TRANSFORMATION IN 21ST CENTURY EDUCATION: DIGITAL PEDAGOGY AND LEARNER-CENTERED TEACHING TRENDS

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Abstract

This article explores the transformative shifts in 21st-century education driven by the integration of digital technologies and learner-centered pedagogy. It highlights the paradigm shift from traditional teacher-centered instruction to personalized, technology-enhanced, and student-driven learning experiences. Theoretical underpinnings such as humanism, social constructivism, and connectivism are examined to provide a foundation for understanding digital pedagogy. Key components of this transformation include adaptive learning environments, inclusive practices, student motivation, and evolving roles of educators. The study emphasizes that digital pedagogy not only involves the use of tools but requires a complete reimagining of educational practices, assessment strategies, and teacher professional development. Drawing from international best practices and research, the article concludes that the future of education lies in the intentional and critical use of digital technologies to promote equity, creativity, and lifelong learning.

Keywords: Digital Pedagogy; Learner-Centered Teaching; 21st Century Skills; Inclusive Education; Educational Technology.

1. Introduction

The 21st century educational landscape has undergone a major transformation in terms of context, learning space, and pedagogy due to the progressive integration of digital education technologies. The advances in technologies that have seeped into many society aspects have triggered the transformation, opening a new horizon of learning that was previously inconceivable. Mobile handheld devices, anytime anywhere access to the internet, learning management systems, online forums, webcasts, and podcasts have not only promoted the use of Web 2.0 technologies for personal communication, information sharing, and knowledge construction but have also attracted businesses and schools looking to cash in on such opportunities [1]. These attempts at educational reform boost the support of the miracle technologies to revolutionize education by liberating learning from the constraints of time and space and promoting its massification, leading to a paradigm shift from a teacher-centered to a learner-centered view of learning. Supporting this change of mindset, most countries around the world have formulated national visions and policies for the reform of education via the ICT pathway, a big part of which is digital technologies. At the local level, many different efforts have been made in individual schools to embrace

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digital technologies and help prepare students for a digital future. Such institutional exogenous impetus upholds the widespread belief of a second digital divide in education: whether or how digital technologies would be embraced by pedagogical practices, and with what outcomes [2]. In the digital native generation, learners are expected to be born and raised in the digital age with high-level digital technology use, and both educators and students are anticipated to be competent and responsible consumers of digital technologies. Adopting a scant conception of ICT, however, teachers are merely perceived as users of digital technologies without attention plans, strategies, or skills for meaningful use of the technologies in the classroom. Such teacher-centered digital technologies do not make a practical difference beyond a better lecturing on pre-prepared PowerPoint slides.

1.1. Historical Context of Education

Finding out how new styles of education operate in both Catholic schools and public schools requires an examination of the history of education in the United States, as well as key historical developments in Catholic education in particular. A history of education in America is not well documented in church archives, so it must be researched through public documents, histories, textbooks, and oral interviews with key individuals, as well as through on-going empirical studies. Considering this is only a beginning, much remains to be done, however. In particular, the actual working of the new styles of education in churches and schools needs to be examined. For the sake of arrangement and documentation, the history of Catholic education has been divided into seven decades: the 1950s, 1960s, 1970s, 1980s, 1990s, 2000s, and 2010s. Within this framework, key historical developments will be spotlighted. For greater precision, the time slots of each decade have been divided into hear and half-year periods. In some instances, certain notable developments occurred immediately before or just after a decade. These qualifying years have been included as “plus or minus” to facilitate a fuller understanding of important historical events. The time period beginning with the publication dates of the three syllabi of the Council of the Church until the 1960s was generally known to be “the golden age” of Catholic education when the church developed a relatively well-established system of schools throughout the United States. In particular, hundreds of parochial elementary schools were built for parish children and convents for sisters who taught them, with clergy supplied by local Chicago diocesan priests and Franciscan brothers from New York initially hired to teach in Catholic high schools. Thanks to the rapid growth of the school system, Big Ten Catholic colleges had been established not only in the Midwest, but also in other regions of the United States ([3]).

2. Learner-Centered Teaching

The 21st Digital Pedagogy Trends discussion has mostly revolved around a gradual change from traditional, teacher-centered instruction to emerging and maturing practices of

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personalized, learner-centered, and sometimes called "flipped," or "inverted," instruction [6]. Learner-centered instruction recognizes that people have individual characteristics that play a substantial role in their personal learning environments. This highlights how a variety of differing local environmental factors on which learners have an impact require solutions that vary not merely between students, but in time and context for the same individual learner. A key tenet of this is that cognitive, metacognitive, and other skills applicable to self-direction in learning are crucial—both to ascertain such characteristics, and to handle learning once a suitable learning environment has been determined.

Learning can take place in formal, informal, and non-formal environments with varying degrees of control by the learner. It can result in highly different products, in different contents and foci, and in different measures of goal achievement. Also important is that successful controlling and collaboration of design and maintenance of cross-scale learning environments with social and cultural effects on cognition and learning seems considerably more difficult than analysis, design, and maintenance of more formal environments. In the future, the expectation is that a student with the right learner environment will be more fortunate than today's graduates—even if the learning understanding seems hard to revisit. Each teacher may perform better in preparing students for an increasingly complex environment.

The central aim is to create a more real school that uses projects and technologies to better prepare students for life after education, mostly referred to as a "future-ready" school. Current practices include Big 10 Project Fridays, Project (P) with WMS Community, WMS Curriculum Fair, WMS BETties, and The Big 10 Awards. Even schools that compete for students may use comparable events. This presents a synthesis of new ideas intended to guide change towards increased authenticity and engagement for students and teachers, primarily out-of-school, youth-centered initiatives that nevertheless require a rethinking of the "design" of school learning environments.

3. Principles of Learner-Centered Education

The American public K-12 education system has been plagued with various challenges such as standardized, one-size-fits-all pedagogy, morbid curriculum, and a lack of real-world connection and relevance to identity development. On the other hand, savvy learners find ways to personalize their learning to engage in authentic and relevant activities in their lives outside K-12 education spaces through the use of mobile/handheld smart devices and the Internet. In this situation, a 21st century learner-centered education may help meet diverse learner needs and challenges driven by globalization, diversity, and technology. This form of education not only helps equip students with needed knowledge and skills but also fosters learners' identity development.

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21st century learner-centered education emphasizes humanism, the core tenets of constructivism, interest-driven and passion-based learning through the lens of situated cognition. The teacher is not considered the sole authority in their classroom, and although they are necessary for the teaching-learning process to occur, they are not necessarily sufficient. Learners insert their voices, identities, and lives into the classroom and learning practices, and classrooms are responsive to learners' needs, experiences, and identities. Further, the educator's role changes to being a facilitator who helps with how to learn as opposed to what to learn. In addition to providing agency and voice, the core tenets of constructivism argue that knowledge is constructed rather than transmitted, vigorously explored rather than passively absorbed, and socially mediated and publicly shared rather that privately held. In a learner-centered culture, no specific curriculum is imposed; rather, learners are aware of how to learn and pursue various avenues for learning through the choices they are given.

4 Strategies for Implementation

The literature identifies three key strategies: increased capacity building, collaborative delivery of resources, and providing motivation and recognition entitlement. A growing and diverse knowledge base is a prerequisite for the exploration of new pedagogies. A dense online social network is necessary for all knowledge building activities to be delivered and accessed socially. Finally, motivation and recognition for knowledge building activities must draw from performance, improvement, and purposeful altruism. A balance of these three strategies will ensure that educators increasingly and adaptively use technologies to develop digital pedagogies and encourage student-centered teaching. Existing rich knowledge about digital technologies for education is rapidly growing; however, this knowledge remains hidden in thousands, even millions, of disparate repositories ranging from online formal digital content to informal user entries. It is overwhelming for educators to use these existing resources flexibly and adaptively. Increasing the capacity of educators to develop digital pedagogies is one of the fundamental tasks needed to meet future educational demands. Ongoing efforts are warranted to increase the capacity of educators to develop digital pedagogies and delivery collaborative resources through participatory and multi-media knowledge building activities. In existing TPD, educators alone cannot talk and teach. It is crucial to build up a diverse, online, and dense social knowledge network of educators. No single TPD can maintain performance well. It is crucial to provide a wide variety of motivation and recognition. Educators also need to be provided with different motivation and recognition entitlements. Thus, it is recommended that a given TPD should strive for both diversity and balance of these three strategies. Development of knowledge about technologies for education is ongoing and rich and will remain open-ended. However, what to use is context-specific, and how to use them is knowledge-intensive and demanding. Thus, future TPD about digital technologies for education is needed to be focused as life-long learning. Attending a variety of knowledge

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building TPD activities will help educators to maintain their professional improvement while also using technologies to enhance education. Engaging in the delivery of knowledge building TPD activities will not only enhance collective professional improvement but also build up low-cost social online networks for future knowledge building activities of the same topic. Educators also need to be encouraged to seek personal technology-based knowledge sharing activities and engage in the development of knowledge and social networks.

6 Assessment in Learner-Centered Environments

The process of assessment is integral to the learning process. The outcomes of an assessment activity have the power to shape what is taught and how it is taught in educational environments. Traditionally, in teacher-centered classroom environments, the assessment of learning was often solely the prerogative of the teacher. Task design, rubrics, marking, and feedback were often the responsibility of the teacher, with students expected to passively receive and consume this information at face value [7]. However, in recent times, with the rise of learner-centered environments, learners have become more active partners in the learning process, challenging the traditional one-sided view of assessment. With this shift, in addition to their roles as evaluators of learning, learners can also be viewed as assessors, co-designers, and co-markers of assessment tasks. Consequently, it is timely to consider the nature of assessment in learner-centered pedagogic environments.

A focus of people's knowledge can offer insight into how assessment might be framed in contemporary environments. With the transfer of knowledge from the teacher to the student on one end and the teacher having control of assessment the other end, there is a shift in emphasis on assessment instruments, processes, and outcomes. End-of-block examinations have undergone a transformation into more diverse formal and informal assessment tools. Shared assessment task design, marking, and feedback processes have become more common practice. A culture of self-assessment has evolved for students to focus on their learning and the learning of their peers. In acknowledging the convention of teacher control over assessment, students have begun to take more control over their learning, asking questions of their own learning and posing problems for themselves to solve.

7 The Role of Educators

The use of technology for technology's sake has long been questioned as a means of moving educational discourse forward that has risen to palpable urgency in the 21st century [1]. Calls for educational transformation or innovation have intensified in parallel to the explosion of internet use, the ubiquity of mobile technologies in everyday life, the adoption of social media in the public consciousness, and the widespread influence of media.

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Connections are made between significant societal changes and the alleged inability of 20th-century educational models to meet the needs of learners. Discourse related to the importance of lifelong learning, learner participation, student engagement, and the use of authentic assessment models has found a purchase in these broader contexts, and in response calls for a rethink of the roles of teaching, learning, and assessment have gained traction [2]. A role of teacher as "guide," as "mentor," as "enabler," and as "facilitator" has emerged. Forms of assessment such as collaborative project work, online peer review, and participation in unedited public discourse have been proposed as addressing the needs of a creative and collaborative generation of learners. Definitions of educational change have shifted focus so that questions surrounding 'what kind of learning we want' have taken precedence over 'how we want to change' the system.

Many precepts guiding teaching and research in the physical classroom have transitioned to their online, virtual equivalents, but rarely without challenge or resistance. The 21st-century question 'how' needs to be precise, pertinent, and at times pedagogically audacious. In acknowledging the underpinnings of the old educational model, the complexities, fears, and risks surrounding a shift of paradigm become apparent. Educational transformation requires more than new activities or media; large and complex cultural change is required. Current massification brings a kind of system saturation, threatening more than mere overexposure. While the general population has become familiarized with the technology and information-based paradigm, educational authorities continue to wrestle with the yawning gaps in understanding.

Education, traditionally seen as a safeguard to society, is now shaken at its foundations. What some view as new understandings and opportunities, others view as looming disaster. Incompatible epistemological understandings of education; radically new approaches and methods proposed for learning, teaching, assessment, and institutional issues are perceived as preposterous, misguided, or even patently dangerous. Fears of desensitization to violence in a broadband, anonymous, edited world and loss of a stable, shared intellectual sphere vie for prominence with utopian views of the second coming of the public sphere. The challenge of education at this time is unprecedented, requiring not only understanding and participation but also wisdom and restraint.

8. Facilitators of Learning

The twentieth century thought leaders welcome the fruition of new knowledge brought about by the spread of computers and other forms of technology. They cogitate that adapting to these changes will generate favorable differences among learners from varied spheres. In addition, the current potential of computer technology in written expositions is acknowledged. It is claimed that modern writing can be enhanced by the presence of computers due to easy manipulation directed by a variety of applications built in them. To

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accentuate these beliefs, it is asserted that educators need to acquire skills and knowledge to digitally participate. The constant advent of technology including software and hardware yields varied instruction modifications from traditional to contemporary styles. It yields a multimedia-rich environment which is believed to possess the capability to develop shared meanings. The use of technology generates the fruition of varied multimedia forms that manifest the presence and relevance of Information Communication and Technology. This type of flourishing contemporary environment is perceived to enable teachers' creativity when they design language tasks in acclimatizing modern-day learners.

Using technology to assist the instruction necessitates teachers to adapt to it. The use of these innovated tasks from modern-day materials could influence lessons to underpin institutionally-prescribed curricular goals. Teachers' involvement with technologically-associated materials is naturally confronted with educational principles that they have to address and conform sensibly during the creation of didactically useful tasks from opted springboards. Only appropriate and relevant technology could yield beneficial instruction modification with favorable learning outcomes. Heeding to the thoughts and findings of current education leaders, teachers should only involve technologies when necessity arises in generating outcomes. With the help of technology, innovation is perceived to spawn pedagogical implications that tend to benefit both learners and teachers in materials selection, task designs, presentation and performance as digital participants who have the active abilities in interacting with forms of technology and media.

9 Professional Development for Educators

Teaching and learning practices shift along with the continuously improving technology. In the current 21st century, even preschools integrate new knowledge and skills through learning technologies. Other than the facility of learning, being venue for productive spreading of knowledge and information, the internet has transformed the teaching profession. These rapid transformations apparently led to alternate teaching practices of teachers. Commitments on the transformation of teaching practices require training and support. Training is imperative and most of the instances, it is conducted in a short period of time so lessening amount of professional sharing and connection in one venue. Teachers acquire various questions regarding their teaching practices. This study aims to probe the responses of teachers from different technology environments of their prior teaching practices before being acquainted with available technology [2]. Development in education had been never thought of without considering professional development for educators on the said change. In the late quarter of the 20th century, studies were already done in regard with practitioners and scholar's perceptions on the difficult challenges to cope with the educational renovation due to the commencement of technology in schools. First instances of attempting to equip schools with technology started out as a perplexity on situations which transformed drastically in a relatively short score keeping

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only an unclear sense of their differences. Who could have expected and prepared for this deviation? When students are more advanced and technologically-wise than the faculties with respect to the multiple access to information and resources? The fast development and availability of the Internet and communication tools that relate materials, imperfect practices, or beliefs to situational solutions? What kind of anxieties is out there in regard with these shifts? In the current second quarter of the 21st century, the same questions might still apply, although this time, discussion is shifted to examination. From marketing booths to technophobes to advocates, educators are trying to reimburse for missed opportunities in growing technological skills. Discussion naturally leads to a deepened understanding of the subject, alongside with construction of collaborative language projects.

10 Challenges Faced by Educators

Teaching and learning, as part of education, have an on-going development of methods, techniques and approaches. These developments are influenced by various trends or shifts involving real life components including learners' characteristics as influenced by culture, time and technology. Trends in disparity of approaches are viewed as threats by those who prefer to stay behind, while teachers react against the demands for change, realizing their inability to follow suit. Technology exposed them to a whole new set of audiovisual materials being made for education. As a reaction though, they think of ways on how to personalize those materials almost resulting negatively in the gradual fading of affordances. Since before, it has been educators' inability to maximize learners' affordances to learn that led to that fading, in a sense that those affordances are ignored. All seem nice about technology but the institution cannot afford the budget [2]. By answering what is a present challenge in the design of intended learning outcomes, the new competency framework proposed in the study defines a generic framework encompassing domains of knowledge, psychomotor skills, attitudes, and resources each having an initial set of more specific descriptors to assess education programs or the present challenge. However, this competence framework is still a crude first draft. Further empirical studies are needed to improve it based on expert opinions in various fields. Attempts have been made in analyzing competency frameworks of educational institutions and countries and also in suggesting frameworks for higher education institutes assessment. However, to the best of the authors' knowledge, the similar holistic analysis at a larger and variant scale and a competency framework with domain-general generic competence descriptors on all four domains have not been tried.

10.1. Student Engagement and Motivation

With the spread of the Internet, the role of learning has greatly changed. Learners can get information from various electronic resources besides textbooks, and teachers can also provide them with countless resources. In such an environment, learners should be aware

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of the authenticity and accuracy of those resources so as to be effective, critical, and responsible participants in their communities [8]. A well-planned pedagogical approach could help learners assume an active role in their learning both in and outside the classroom. Learner-centered teaching approaches could help set the foundation for and foster the development of student engagement skills in learning. Content for LCT should focus on developing effective learning environments and experiences that incorporate engaging, interactive, and collaborative learning activities and tasks. It promotes student-centered learning that aligns assessment with the process of developing self-directed learning. Proper technology use can enhance student engagement at school and home through effective organizational and content tools, as well as enhance motivation and increase opportunities for personalizing learning. As students engage with rich learning experiences, a great number of teaching-focused beliefs may change gradually. In order to build a learner-centered environment, teachers will need to change their own beliefs about the teaching and learning process and be able to question their own practice, attitude, and philosophies of teaching. Using technology as a pedagogical tool could be an important aspect to enhance student engagement both in and outside of class. 21st century skills emphasize that students integrate knowledge, skills, and attitudes through formative learning experiences, or learning-in-the-making. It is essential that teachers instill and promote effective communication, creativity, and collaboration skills in their learners for overall successful lifelong learning. An interactive online platform provides simultaneous, collaborative, and content-focused activities among groups of students that facilitate the practice of these critical skills. Besides, being able to set short- or long-term goals is important for self-directed learning. Higher level guiding instructor questions should prompt students to reflect about personal learning goals, monitor learning processes, and realize learning outcomes achieved by self-supervised study.

10.2. Understanding Student Needs

Teaching and learning practices in 21st century education face more complexities than ever. In order to master critical learning outcomes of creativity, collaboration, and communication through information and communication technologies (ICTs), K-21 educators are pushing themselves in thus far untested directions. These traditional and new practices create instructional change over. The most current infusion of new tools, practices, and philosophies that make up this change is the pedagogical turn. The goal of this transformation is to personalize classroom life to meet the needs of all learners, prepare students for success while knowing that education systems are often out of alignment with learning, and incorporate a more holistic, interdisciplinary way of teaching and learning [6]. This pedagogical shift leads to a re-envisioning of teaching and learning that asks educators to meet the needs of students wherever they may be through the provision of diverse, rich experiences. Learning is no longer something that only occurs in a school, in a classroom, or at a specific time, rather in the 21st century education, it can happen anywhere, anytime,

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and through a variety of formats. This new diffuse view of learning as something that is ongoing, organic, informal, social, evolving, and participatory is echoed in how the outcomes of learning in the 21st century education are re-envisioned [8].

Methods of assessment are similar to those of learning, ideas about the ways to measure what has been learned are being uprooted to better serve students. A personalized, learner-centered view of assessment seeks to support robust learning and provide opportunities for timely/individualized feedback. Considerations for instructional use of technology expand beyond simple logistics and include issues of transformational use for the purposes of assessment or as a measure for growth. Reinvention of the role of the educator is therefore vital–as assessments are learning opportunities themselves, the educator must either change his or her level of presence or change the learning experience. In the 21st century education, learning should be indicative of growth, rather than an end result. In this context, teacher feedback is no longer fed to students on an empty plate, but is collectively considered and acted on. The notion of 'assessment as learning' becomes central, where learners become actively aware of their understanding and use appropriate tools to make adjustments in future learning. This role entails curating learning resources, scouting out great projects, guiding students, and providing limitless channels for teaching and learning. Consequently teacher/learner roles shift dramatically as learners are asked and expected to take more responsibility for their learning.

10.3. Techniques to Enhance Engagement

Technology offers a plethora of interactive tools to grow engagement in the classroom. In a culture of trial-and-error, educators may sometimes place a tool before learning goals, or use an excellent tool ineffectively. It is important to use a variety of active tools to drive engagement, e.g., Classroom Performance System (clickers), PollEverywhere online polling, Wordle (word clouds) or stickers for interactive contribution to brainstorming, GoogleDocs for instant group collaboration on a document, or Storify for posting links, videos, or text in real-time to centralize social media conversations. A well-ordered presentation composed of multiple types of interactive methods will be more effective than a single gimmick, or slide with an overwhelming image, logo, or color. Trainees budget for technology vying for attention, or have spent too much mental energy getting or keeping the tools running, losing sight of the learning goals [9]. Both students and faculty report dissatisfaction with the effectiveness of technology since it is commonly used ineffectively—well-pitched but poorly executed webinars, poorly designed and presented Web sites, and poor electronic communication replete with emoticons or shorthand.

To effectively use technology, teaching staff should receive appropriate training in those technologies prior to classroom use. A knowledgeable teammate can ensure that software installations are complete and file formats compatible. Investing in travel across

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campuses is worthwhile if timely trips offer alternatives otherwise impossible, to see questioning, interactions, or gallery walks take place. Teaching staff should feel comfortable with the technology and the topic they present, matching content with style. Extensive evaluations, multiple processes, enormous amounts of time, and significant funding went fruitlessly to ending a poor experiential education class. It is impossible to interactively teach if there is no time for interaction--a fact acknowledged with a apology, excuse, and promise to overhaul the class but hoping to avoid questioning from the audience [10].

There is much research supporting the view that technology can keep instruction fresh, motivate students to participate, and cater to a diversity of learning styles. In short, technology must be utilized relevantly, and thoughtfully, to enhance learning for all learners rather than an optional gimmick for those engaged. It embraces a wider range of participant responses; truthfully, polling allowed more to contribute and gave everyone an opportunity to participate in anonymity. Students may fear asking a question in class due to being ridiculed or ignored; technology enables them to ask others. Over 85% of students indicated that classes using technology were superior, learning much more, and appreciated clever slides. The respect should grow and be reciprocated, attempted with quiz statements about reviewers' ineptitude or why they might not pick the "right" answer.

11. Inclusive Education

In the previous section, it was suggested coordination among the construction of knowledge on the Internet, Internet-based discussions, and pre-service education in South Korea in order to deepen understanding of educational inequities. Also, the extreme outcome of Internet-based LCT is to change the education system entirely, reducing the disparity of educational culture, resources, and evaluation procedure. Inclusiveness of LCT in a diverse society means different kinds of students' voices are described in a lesson to maximize learning power rather than focusing on the dominant student. All the students are encouraged to tell their background knowledge, personal experience, and understanding of the topic more, because digital pedagogy frees the student from the physical limitation of school building and classroom. If the inculcation education changed to lecture hall or discussion forum since it is easier to record and analyse the lecture, the inclusive in education means it is necessary to follow the dominant voice since the quantitative analysis is more accurate and students' emotions hinder fair evaluation [11].

By widely speaking, Inclusiveness of LCT in a diverse society means different kinds of students' voices are described in a lesson to maximize learning power rather than focusing on the dominant issued. Religious, cultural and socio-economic backgrounds of learners must be considered while preparing the lesson. In a lesson of singing a song in a foreign language class, students come together to listen to the teacher's musical talent. Most of them, however, feel embarrassed for their lack of dexterity from personal reasons like

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controlling muscle, ingesting narcotic, religious prohibition, and having no way to appreciate songs, so that they have passive listening to the teacher's singing and silence in class. If there was a better clink or painful dot with others who have a similar feeling in the same community, this disharmony would have a chance of being synthesized [12]. In this stage, LCT changes to Digital Pedagogy, through which, feeling no embarrassment in sharing video clips in daily life, students are coming to sing all together with their favourite songs.

11.1. Diversity in the Classroom

A heterogeneous population of students is a characteristic of the modern classroom. In today's society, diversity is multi-faceted and complex, involving several aspects that can impact how one interacts with others. Global interconnectedness has increased communication, cultural exchange, and economic exchange [13]. Thus, individuals now find themselves intertwined within a variety of cultural networks. No longer does someone simply belong to one fixed cultural group; social identity is malleable and adapted to different cultural scenarios. Understanding diversity and the differences associated with it has become a fundamental life skill and necessary task.

Since modern classrooms comprise students from multiple and varied backgrounds, such diversity gives rise to the likelihood of different perceptions of culture, and the unavoidable presence of misunderstandings and conflicts. Additionally, the framing and understanding of what is diverse are subjective in themselves: cultures and ideologies may diverge on issues they consider to be values of importance. Accordingly, students' role construction may differ and result in interaction styles that contrast with expectations formed at face value. Within a traditional view of education, such differences may be framed as a learning disorder, regarded as forms of disrespect, or dismissed as misbehavior. An alternative view would regard diversity as a discovery and opportunity for further understanding, consider students as equal and legitimate participants in the classroom who nevertheless need some guidance, and frame unexpected interactive styles as opportunities for reflection and negotiation rather than as disruptive behavior.

As teachers in today's classrooms, it is necessary to consider the heterogeneous drawings that make up the classroom and to locate their understanding of and appearance in the course of interactions whereby construction of identities is accounted for. It is important to build an environment conducive to every student's expectation, so that everyone may feel secure in their social position and fulfill their potential. Accepting multiculturalism starts with plain acceptance of everyone and everything in their own right. The course of events may include plenty of unauthorized improvisations, but they will all necessarily contribute to the construction of new meanings. Thus, support is needed to assist teachers in their quest to understand students differently, in order to avoid the framing of

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expectations that either vilify or idolize the narratives of migrants, people of varied color, religion, and orientation, and/or out-of-class interest.

11.2. Adapting Learning Environments

Recent times have seen remarkable developments in educational technology, which affect the direction, design, and delivery of education. Technology innovation paves the way for creative and smart learning scenarios, offering opportunities for students to take an active role in their learning actively. Identifying the areas where academic innovation is needed and where endeavors provide successful results requires research. There is a need for effective educational approaches since the rapid utilization of technologies, social networks, cloud computing, ubiquitous learning environments, augmented and virtual utilization, and collaborative design environments by the faculty and students in teaching and learning needs to be incorporated with pedagogy. Utilizing innovative pedagogies and learning environments is a critical topic in higher education to improve engagement and success [14]. Redesigning learning environments is one of the key recurrent topics. Creating a knowledge-based society requires the redesign of education in classrooms, curricula and educator training. The transformation of classrooms and curricula has clear technological and educational implications.

In a knowledge society where knowledge is rapidly generated, transferred, and stored in human connections, education cannot retain its traditional role as the most powerful organizer of knowledge. It cannot set strict objectives for learning content explicitly or implicitly: what is good knowledge for my students today will probably be different tomorrow. The content of schooling will have to be increasingly learner-centered. The radical redefinition of the value of knowledge calls for a rethinking of pedagogy. The student–teacher relationship is more and more disrupted as more and more educational knowledge is digitized; students' first educators are more likely to be other students than teachers; and students learn in various ways – via trial and error, cognitive apprenticeship and explorative learning – that cannot be easily managed in standard school formats. The socio-technical revolution is also affecting the design and roles of learning environments, including classroom, school, and community learning settings. On the one hand, learning environments are shifting from being venues and tools for learning to being venues and tools for creating social and individual learning (and its outcomes). On the other hand, built pedagogical models and their mediating technologies are shifting from cultures of instruction and elaboration to cultures of interaction, negotiation and effective participation [8].

12. Conclusion

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This article discussed the paradigm shifts of learning and pedagogy in the 21st century. The advent and development of digital technology have transformed the process of education into a digital age by spurring drastic changes in learners' learning behavior and teachers' teaching strategies via various digital platforms. Some key characteristics of the new learning behavior associated with digital technology particularly the Web 2.0, such as cost-free access, personalized learning, peer learning, and collaborative knowledge building, were delineated. Furthermore, the fundamental re-engineering of the characteristics of pedagogy in terms of learner-centeredness, authenticity, and continuity were outlined. The implications of digital technology on learner-centered pedagogy were thoroughly reviewed with a rich body of up-to-date research findings. In terms of future research directions, it was suggested to examine how future educators' digital literacy skills could be developed with technology effectively integrated into teacher training programs.

Digital technology has made a huge difference in several aspects of education in a tectonic manner. The arrival of the digital age has changed the life and social background of this generation significantly. Growing up with digital technology, millennial learners have become digital natives or Zoomers compared with their teachers, the Digital Immigrants. They use different learning habits, but they still have the same need of knowing. Due to the ever-increasing influence of digital technologies, traditional boundaries are broken between all kinds of learning, and as a result, learning is allowed anywhere, anytime, by anyone on anything. Education is thus said to not be the privilege of the privileged anymore [1]. Attention to the implications of digital technologies for pedagogy has been a significant part of educational research in recent years. Various shifts of pedagogy accompanying/integrating with such a disruptive change have been thoroughly analyzed from multiple perspectives. Intensive research work has been carried out on the nature and key characteristics of learner-centered pedagogy in the digital age. Overall, it can be concluded that these are paradigm shifts of pedagogy from teacher-centered, exam-oriented education to learner-centered, authentic learning which is what the learner wants and needs [2].

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