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Integrating Digital Innovation and Culturally Relevant Pedagogy for Global Competence in Sustainable Education

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Abstract

Education is a process that cultivates a wider outlook and discernment, propelling critical and creative thought processes. The seeds sown in young minds take root, and their perspectives are shaped by what they learn. At times, the acquisition of knowledge and practical wisdom through education is confined to the curriculum, often ignoring or giving less importance to one's roots. The current research focuses on incorporating Place-based Education as a pedagogical approach to shape students' mindsets locally and then globally. Such an approach is the need of the hour, as the student community must cultivate a deeper connection with and responsibility for their environment, community, and culture. Gloria Ladson-Billings' Culturally Relevant Pedagogy serves as the theoretical framework for this analysis. She cites Cornel Pewewardy's assertion that one of the reasons Indian children experience difficulty in schools is that educators have traditionally attempted to insert culture into education, instead of inserting education into culture. This statement is also relevant to the field of higher education. Glocalization becomes meaningful only through the implementation of such culturally relevant pedagogies. Thus, integrating local contexts and global resources can foster meaningful and globally aware learning experiences. Furthermore, emerging digital modes provide new platforms for reinforcing local knowledge in innovative forms, while staying aligned with global needs. The study attempts to integrate culturally relevant pedagogy with modular learning structures to foster sustainable education. By aligning localized knowledge with modular flexibility, this framework proposes a resilient educational ecosystem in which facilitators utilize self-contained learning modules to build students' global competence while mirroring the community's cultural wisdom.

Keywords: Culturally Relevant Pedagogy, Digital Tools, Global Competence, Glocalization, Modularity, Place-Based Education

Introduction

Education is a transformative journey that promotes knowledge acquisition and chisels the thought process in order to attain practical wisdom. It has been imparted through innumerable pedagogies that train the learners to acquire academic and life skills. It is considered a holistic process, not limited to academic and professional success, but rather extends to moulding an individual into a responsible, ethical, and socially conscious human being. It makes one aware of one's position at the giving end, contributing to the betterment of humanity and society. Today's scenario poses a pertinent question: whether the true purpose of education is really being attained or if it is merely being used as a tool

for attaining economic success. A learner tends to look at the curriculum as an external component that would decide their future and least bothers about its inherent knowledge and value system. This is largely because of the inadequacy of the prescribed text or pedagogies employed. When the learning material or pedagogy does not reflect the cultural ethos of the learner, the learning process and the learner seem to be disconnected entities. In addition, the digital era has not only resulted in information overload but also fostered a culture of distraction, as a result of which the learner community struggles to wade through it. At the same time, appropriate use of technology in the teaching-learning process will not only promote learners' understanding but also pave the way for enhancing their critical and creative acumen.

Place-based education is a pedagogical approach that prioritises "experiential, community-based, and contextual/ecological learning to cultivate greater connectivity to local contexts, cultures and environments" (Yemini). Gloria Ladson-Billings's theory of Culturally Relevant Pedagogy, with the case studies supporting it, proves to be fruitful in the contemporary context, aided by digital tools. Such an attempt will facilitate the learners to acquire global competence, with a strong footing in their cultural knowledge. Thus, sustainable education can be achieved through the wise amalgamation of Culturally Relevant Pedagogy and Digital Tools, leading to Global Competence.

Review of Related Literature

The application of Gloria Ladson-Billings's theory of Culturally Relevant Pedagogy has been dealt with in many articles. To cite a few, Mrinal Mukherjee, in her article "Culturally Responsive Teaching Learning in Indian Multicultural Context: Review of Contemporary Policy & Practice," explores the cross-cultural instructional challenges and reviews culturally responsive teaching learning at the school education level. Similarly, Dr. Atal Bihari Tripathy and Mrs. Subhashree Mishra attempted a qualitative case study in the "Role of Culturally Responsive Teaching in Advancing Equity and Engagement in Diverse Classrooms," conducted in government and private secondary schools across urban and semi-urban areas of Dehradun district. The author of the article, "Rethinking Multicultural Education beyond Cultural Celebrations: Pedagogical Barriers in Indian Schools," Priti Sangray, underscores the importance of integrating multicultural education in schools.

While such articles underscore the importance of Culturally Relevant Pedagogy at the school level, there remains a noticeable gap in research concerning its application within Higher Education contexts. The present study seeks to address this gap by examining the implementation of Culturally Relevant Pedagogy in Higher Education through the integration of digital tools and technology-enabled pedagogical practices. By exploring how digital platforms can support culturally responsive teaching and enhance student engagement, inclusivity, and academic participation among diverse learners, this research contributes to extending the scope of Culturally Relevant Pedagogy beyond school education and into contemporary higher learning environments.

Objectives

The objective of the current study is to highlight the significance of culturally relevant pedagogy facilitated through digital tools in higher education, as it provides opportunities for acquiring global competence and thereby promotes sustainable education. Such an approach can make learning more meaningful, relatable, and engaging for students from

diverse backgrounds. It also aims to bridge the gap between traditional values and modern educational practices, thereby fostering holistic development among learners.

Methodology

The study proposes a pedagogical methodology that amalgamates Culturally Relevant Pedagogy and the 'Modularity' principle of Adaptive Design for Learning to promote sustainable education. The approach facilitates learners' conceptual understanding through local cultural contexts while fostering global thinking, adaptability, and global competence.

"Educational practices must match with the children's culture in ways which ensure the generation of academically important behaviors" (Jordan, 1985, p.110). Students are inherently multi-faceted individuals whose learning is shaped by their diverse cultural, social, and linguistic backgrounds. Their lived experiences and identities often differ significantly from the perspectives represented in prescribed textbooks, which may reflect contexts that are unfamiliar or culturally distant. As a result, learners may find it challenging to fully connect with or relate to the content when it does not align with their cultural realities. This highlights the importance of instructional approaches that acknowledge students' cultural rootedness and bridge the gap between formal academic content and their everyday experiences.

Gloria Ladson-Billings, in the article "But That's Just Good Teaching! The Case for Culturally Relevant Pedagogy" (1995a), has attempted to locate the problem of discontinuity between what students experience at home and what they experience at school in the speech and language interactions of teachers and students. These sociolinguists have suggested that if students' home language is incorporated into the classroom, students are more likely to experience academic success. Villegas (1988), however, has argued that these micro-ethnographic studies fail to deal adequately with the macro social context in which student failure takes place. (pp.159-160)

Ladson-Billings further observes that successful teaching comprises the first step of deciding what to do with regard to the social context, the students, the curriculum, and the methodology. According to her, the teachers engaged in culturally relevant pedagogy must be able to deconstruct, construct, and reconstruct the curriculum. Deconstruction refers to the ability to take apart the "official knowledge" to expose its weaknesses, myths, distortions, and omissions. Construction refers to the ability to build curriculum… Reconstruction requires the work of rebuilding the curriculum that was previously taken apart and examined. (2006, p.32)

Teachers in higher education in India, especially those working in private universities and autonomous colleges, can consider redesigning their curriculum to reflect both global and local (glocal) needs. At the same time, educators who use prescribed textbooks can adopt instructional strategies to develop cultural competence among students. A teacher can build cultural competence by linking textbook concepts to learners' lived experiences within their local context. For example, while teaching a lesson on environmental conservation, a teacher in India can connect the concept to traditional practices such as rainwater harvesting in rural Tamil Nadu or the community-driven water management systems seen in villages. By relating the textbook idea of sustainability to practices like maintaining temple tanks (ooranis) or local farming methods that depend on monsoon cycles, the teacher helps students see that the concept is not abstract but already present

in their cultural environment. This approach makes learning more meaningful and rooted in students' everyday realities. Ladson-Billings observes thus: "My sense of cultural competence refers to helping students to recognize and honour their own cultural beliefs and practices while acquiring access to the wider culture, where they are likely to have a chance of improving their socioeconomic status and making informed decisions about the lives they wish to lead" (2006, p.36).

Analysis

Cultural competence enables students to remain grounded in their own cultural beliefs and practices while effectively engaging with broader global perspectives. This balanced identity allows them to navigate diverse academic, social, and professional environments with confidence and adaptability. As a result, culturally competent students are better equipped to communicate across cultures, collaborate in international settings, and make informed life choices. By valuing their own cultural roots alongside global knowledge systems, they develop the flexibility and awareness needed to excel in a globalized world. Thus, Ladson-Billings, in "Toward a theory of culturally relevant pedagogy," argues that culturally relevant pedagogy helps students succeed in school while still valuing and preserving their own culture. In the example, a teacher used rap lyrics to teach poetry concepts, then connected those lessons to traditional poetry. Students who were good at writing or improvising rap were encouraged and recognized for their skills. (1995b, p. 476).

Although culturally relevant pedagogy has often been discussed in relation to school education, it is equally significant in the context of higher education, particularly in today's digital era. In India, many students from rural backgrounds enter colleges and universities with strong aspirations for social mobility and economic advancement. However, they frequently encounter challenges such as linguistic barriers, differences in cultural capital, lack of confidence, and unfamiliarity with urban or digitally driven academic environments. In such contexts, culturally relevant pedagogy can play a transformative role by connecting classroom learning with students' lived experiences, local knowledge systems, languages, and cultural practices. When educators acknowledge and incorporate these backgrounds into teaching practices, students are more likely to feel valued, confident, and motivated to participate actively in classroom discussions and academic activities. This approach not only supports academic achievement but also creates inclusive learning spaces where rural students can express themselves freely without feeling alienated or inferior.

Online learning and digital tools play a significant role in enhancing teaching and learning. In order to develop culturally competent students, teachers should design learning modules that integrate three key dimensions: knowledge, culture, and global relevance. Such modules should first provide clear conceptual understanding of the content (knowledge), then connect it to learners' lived cultural experiences to make learning meaningful (culture), and finally extend the discussion to a broader global context to highlight its wider applications and implications.

By following this approach, students are able to see learning as both locally rooted and globally relevant. Digital tools can further support this process by offering multimedia resources, interactive tasks, and collaborative platforms that encourage engagement with diverse perspectives. This not only strengthens conceptual clarity but also helps learners develop critical thinking, cultural awareness, and global competence. Ultimately, such an

instructional design prepares students to navigate and contribute effectively in an interconnected world.

In this VUCA (volatile, uncertain, complex, and ambiguous) world, teachers need to continuously revisit and reimagine their pedagogical approaches to remain relevant and effective. Integrating technology into teaching and learning becomes essential, not only to enhance accessibility and engagement but also to provide learners with diverse and real-world exposures.

Adaptive Design for Learning (ADL) is a framework for designing online modules or courses that supports educators in reflecting on and improving course design. It is offered grounded in strong pedagogical principles and is intended to address learners' VUCA contexts. The framework is based on five key principles: adaptability, active and interactive learning, the 3Cs of online learning, the balance of asynchronous and synchronous learning, and modularity. (Ateneo SALT Institute, 2025, Module 1)

A common issue in traditional teaching is the tendency to deliver instruction first and conduct assessment only at the end of a course. This approach often delays meaningful feedback, leaving learners unaware of their progress until the course is nearly completed. To address this, Adaptive Design for Learning encourages a shift toward a modular structure. In this approach, courses are divided into smaller, self-contained units that are both meaningful and flexible. These modules can be combined to form a complete course or used independently for workshops or focused learning sessions (Ateneo SALT Institute, 2025, Module 1.8). Designing learning in modular form also creates natural checkpoints throughout the course. This enables continuous assessment and more frequent feedback, allowing both instructors and learners to monitor progress and make timely improvements.

While the desired learning outcome is the acquisition of knowledge and skills, with holistic attitudes, the most important feature is the application of the acquired knowledge, skills and attitudes which ADL refers to as "comptences" (Ateneo SALT Institute, 2025, Module 2.2). According to the ADL course, "A competence is what we hope our students would acquire at the completion of a course so that they can use the knowledge, skills, and attitudes that they have learned beyond the classroom" (2025, Module 2.2). For example, in a course "Gender Studies," the objective of the course teacher is to adopt a pedagogy that will inculcate cultural and global competence in the students by acquiring

- Knowledge of gender issues in local and global contexts, and an understanding of how each person's identity is shaped by gender-based perspectives.
- Skills in evaluating, analyzing, and rethinking gender-specific roles, both locally and globally.
- An inclusive attitude that embraces all people, including those identified as LGBTQIA2S+, under the universal fold of humanity.

In contrast to focusing on taught/ contact time, a focus on Learning Time will help students acquire the competences, quite naturally and practically. Learning time does not distinguish between synchronous and asynchronous learning, but rather centres on the process of learning, including activities such as assignments, discussions, debates, and pre-reading tasks. The concept of Learning Time is a dynamic shift towards enhancing student competences. The challenge ahead for designing a course based on Learning Time

will be creating modules that accommodate different learning activities that both spark their interest and nurture the required competences.

For example, in a course “Basic Communicative English,” Learning Time should be realistic, and it should engage students in a variety of activities that develop their LSRW (Listening, Speaking, Reading, and Writing) skills through literary and authentic texts reflecting varied cultural experiences. One of the intended competences is the ability to use English appropriately and confidently for general and specific purposes, with an awareness of intercultural communication, cultural nuances, and context-sensitive language use. A key challenge in online learning is maintaining learner engagement. ADL course advocates four key strategies to optimize learner engagement. First strategy is to design content in small, manageable “bite-sized” (Ateneo SALT Institute, 2025, Module 4.3) chunks. Since attention and working memory are limited, breaking content into segments helps learners process and retain information more effectively.

Another strategy is the use of clear signalling techniques. This involves guiding learners by highlighting key ideas before, during, or after presenting content. Providing guiding questions, summaries, or simple explanations helps learners focus on the most important concepts and reduces cognitive overload.

Effective online learning also benefits from combining audio and visual elements in a meaningful way. Visuals should support and clarify the content rather than repeat text unnecessarily. Well-designed multimedia presentations enhance understanding by integrating words and images purposefully. According to Cognitive Theory of Multimedia Learning, learners process information through both visual and auditory channels when engaging with multimedia content (Mayer, 2003). Learning becomes more effective when these two channels are well integrated and work in a coordinated manner. Finally, content design should encourage deeper engagement with ideas. Instead of passive consumption, learners should be given opportunities to discuss, critique, annotate, or investigate content. Activities such as collaborative reading, discussion tasks, or inquiry-based learning help learners move beyond surface understanding to deeper analysis and reflection.

The key strategies for module preparation techniques, as per Ateneo SALT Institute (2025), include the following:
Segmenting: The duration of the module can be fifteen minutes at the most. In case of lengthy content, it should be divided into meaningful segments that elaborate on one or two central ideas. It should provide a brief overview of the key terms in the lesson, along with appropriate explanations and reflective questions. This serves as a foundation for students’ understanding of the subject and its relevance in the local and contemporary world. The way the video unfolds allows students to listen, pause, and reflect on the concepts, facilitating deeper understanding.

Pre-training: The video, at the outset, should pre-train the students with regard to the significance of the content, relevance of the topic, with a practical example, and presentation of a brief overview of the content

Signalling: The module should make potential use of signalling at various places in order to emphasize the meaning and context of the terminology. For example: pictorial representations, highlighting, using bullet points, incorporating graphs, a clear breakdown

of acronyms, listing, usage of colours, questions and prompts, and summarizing key takeaways. Signalling by contrast includes listing and other illustrations that help students clearly distinguish the concepts.

Concretizing: One effective way to make content more accessible to students is by making it concrete through examples, stories, and metaphors. Using examples connected to students' prior knowledge and cultural experiences helps students understand new ideas easily. Instead of teaching concepts in a purely abstract manner, teachers can relate them to familiar literary texts, traditions, or social contexts. For example, when teaching percentages, a teacher in Tamil Nadu might use examples from local shopping practices, such as festival discounts during Pongal sales, instead of using unfamiliar foreign contexts. This helps students connect mathematical concepts to their everyday experiences.

Similarly, while teaching the socio-cultural significance of agricultural symbols, a teacher might compare the West African (Igbo) concept of the Yam with Paddy (Nel) from the Tamil agrarian tradition. Students who are already familiar with how newly harvested rice (Pudhu Nel) dictates family status, masculinity, and ritual offerings during Thai Pongal may better understand why the Igbo community elevates the Yam as the "king crop" (National Root Crops Research Institute, n.d.).

In both societies, these crops are not just food; they are sacred symbols of wealth, hard work, and blessings from ancestors. In Igbo culture, a man's worth and ability to marry are judged by the size of his yam barn, which perfectly mirrors how historical Tamil families were respected based on the size of their paddy granaries (Nel Kalanjiyam). Relating an unfamiliar global crop to a culturally familiar staple helps students see that distant cultures share the very same values as their own. This simple comparison bridges the geographic gap, making foreign traditions easy to grasp while deeply increasing classroom comprehension and student engagement. The technique of familiar analogy while introducing new concepts will capture immediate attention and arouse curiosity among students. While teaching imagery in literature, a teacher can use a culturally familiar analogy like this: Imagery in a story is like the detailed descriptions in a traditional Tamil folk performance or a temple festival procession. Just as people can almost 'see' the brightly decorated chariot, 'hear' the nadaswaram music, and 'smell' the camphor and flowers during a temple theru thiruvizha, imagery in literature uses words to create vivid sensory experiences in the reader's mind.

Audio Visual: Audio-visual tools make learning more meaningful by connecting ideas to what students can see and hear in their everyday cultural surroundings. Essential processing of the content should be made possible with illustrations or other techniques that ensure learners actively process and retain the key concepts. A visual representation simplifies abstract ideas, making the learning experience more meaningful. Moreover, the combination of narration and imagery ensures that learners actively process and retain the key concepts presented. Similarly, there should not be any extraneous elements such as visual redundancy, distractions and extraneous cognitive overload.

Diving Deep into the Content: The module should employ multiple strategies to engage students deeply with the content, including interactive questions and prompts for discussion. At every significant point in the presentation, the presenter should introduce learners to various dimensions of the topic through existing knowledge frameworks. This

approach allows learners to follow the lecture smoothly, minimizing cognitive obstacles and enhancing comprehension.

Findings and Discussion

Towards the end of the presentation, a discussion forum can be facilitated to stimulate students' critical thinking on the topic. Discussion points are to be introduced sequentially rather than all at once. Pauses should be provided between points, along with hints that prompt reflection. This step-by-step approach will encourage active participation and deeper engagement with the content. By offering clues instead of direct answers, independent reasoning is supported. The discussion forum also promotes peer interaction, enabling students to consider multiple perspectives before arriving at their conclusions.

To summarize, the module should be a systematically designed audio-visual tool that introduces key concepts through interactive and thought-provoking techniques grounded in culturally relevant pedagogy. Utilizing culturally familiar visuals and local, real-life examples helps students validate their indigenous identities while connecting new, global ideas to their existing prior knowledge. Simultaneously, the presenter's interactive tone and guided discussion foster an active learning environment that respects diverse learner backgrounds. Strategic use of slides and visuals will avoid cognitive redundancy, emphasize essential concepts, and encourage reflective thinking on the central theme. Finally, the concluding discussion forum acts as a critical space for students to engage in peer dialogue, evaluate multiple socio-cultural perspectives, and develop independent reasoning, thereby translating their localized learning into a broader global consciousness.

The study indicates that the integration of culturally relevant pedagogy with digital tools significantly enhances the effectiveness of higher education learning environments. When online modules are designed by teachers in alignment with learners' cultural contexts, students demonstrate higher levels of engagement, comprehension, and motivation. Culturally contextualised content enables learners to connect theoretical knowledge with lived experiences, thereby improving conceptual clarity and retention. The use of teacher-created digital modules allows for flexibility in content delivery and supports differentiated learning needs. Learners benefit from multimodal resources such as videos, interactive tasks, and culturally embedded examples, which promote active learning and sustained attention. Furthermore, the findings suggest that culturally responsive digital instruction fosters inclusivity by acknowledging diverse learner identities and experiences within the classroom.

It is also observed that such pedagogical practices contribute to the development of global competence. By grounding local cultural perspectives within broader academic frameworks, students are better able to engage with global issues critically and reflectively. This balance between local relevance and global awareness exemplifies globalization, driving sustainable education within higher education contexts.

Conclusion

The study concludes that sustainable education in higher education can be effectively achieved through the convergence of culturally relevant pedagogy and digital learning environments. Online modules designed by educators, when aligned with the cultural and cognitive needs of learners, create meaningful and engaging learning experiences.

Such an approach not only enhances academic achievement but also fosters inclusivity, critical thinking, and global competence among learners. Therefore, the purposeful integration of cultural context into digital instructional design emerges as a key requirement for transforming higher education. This model supports a shift towards learner-centred, responsive, and sustainable educational practices that are essential in an increasingly digital and interconnected world.

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