that foster culturally responsive and contextual instructional practices. This study contributes to the conversation around educational equity by underlining the crucial role of assessment in developing responsive and inclusive curricular practices. It demands structural changes that attach curriculum, pedagogy, instructional materials, and assessment to the diverse needs of learners, promoting an equitable justice in the higher education system.

Key words : Assessment practices, culturally responsive pedagogy, curricular differentiation, educational equity, higher education, sociocultural theory

Introduction

In the current time, higher education systems are universal and have been under increasing pressure to meet the diverse needs of students. The students enrolling in universities and colleges today differ significantly in their academic preparedness, learning styles, cultural backgrounds, and language skills (Tomlinson, 2014). In this situation, curricular differentiation is the practice of adapting instructional materials, methods, and products to meet the diverse needs of learners, which has become more significant as an equity-focused strategy in higher education (Subedi &

Bhattarai, 2021). Assessment is essential in supporting the curricular differentiation process. Instead of merely acting as a tool for certification or selection, assessment can serve as a means to gain insights into learners' abilities, requirements, and improvement, which in turn can leader instructional choices (Black & Wiliam, 2009). In the differentiated learning environments, formative assessment, diagnostic instruments, and reflective evaluation procedures are vital for creating adaptable learning pathways that correspond with students' unique learning profiles (Heacox, 2017). In spite of its promise, the implication of differentiated curricular practices based on assessment in higher education is still a complicated and underexplored field, especially in the context of Nepal. Mainly, conventional, uniform models of curriculum and assessment often fail to address the academic and desirable needs of varied learners (Paudel, 2020). Besides, institutional structures may lack the essential flexibility and support to change the assessment process into responsive curricular approaches. This study explores how assessment is applied as a basis for curricular differentiation in higher educational institutions of Nepal. It aims to examine existing practices, identify challenges, and offer standpoints on how assessment-based differentiation can lead to a more equitable and inclusive higher education system.

Statement of the problem

Nepal's higher education system is experiencing a growing diversity among students, yet the majority of teaching and assessment methods remain traditional and focused on written exams. This uniform approach fails to consider the different needs of learners, restricting chances for equitable education (Paudel, 2020). Although assessment could play a vital role in guiding the differentiation of curricula and fostering inclusive teaching (Black & Wiliam, 2009), it is rarely used for this purpose in the context of Nepal. Instead, assessments are mainly summative, helping mostly for grading rather than enhancing instructional techniques (Subedi & Bhattarai, 2021). The disconnect between assessment practices and the ability to familiarize the curriculum raises questions about the approach to equity in classroom practices of higher education. Therefore, this study explores how assessment is employed to facilitate curricular differentiation within higher education in Nepal.

Rationale of the study

The rising variety among students in higher education in Nepal, arising from regional, socio-economic, cultural, and academic disparities, requires more inclusive and adaptive teaching methods. However, the curriculum delivery and assessment practices in numerous institutions still follow traditional models that fail to consider individual learning requirements (Paudel, 2020). When used outside of mere grading, assessment can offer valuable insights into students' learning styles, needs, and their development (Black & Wiliam, 2009). This knowledge can facilitate curricular differentiation, enabling educators to modify instruction and enhance equity in academic consequences (Tomlinson, 2014). Despite its importance, there is limited understanding of how assessment is used in higher education in Nepal to foster such differentiated methods. This study is significant as it explores the role of assessment in curriculum modification, tackles equity issues, and encourages an inclusive instructional process. The outcomes of this study will be added to the increasing conversation on learner-centered education in Nepal and strengthen policy changes aimed at enhancing instructional practices in higher education.

Objectives of the study

The objectives of this study are as follows:

To explore the practices of curricular differentiation in higher education based on assessment

To examine the issues and challenges in curricular differentiation practices

Research questions

The research questions of this study are as follows:

How are assessment practices currently used to support curricular differentiation in higher education?

In what ways do teachers adapt curriculum based on assessment to meet diverse students' needs?

What are the major challenges faced by teachers in implementing assessment-based curricular differentiation?

How can assessment-based curricular differentiation contribute to equity and inclusion in higher education?

Review of related literature

Curricular differentiation and assessment have been broadly examined as essential elements of inclusive and equitable education, particularly within the realm of colleges. Until now, their interrelation in the higher education context appears to be less explored, especially in the context of Nepal. The present frame of literature highlights that when differentiated instruction is supported by continuous and meaningful assessment, it can improve students' engagement, provide for a diversity of learning needs, and foster academic achievement (Tomlinson, 2014; Heacox, 2017). Similarly, assessment helps not only as a grading instrument but also as a means to comprehend students' readiness, interests, and learning styles, which can formerly guide curriculum development and teaching strategies (Black & Wiliam, 2009). Though conventional higher education approaches typically emphasize summative assessments, they often command the formative application of assessment for modifying the curriculum (Paudel, 2020). This literature review explores essential theoretical viewpoints, international practices, and empirical research concerning assessment-based curricular differentiation, aiming to expose gaps and implications related to the context of Nepalese higher education.

Theoretical review

Curricular differentiation practices, as a teaching method, which is rooted in constructivist learning theories, which focus on learner-centered activities and the responsiveness towards the individual differences among learners (Vygotsky, 1978). The major concept is that students are engaged in optimum learning when the instruction is modified according to their readiness, interests, and learning styles, which requires continuous assessment to lead the teaching methods (Tomlinson, 2014). In this regard, Vygotsky's sociocultural theory has offered a broad theoretical basis for curricular differentiation practice. Similarly, it emphasizes the significance of social interaction and instructional scaffolding within the learner's Zone of Proximal Development (ZPD), representing that the assessment should reveal the learner's existing knowledge, skills, and face the challenges of their own (Vygotsky, 1978). By using formative assessment, teachers can scaffold learning experiences that enhance the deeper comprehension and attainment of skills. Likewise, culturally responsive pedagogy also supports the curricular differentiation practice by acknowledging the necessity of integrating students' cultural backgrounds into teaching and

assessment techniques (Gay, 2010). In the diverse higher educational contexts of Nepal, this theory needs teachers to create assessments and curricular resources that honor and reflect the learners' identities, thereby improving engagement and equity. Collectively, these theories offer a comprehensive framework for understanding how assessment can work, intentionally working to differentiate curriculum practice and foster inclusive and equitable learning environments in higher education in Nepal.

Empirical review

Empirical studies regarding the curricular differentiation practice in higher education have shown that varying levels of application and effectiveness exist in diverse backgrounds. Tomlinson and Imbeau (2010) have discovered that educational institutions that incorporate formative assessment practices into curriculum planning are generally more successful at meeting the needs of varied learners, leading to enhanced engagement and success. Their research has emphasized the useful effects of assessment-based differentiation on students' motivation and academic achievements. Paudel (2020) has observed that although policy statements have advocated for inclusive education, higher educational institutions in Nepal largely use rigid curricula and paper-and-pencil testing, which limits the capacity for differentiation based on the assessment system. This misalignment hinders fair learning opportunities for students from diverse backgrounds.

A study conducted by Sharma and Gautam (2019) in Nepalese universities has looked into lecturers' views and practices concerning differentiated instruction and found an extensive lack of knowledge and training on how to use assessment to guide the curriculum modifications. Teachers have reported that they face problems related to large class sizes, inadequate resources and materials, and limited institutional support. In contrast, research from more comfortable settings indicates that technology-based assessment tools and professional training can lead to more effective curricular differentiation practices. Similarly, Andrade and Cizek (2010) have illustrated how formative assessments have been supported by digital platforms, which enable instructors to deliver tailored feedback and adjust the learning activities according to the students' needs. These empirical understandings collectively highlight the essential role of assessment in enabling the curricular differentiation practice while also pointing to contextual obstacles that need to be overcome to realize the equitable and inclusive justice in higher education.

Methodology

Research design

This study uses a qualitative approach and case study design to examine the practices and challenges related to curricular differentiation practice based on the assessment system in higher education. A qualitative methodology is suitable as it enables a comprehensive understanding of complicated social phenomena within their real contexts (Creswell & Poth, 2018). Similarly, the case study design specifically permits a full investigation of how assessment affects the curricular differentiation practice in higher education in Nepal. Likewise, the participants are faculty members engaged in curricular differentiation practices, as well as students in this study who are selected by the purposive sampling techniques.

Tools of data collection and analysis procedure

A variety of data sources is used to promote triangulation and enhance the validity of the findings. These include: Semi-structured interviews with faculty members to generate their insights and viewpoints. The documents are an analysis regarding to the institutional curriculum guidelines, assessment policies, and course materials. Similarly, the non-participant classroom observations are used to evaluate how differentiation practices driven by assessment are applied in the teaching and learning process. The gathered information is analyzed thematically in this study, and tools are triangulated. The collected information and the documents are confidential, and informed of their rights to withdraw at any stage they have provided the information regarding the study.

Results and discussion

Practices of curricular differentiation in higher education based on assessment

Curricular differentiation practice in higher education involves the required modification of curriculum content, teaching methods, and materials, and assessment strategies to meet the diverse learning needs, backgrounds, and abilities of the students. Assessment is important in guiding this type of diversity, in which the teachers' understandings are used to comprehend learners' readiness, interests, and cultural backgrounds. The methods of curricular differentiation that are based on assessment are closely tied to sociocultural theory and culturally responsive pedagogy, both of which highlight the social aspect of learning and the importance of cultural identity in higher education. Sociocultural theory, based on Vygotsky's work (1978), declares that learning is fundamentally a social activity facilitated through language, interaction, and cultural tools. Vygotsky contended that learners enhance their cognitive abilities within their Zone of Proximal Development (ZPD), which is the space between what a student can accomplish on their own and what they can achieve with assistance (Vygotsky, 1978). Similarly, a formative assessment system that aligns with the sociocultural ideologies prioritizes the understanding of students' existing skills and provides support through meaningful social engagement. In this regard, Black and Wiliam (2009) have emphasized that formative assessment "supplies the essential information to modify the teaching and learning process while they are still ongoing" (p. 7), enabling teachers to tailor curriculum and instruction to the immediate needs of students.

In the context of higher education, curricular differentiation practice is guided by sociocultural theory, which involves more than merely varying difficulty levels and requires recognizing the students' cultural backgrounds and social experiences as valuable assets that influence their learning. In this regard, Ladson-Billings (1995) has contended that culturally responsive pedagogy is vital for empowering the underserved students by upholding their identities and integrating their cultural experiences into the curriculum. So, this pedagogy advocates for curriculum and assessment practices that are not culturally neutral but instead mirror the lived experiences of students and that foster critical consciousness (Gay, 2010, p. 31).

Thus, assessment-based curricular differentiation practice must transcend the structured and uniform approaches that adopt the culturally relevant assessment techniques. For instance, teachers might employ diverse assessment formats such as portfolios, oral presentations, and collaborative projects, which enable students from numerous backgrounds to showcase their learning in ways that correspond with their cultural practices (Heacox, 2017). This method of assessment aligns with Vygotsky's focus on mediated learning, where cognitive development is influenced by cultural tools and social contexts (Vygotsky, 1978). This study indicates that such

culturally responsive and socio-culturally informed differentiation practice has a positive effect on students' engagement and academic achievement. Similarly, according to Tomlinson (2014), the differentiation requires a reflective understanding of each student's cultural and social identity along with their academic necessities (p. 45).

However, the studies within the Nepalese context have revealed that the hindrances in effectively applying these practices of curricular differentiation. As Paudel (2020) points out, the occurrence of summative assessments and rigid curricular frameworks hamper the educators' ability to modify the curriculum based on the diverse profiles of the learners. Similarly, Sharma and Gautam (2019) have noted that, lack of professional training and institutional support for formative assessment, culturally responsive assessment techniques are essential. In this concerning, successfully applying the curricular differentiation in higher education depends on the incorporation of sociocultural theory and culturally responsive pedagogy into the assessment frameworks. Similarly, by placing learning within the social and cultural contexts of students, teachers can use the assessment as a flexible tool to facilitate learning and promote equity. Achieving this requires regular reforms in institutional policies, professional development, and curriculum design to view variety as an asset rather than a hindrance.

Issues and challenges in curricular differentiation practices based on assessment

Curricular differentiation practice in higher education, for its effectiveness, involves activities to deliver fair learning opportunities by adapting the instruction and assessment system to address the varied interests and needs of learners. In this regard, numerous problems and challenges hinder the fruitful application of differentiation based on the assessment system in higher education. A significant problem is the occurrence of summative assessment techniques. The higher educational institutions mainly depend on final exams and paper-and-pencil tests that largely assess students' capacity to memorize information instead of understanding or skill development (Paudel, 2020). Such assessment approaches offer minimal formative feedback, which is vital for recognizing students' needs and guiding differentiated instruction (Black & Wiliam, 2009). Lack of continuous, formative assessment, and teachers' absence of the requisite information to modify curriculum content, pacing, or teaching styles to accommodate individual learners.

Similarly, another critical concern in terms of curricular differentiation practice is the inadequate institutional support and policy structures that promote curricular flexibility. The rigid curriculum frameworks, structured syllabus, and traditional assessment timelines limit the teachers' capacity to apply the differentiated strategies (Sharma & Gautam, 2019). This rigid system, often arising from central educational systems, has emphasized standardization over adaptability, constraining innovation in teaching and assessment systems of higher education.

The readiness and training of faculty members represent additional obstacles in the curricular differentiation process based on the assessment. Numerous teachers have limited opportunities for professional development in formative assessment and differentiated curricula, leading to a lack of knowledge and skills to effectively analyze assessment data for curricular modification (Tomlinson, 2014). Teachers frequently voice uncertainty regarding how to design and implement assessments that accurately reflect the diverse students' capabilities and how to use the results of these assessments to inform the instructional process. In some cases, the large class sizes further hinder the implementation of curricular differentiation. In the context of higher education in Nepal, classes can consist of hundreds of students in core subjects, interpretation,

modified assessments, and feedback are logistically challenging (Sharma & Gautam, 2019). This reality limits the teacher's ability to closely monitor the students' progress and provide tailored support, often resulting in a uniform approach to the instructional process.

Moreover, limitations of resources, such as limited access to technology, teaching assistants, and varied instructional resources, limit the possibilities for differentiation practices (Paudel, 2020). Without adequate resources, teachers have found that it is difficult to apply various assessment approaches or create alternative curriculum pathways that cater to the diverse learning needs of the learners. In this regard, from the cultural perspective, there may be resistance to transformation from both teachers and students who are familiar with traditional, exam-focused educational techniques. Similarly, transitioning to assessment-based differentiation practice requires a reevaluation of teaching roles and students' autonomy, which could be met with doubt or hesitance (Gay, 2010). This cultural barrier highlights the requirement for awareness-raising and shifts in the mindset within academic circles.

Likewise, the equity concerns associated with students' socioeconomic and linguistic backgrounds impact the effectiveness of differentiation practice. In higher education, students from understated communities may encounter additional hindrances such as language challenges, limited preceding educational experiences, or insufficient access to additional learning resources (Paudel, 2020). Lack of culturally relevant assessment and curriculum modifications, these students are at risk for further marginalization. So, while assessment-based curricular differentiation practice has the competence to improve inclusivity and learning outcomes, it opposes various challenges, including systemic policy boundaries, faculty readiness, class sizes, resource constraints, and cultural as well as equity-related obstacles. Undertaking these issues of assessment system requires comprehensive initiatives that encompass policy reforms in terms of the curricular development, targeted faculty training, resource distribution, and cultural practices in concurrence to promote equitable and effective higher education.

Ways forward to the challenges of curricular differentiation practices based on assessment

To address the problems related to implementing curricular differentiation practice based on assessment, it requires interventions on multiple levels that include policy changes, institutional support, faculty training, and innovative teaching methods.

Encourage varied and ongoing assessment methods

Educational institutions ought to emphasize formative assessments in addition to summative ones. The techniques for formative assessment, such as quizzes, peer evaluations, self-assessments, classroom presentations, and continuous feedback, enable teachers to track students' progress in real-time and change their teaching as needed (Black & Wiliam, 2009). Presenting a range of assessment types, including portfolios, projects, and presentations, allows diverse learners to express their understanding in various ways, thereby supporting differentiation practices in higher education.

Create adaptive curriculum guidelines

In the context of Nepal, higher education-related policymakers and institutional leaders need to reform rigid curriculum structures to grant more freedom in the process of content delivery, pacing, and assessment approaches. The policies should allow teachers to responsively adjust curricula based on the students' assessment results and local surroundings (Paudel, 2020).

Similarly, familiarizing curriculum design can cater to the diverse needs of learners and enhance the inclusivity in the education system.

Prioritize teacher training initiatives

Essential training programs are vital for providing faculty members with the necessary skills in formative assessment, data analysis, and differentiated instruction (Tomlinson, 2014). Continuing professional development nurtures a culture of reflective teaching and innovation, empowering teachers to apply assessment techniques confidently for curricular differentiation practice.

Optimize class sizes and support systems

Approaches aimed at decreasing class sizes in the core subjects can enhance the effectiveness of a differentiated curriculum and quick feedback (Sharma & Gautam, 2019). Furthermore, using technology such as learning management systems and online assessment tools, and techniques can assist teachers in efficiently managing and analyzing student information regarding their learning process.

Integrate culturally responsive teaching methods

Including culturally responsive strategies within the assessment system and curriculum design addresses the issues of equity by recognizing and valuing the cultural backgrounds of the students (Gay, 2010). So, curricular differentiation practice should represent the various identities of learners, employing assessment techniques that are relevant and accessible to all students.

Institutional support and cooperation

Academic institutions should establish cooperative environments where teachers can collaborate, share effective practices, and collectively tackle challenges related to curricular differentiation practice based on the assessment system. Similarly, institutional leadership must prioritize resource allocation and recognize faculty contributions to inclusive teaching and innovative assessment practices in higher education.

Conclusion

This study has explored the influence of assessment practices in curricular differentiation in higher education. The findings indicate that despite the increasing diversity among students, assessment systems mainly depend on summative approaches, which hampers the opportunities for adaptive and inclusive teaching and learning processes. Similarly, the structural hindrances such as rigid curricula, large student numbers in some cases, and insufficient faculty training further inhibit the differentiated approaches. Using sociocultural theory and culturally responsive pedagogy, the study highlights the need to recognize learners' cultural and social backgrounds. Likewise, differentiating based on assessment exceeds a simple technique; it serves as a way to achieve educational equity. Thus, higher educational institutions need to advocate for formative, adaptable assessment techniques, enhance professional development, and create policies that support responsive curriculum design so that all learners have fully accessed their equitable educational opportunities.

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