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Research Article

In-Depth Exploration of The Constraints Connected to Diverse Curriculum Designs on A Global Scale: A Literature Review

Md Mirajur Rhaman Shaoan[1,2], Phan Thi Anh[2], Miracle Uzochukwu Okafor[2], Ayu Novianti Lahinta[3], Punsadini Upamalika Nanayakkara[2]

[1]Faculty of Education, University of Warsaw, Warsaw, 02678, Poland, Southwest University, Chongqing, 40718, China
[2]Faculty of Education, Southwest University, Chongqing, 40718, China
[3]Centers for Studies of Education and Psychology of Ethnic Minorities, Southwest University, Chongqing, 40718, China

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**Corresponding author:*
E-mail:
m.shaoan@uw.edu.pl

ABSTRACT

This literature review thoroughly examines the challenges associated with diverse curriculum designs across various educational contexts worldwide. The study identifies key constraints and elaborates on how design-based curricula effectively implement diverse educational approaches. The global challenges of diverse curriculum designs arise from sociocultural disparities, fragmented policies, and unequal distribution of resources. Research indicates that rigid national standards often conflict with local educational needs, limiting inclusivity and adaptability. Additionally, the review explores how these challenges impact educational outcomes and curricula, highlighting those global benchmarks may marginalize indigenous knowledge systems and overlook the unique needs of refugee students. The findings emphasize the necessity for adaptive strategies and context-sensitive approaches to address these challenges and promote inclusive educational practices. Curriculum design should balance global competencies with local relevance. This review contributes to the broader discussion on global education reform by providing insights for policymakers, educators, and researchers who aim to enhance curricular diversity and tackle the barriers that hinder effective integration. Addressing these challenges is essential for fostering equitable education, promoting cultural preservation, and preparing students for an interconnected world.

Keywords: *Subject-centered designs, Learner-centered designs, Problem-centered designs, Technological designs, Cultural and Contextual designs*

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Introduction

The development of diverse curriculum designs is essential for shaping education systems worldwide. However, this process is often challenged by constraints that affect its effectiveness and inclusivity (Zguir et al., 2021). In educational institutions, the design of the curriculum is a significant factor since it defines how knowledge is transmitted and the structure of the learning process. Education must consider sociocultural contexts, economic disparities, and technological advancements in our increasingly globalized world while aligning with global standards and local priorities (Abulibdeh et al., 2024). The curriculum designs that are accessible to meet a variety of educational philosophies and objectives often feature an underlying rigidity, even though various curriculum designs are available (Walker & Soltis, 2004). The inflexibilities might hamper the ability of academic institutions to adapt to shifting societal expectations, advances in technology, and the diverse requirements of students (Kazis et al., 2007). Unfortunately, the goal of creating a balanced and inclusive curriculum is frequently obstructed by systemic barriers, which lead to gaps in access, equity, and quality of education (Arkorful et al., 2020). This study investigates the connection and interaction between curricular frameworks and the measures that schools must take to adapt to the requirements and preferences of students, nations, and other essential entities within a society. Furthermore, among the enormous variety of arguments now taking place, numerous definitions of curriculum directly oppose one another. Before discussing the dispute around curriculum designs, it is essential to investigate several definitions of curriculum that academics have presented. Based on the findings of Allan and Francis (2013), there are five basic ways to describe curriculum. In the first definition, it is defined as a strategic plan for attaining goals, consistent with the concept that Tyler and Taba presented earlier. This literature review examines the complex constraints associated with diverse curriculum designs and emphasizes the need for a comprehensive approach to address these challenges. In addition, the curriculum would be categorized in a detailed manner, characterizing it as encompassing the many contacts and exchanges that students undertake. One significant challenge in curriculum design is the conflict between global standards and local relevance. For example, emphasizing standardized testing, such as the Programme for International Student Assessment (PISA), motivates education systems worldwide to align with international benchmarks (Ding & Tasara, 2024). This example highlights the fact that the entire curriculum is influenced by activities planned to take place within schools and those that take place outside of schools. However, It is because students progress under the direction of their teachers. As an additional point of interest, they classified it as a framework for connecting with persons in which the individuals are not required to fulfill any criteria. The fourth definition contains a broader variety of ideas than the ones that came before it. While these standards promote comparability across countries, they often neglect local cultural, linguistic, and historical contexts. A notable case is the marginalization of Indigenous knowledge in Australia's national curriculum, where perspectives from Aboriginal and Torres Strait Islander communities are only superficially integrated despite their profound cultural significance. Such oversights undermine the inclusivity and authenticity of education, causing it to resonate less with local communities. It comprises several domains, such as a particular subject area, a body of knowledge, a theoretical framework, and fundamental principles. In the end, they propose that it might be defined based on the subject matter, which includes subjects like English, mathematics, and physics, or the content, which refers to how individuals should gain information by acquiring knowledge by studying (Deng & Luke, 2008).

A thorough definition of the curriculum needs to be improved, as was said before; this lack of a definition has led to further arguments over the designs of the curriculum and which design is most appropriate for implementation in educational systems (Rogan & Grayson, 2003). Although there may not be a single, comprehensive definition of curriculum, the process of defining it before its implementation

has been efficiently distilled down into three essential areas, which are as follows: Individually, subject-centered, learner-centered, and problem-centered instructional designs are the three primary kinds of instructional designs that are used (Allan & Francis, 2013). As stated by Şahin (2020), the term "curriculum design" has been defined as determining the many components of a curriculum. Economic disparities significantly worsen the challenges associated with designing diverse curricula. Low-income countries face significant constraints due to limited financial resources, particularly in sub-Saharan Africa and South Asia (Hassan, Groot, & Volante, 2022). According to Nunan (2024), approximately 244 million children and adolescents worldwide are out of school, many of whom live in areas where the curricula are outdated or do not address current societal needs. For instance, in rural Bangladesh, some curricula often lack practical, skill-based components that align with local labour markets, making education less effective in promoting economic mobility (Shaoan et al., 2024). These designs include conventional, competency-based, integrated, and interdisciplinary curricula schools often lack the necessary infrastructure and trained educators to deliver a comprehensive curriculum, further deepening the educational divide (Shaoan et al., 2023). Technological advancements and digital divides also influence curriculum effectiveness on a global scale. While technology integration is increasingly recognized as a transformative tool in education, access remains unequal. During the COVID-19 pandemic, the shift to online learning revealed glaring disparities (Ndzinisa & Dlamini, 2022). In countries like Kenya, only 22% of households had internet access (World Bank, 2019), leaving millions unable to participate in digital classrooms. The lack of technological infrastructure undermines efforts to modernize curricula and integrate 21st-century skills, perpetuating educational inequities (Nwigwe et al., 2024). The consequences of inaction are far-reaching, limiting educational equity and undermining efforts to foster global competencies. To identify areas that might benefit from change and propose solutions to increase the flexibility and effectiveness of educational systems, this study aims to identify and evaluate the limits and obstacles present in these frameworks.

Literature Review

The field of curriculum design has received considerable interest in educational research due to its crucial influence on educational results. The inherent inflexibilities in different curriculum designs have been a central focus of academic criticism, emphasizing educators' difficulties adjusting curricula to accommodate differing learning requirements and settings (Romiszowski, 2016). This literature review examines the complex nature of these inflexibilities, using a wide range of scholarly research from various educational paradigms and geographical locations. A significant area of study is the inflexibility of standardized curricula, which often give more importance to consistency and quantifiable results than personalized learning experiences (Darling-Hammond, 2006).

According to scholars, inflexibilities may hinder Creativity and critical thinking since they limit instructors' ability to customize education to meet the specific requirements of their pupils (Cullen et al., 2012). The prevalence of high-stakes testing intensifies this problem, strengthening a limited emphasis on measurable accomplishments while neglecting comprehensive educational growth (Santori, 2024). On the other hand, alternative curriculum designs, influenced by constructivist and progressive education ideas, support more adaptable and student-focused methods (Dewey, 2008; Vygotsky & Cole, 1978). These models highlight the significance of adjusting teaching approaches and subject matter to suit learners' changing interests and skills. Nevertheless, implementing an adaptable curriculum faces obstacles in educational institutions due to structural and cultural constraints. These limitations stem from the traditional focus on standardized evaluation and institutional conformity (Hargreaves, 2003). The examination encompasses worldwide situations where local educational regulations and socio-cultural aspects impact the modification of curriculum designs. In the Asia-Pacific area, the popularity of shadow education, which refers to private ex-

tra tutoring, results from the perceived shortcomings of traditional curriculum (Bray, 2009). This situation highlights the conflict between an inflexible official curriculum and the need for individualized and competitive educational experiences (Zhang & Bray, 2020).

Representative Curriculum Designs

Representative curriculum designs are comprehensive educational frameworks that act as templates for creating and executing curricula in various educational environments (Grant, 2018). Curriculum designs vary across the globe and are influenced by unique constraints that impact their effectiveness. These designs encompass essential ideas, procedures, and content arrangements required to attain specific academic objectives. The notion of representative curriculum designs is founded on the necessity of offering standardized yet flexible principles that might be customized to various educational environments (Kim et al., 2022). A notable example is Finland's flexible and student-cantered curriculum, which focuses on individualized learning, collaboration, and critical thinking. Curriculum design plays a critical role in shaping educational experiences and outcomes. This approach is grounded in constructivist principles, allowing teachers to tailor content to students' interests and needs, thus promoting a more holistic educational experience Shaoan & Namanyane, 2022). However, this progressive model faces challenges in balancing standardization with flexibility, particularly in upholding national educational benchmarks. By providing structured yet adaptable frameworks, these designs allow educators to create coherent and effective curriculum plans that meet the diverse needs of learners. On the other hand, a national college entrance examination in China's gaokao system drives curriculum design toward rote memorization and test preparation, hindering creativity and critical thinking (Song, 2023). Additionally, curriculum designs align educational objectives with instructional strategies and assessment methods, ensuring a comprehensive and integrated approach to teaching and learning.

The subject-centred designs

The term "subject-centered designs" refers to the structuring of educational activities in which the expert focuses on the essential concepts and facts linked to each subject area by using techniques, tools, and resources that are relevant to the subject area (Burton, 2010, as cited in Sahin, 2020). Subject-centered curriculum design, characterized by organizing information around specific courses or disciplines, is a conventional and extensively employed technique. It focuses on achieving expertise and utilizing structured, sequential content. However, this design has many limitations. Subject-centered designs can cause knowledge fragmentation. This method often overlooks the interdisciplinary linkages that enhance learning and offer a comprehensive comprehension of complex subjects by concentrating exclusively on particular courses (Drake & Burns, 2004).

Additionally, curricula focused on specific subjects can become rigid and inflexible, making it challenging to accommodate students' different needs and interests (Eisner, 1994). Moreover, focusing on standardized testing and evaluation in subject-centered systems can stress instructors and students, resulting in a teaching mindset focused on meeting test requirements (Au, 2007). The excessive emphasis on high-stakes testing can hinder the cultivation of Creativity, critical thinking, and the acquisition of broader skills. The primary focus of subject-centered designs is to prioritize the information and content considered necessary for learning within the context of the educational program. According to Sahin (2020), the information structure is governed by the resources accessible for learning or education. Textbooks and subject matter specialists who have received education in a particular subject area are other factors that influence this design form (Brown & Green, 2019). A higher degree of separation between the many fields of study has resulted from establishing subject specialization in educational institutions. Those supporting this strategy say that, On the other hand, it is possible to conclude that students in this particular scenario must comply with the content and growth of knowledge in the specific area of study the teachers offer. Criticism

has been leveled against this design due to the stereotyped nature of its style. The educational system prevents students from expressing their Creativity, instead encouraging them to concentrate on the material mandated in textbooks (Hadar & Tirosh, 2019).

Furthermore, this overall design might be further subdivided into various specialties. Students are expected to have a profound comprehension of the subject matter and the ability to continue their study in that area if they can become adept in the techniques of inquiry used in these fields of study. According to Allan and Francis (2013), the main objective of the broad-field technique is to offer students a holistic grasp of all subject areas covered in the curriculum by including logically related material. The field of language arts comprises a variety of subfields, including but not limited to syntax, reading, speaking, writing, literature, and foreign languages. This feature is designed to provide a systematic approach while optimizing time management in school schedules. It is constructed efficiently. On the other hand, because it covers a wide range of subjects, it is susceptible to criticism because it needs to possess complete expertise in the numerous fields it discusses.

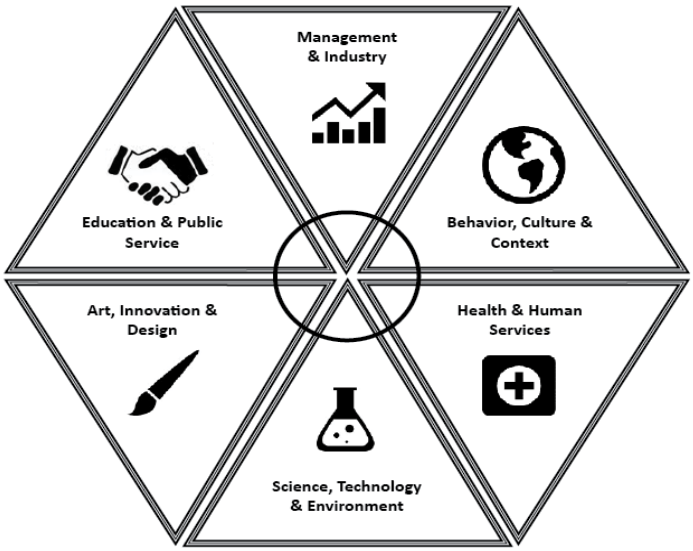

Figure 1 Broad Field Design Curriculum Adapted from Ohio State University Website

Designs that are considered to be the pinnacle of this field include correlation and process design. The process design, the last design in this category, focuses on adopting procedures and methods to guarantee that learners have simple access to knowledge. On the other hand, the correlation design tries to avoid fragmentation by integrating topics as necessary. As stated by Allan and Francis (2013), the primary focus of this endeavor is on the education and development of intellectual ability and character.

Learner-centered designs

Learner-centered curriculum designs prioritize the individual needs of students, fostering critical thinking, creativity, and active engagement. These designs are based on constructivist theories by Dewey (2008) and Vygotsky and Cole (1978), allowing them to adapt to students' interests and abilities. However, critics argue that learner-centered approaches may lack standardization, complicating assessments and comparisons between schools or regions. Implementation challenges often arise from limited teacher training and resistance to change within traditional educational systems (Hargreaves, 2003). The learner-centered curriculum design prioritizes students' needs, interests, and experiences to promote personalized learning and student autonomy. While this approach offers several benefits, it also has significant limitations. One area for improvement is the challenge of addressing diverse learning needs within a single

classroom. Tailoring education to accommodate individual students' unique preferences, abilities, and learning styles requires substantial time, resources, and teacher expertise (Tomlinson, 2001). Additionally, learner-centered designs may need more structure and strictness, which raises concerns about maintaining rigorous academic standards (Meyer, 2009). Another limitation is the potential for unfairness. Learner-centered techniques often rely on students' self-direction and internal motivation, which can disadvantage individuals who require more guidance and support (Darling-Hammond, 2006). Ensuring equitable access to high-quality, learner-focused education for all students remains a significant challenge. According to Allan and Francis (2013), learner-centered designs are often used in lower levels of education, such as pre-primary education courses. Schools can integrate blended models that combine learner-centered methods with standardized frameworks to address these challenges (Anazia & Nwozor, 2023). These designs emphasize the perspectives of learners throughout their whole developmental journey. The first design that falls under this category is centered on the kid. Children should be actively engaged in their learning environments, and their education should be closely linked to their daily lives, interests, and individual needs, according to Allan and Francis (2013). Child-centered or student-centered designs promote the idea that children should actively engage in their learning environments.

On the other hand, these designs suggest that learners' needs and interests should include educationally orientated-values. In addition to supporting this design, Pastalozzi and Froebel contend that children should gain information via practical experience and that the learning process should not be artificial or disconnected from real-life settings, such as the classroom (Lange, 2018). They believe that children should learn by experience. Within the framework of the learner-centered approach, the experience-centered design constitutes the second design. This design acknowledges that students' interests are an essential component in the curriculum development process. However, many believe this curriculum can only be developed if students actively engage in the learning process and their academic interests are determined (Schunk & DiBenedetto, 2016). For example, Finland's educational system balances national curriculum goals with teacher autonomy, enabling adaptations to local contexts.

Furthermore, opponents believe this design has a constraint since it is challenging to construct a curriculum that can completely accommodate and cover all students' interests. With the radical design, the goal is to train students to accept the conditions allocated to them. For example, students from disadvantaged homes or cultures are expected to receive their circumstances and adjust to them. In contrast, students from wealthy communities are subtly influenced to feel that their education is of more value in comparison to that of students from less fortunate societies (Allan & Francis, 2013).

The development of skills in students that allow them to critically evaluate, analyze, and reflect upon knowledge is something that radical curricularists argue in contrast to the traditional approach of just ingesting material. According to Allan and Francis (2013), the curriculum implemented under this design is comparable to and addresses social and economic inequality and injustice issues. As a result, the instructors on this design are extremely politically active. Humanistic designs came into being as a reaction to the behavioristic approach to school curriculum development and design, which has received widespread criticism (Chen & Schmidtke, 2017). This approach focuses on the fact that the environment and how it affects human conduct are the only factors that may influence learning. Educators who adhere to the humanistic approach recognize the complex relationship between human development's cognitive, emotional, and psychomotor aspects(Chen & Schmidtke, 2017). As a result, they believe that the curriculum must include the learners' feelings, desires, and pleasures (Allan & Francis, 2013). Additionally, this kind of curriculum design focuses on the relationship between the theoretical principles and the actual application of the information taught within the community (Allan & Francis, 2013).

Problem-centred designs

Problem-centered curriculum design is an educational approach that focuses on real-world problems and interdisciplinary topics to help students develop critical thinking and problem-solving skills (Cook et al., 2017). While this approach has its advantages, it also has limitations. One challenge is the complexity of planning and implementing problem-centered courses, which requires careful preparation and collaboration among educators. Additionally, problem-centered techniques often require significant time and resources, which can be a hurdle in implementation. Another area for improvement is the assessment of student understanding in problem-centered designs. Traditional evaluation methods, such as standardized tests, may only partially measure students' problem-solving and critical-thinking skills. Developing reliable and accurate evaluation tools aligned with the goals of a problem-centered curriculum remains a persistent challenge. The problem-centered design emphasizes solving individual and society's problems (Kim, 2017). Education goes beyond the confines of particular disciplines and incorporates several aspects of the curriculum that would typically be kept separate in a curriculum primarily concerned with problem-solving (Williams, 2018). The goal is to cultivate people capable of working effectively with others, have a wide variety of skills and knowledge, can manage their learning, and are motivated to take responsibility for their education (Savery, 2006). Constructivism is a theory that proposes that knowledge is formed by the active engagement of students in the learning process. The philosophical roots of a problem-centered curriculum may be traced back to constructivism. According to Hmelo-Silver (2004), a problem-centered curriculum involves students in real-world challenges and requires them to address and find solutions to them actively. A "learner-centered approach" is used by issue-centered curricular techniques. This approach allows students to research, integrate theory and practice, and use their knowledge and talents to produce a practical solution to a specific problem (Savery, 2006, p.12). Following Allan and Francis (2013), problem-centered curriculum designs are distinguished by their concentration on social issues and their intention to maintain cultural traditions while simultaneously addressing the community's and society's unfulfilled requirements. Problem-centered and learner-centered designs differ because the former are created before the student's arrival. At the same time, the latter is related to the insights acquired from monitoring students' learning experiences. Problem-centered designs involve individuals in a social environment. The content, or what is learned, and the technique, or how it is discovered, are included in this instructional strategy (the curriculum). A problem-centered curriculum places a primary focus on the development of transferable skills and abilities, such as the ability to work together as a team, the ability to solve problems, higher-order thinking skills, and the ability to study on one's initiative, even though the acquisition of content is also a significant subject.

1. How can schools facilitate the development of students' problem-solving skills by designing experiences that are authentic, meaningful, and genuinely influence the broader society rather than fabricating or contriving situations that simulate reality?
2. How can schools guarantee that challenges are designed with a flexible framework and encourage open-ended inquiry, allowing for several possible solutions?
3. What is the approach to managing students' work on transdisciplinary problem-based projects?
4. How will the assessment be implemented in a problem-based curriculum? Will students be required to submit portfolios instead of taking examinations?

Problem-centered curriculum designs focus on real-world challenges, fostering critical thinking and problem-solving skills. Grounded in constructivist and experiential learning theories, these designs encourage learners to apply their knowledge to practical situations, making education more relevant and impactful (Hoidn & Reusser, 2020). It is hoped that this strategy will result in more profound and essential learning results and greater motivation and participation since it will enable students to discover practical applications of the

knowledge they have acquired (Teräs, 2016). Because it allows students to evaluate many points of view and participate in critical analysis, problem-centered design is beneficial to developing critical thinking because it encourages learning. The participants have been given the demanding duty of challenging their preconceived notions, conducting in-depth data analyses, and thoughtfully contemplating alternate courses of action (Kambouri, 2016). The ability to think critically is essential for determining the fundamental causes of problems, assessing the potential solutions to those problems, and making well-informed decisions. A notable example of this approach is problem-based learning (PBL), which has been widely adopted in medical education. These examples highlight the potential of problem-centered designs to create meaningful learning experiences and effectively address educational challenges through practical, context-specific implementations (Shaoan, 2021). Enhancing problem-solving skills is the primary objective of problem-centered design, which generally strives to improve problem-solving capabilities. Students can put their theoretical understanding into practice, develop their creative abilities, and provide solutions to complex problems (Henriksen et al., (2017). They develop ideas and determine the achievable difficulties, gather relevant data, develop concepts, and assess their solutions' success. Having the capacity to solve issues is not only very useful in a variety of professions, but it is also necessary for obtaining success in real-world scenarios.

Facilitating interdisciplinary approaches

The problem-centered design encourages interdisciplinary approaches by including various topic areas or disciplines within the educational program. The situations that occur in real life are often complicated and need the knowledge and perspectives of people from different professions. By incorporating interdisciplinary components, students can understand the issue and effectively use information from various academic subjects to develop original solutions (Warr & West, 2020). Implementing this technique encourages the development of flexible skills that may be used in multiple contexts. Problem-centered design enables students to work together to assess challenges, share ideas, and develop solutions. This kind of design also encourages students to communicate with one another (Hmelo-Silver CE, 2004). By teaching students how to effectively express themselves, actively listen to others, negotiate, and work together towards a shared goal, collaboration allows them to enhance their communication and cooperation skills. The act of working together in groups to solve challenging obstacles is what we mean when we talk about collaboration.

As a result of the many causes, goals, and beliefs founded on the objectives sought by the government, society, and the people, the formation of curriculum in various contexts is impacted by multiple factors. Stakeholders can modify or reject curriculum designs based on their visions since curriculum designs operate as frameworks. According to Eryaman (2010) and Ünsal and Korkmaz (2017), the design of the curriculum is an essential component in elucidating the underlying framework of the curriculum. The curriculum designers must ensure that the curriculum they develop suits the needs of people, society, and the subject matter. According to Eryaman (2010), the educational philosophy and policy currently in place in the country should be considered while selecting a curriculum design. Instructional plans play a significant part in the formation of a nation's identity and in the advancement of that nation's growth.

As a consequence of this, the majority of governments develop required curriculum standards, which often correspond with a subject-centered approach to the creation of curriculum. These rules require students to acquire specific topics at specified grade levels. The discussion sheds light on the difficulty of determining which curriculum design is preferable to other options (Henriksen et al., (2017). Therefore, every student or parent needs to review the curriculum design used at the schools they are interested in attending and examine the benefits and drawbacks associated with this design.

The conceptualization of educational programs plays a significant part in forming a na-

tion's identity and advancing that nation. Consequently, most governments adopt mandatory curriculum standards that specify the topics and grade levels students must master. These standards often emphasize the substance of the courses that students must learn. In light of the reasoning, it is clear that finding the most suitable curriculum design is a complicated procedure. Because of this, every student or parent needs to evaluate the curriculum design used at the schools they are considering attending and its benefits and drawbacks. In project-based learning, students must complete a substantial project to develop their understanding of a complex topic or issue (Teräs, 2016). To foster the development of critical thinking and problem-solving abilities, problem-based learning entails providing students with real-world difficulties they must solve. Through these tactics, students can take charge of their education, grow their creative potential, and develop skills beyond simple memorization.

Integrated Curriculum Design

Integrated curriculum designs emphasize the importance of interdisciplinary connections, fostering holistic learning and real-world applicability. When designing a curriculum, it is essential to consider integrated curriculum design, which involves subject-centered, learner-centered, and problem-centered approaches. By merging subjects, students develop a broader understanding of complex issues, which promotes critical thinking and creativity (Olowe, 2024). However, balancing this interdisciplinary integration with the depth needed for subject mastery is a The main aim of this method is to create connections across different fields of study and promote holistic learning. However, there are certain limitations associated with this approach (Prince & Felder, 2006). One challenge is the difficulty of successfully integrating various disciplines of study. Schools can adopt a thematic approach to address this challenge, where subjects are integrated around central themes while maintaining their disciplinary depth (NRC, 2014). significant challenge. Effective interdisciplinary education requires collaboration among educators from different academic fields, which can be hindered by the need to coordinate with other departments and the existence of isolated departments (Jacobs & Frickel, 2009).

Establishing clear learning objectives for each subject that aligns with interdisciplinary goals can guide curriculum development. Additionally, providing professional development for teachers on collaborative planning and assessment methods is essential. This approach ensures that students gain a deep understanding of individual subjects and a connected perspective in their education. However, implementing an integrated curriculum can be challenging due to the constraints of traditional school schedules and processes (Musengamana et al., 2024). Another potential issue is the risk of offering a superficial presentation of the subject matter. Since an integrated curriculum aims to cover a wide range of subject areas, it may lead to a less thorough understanding of specific topics (Beane, 1997). Balancing the need for interdisciplinary connections with in-depth research on particular topics poses a significant challenge.

Technological Constraints

The use of technology in curriculum design has both advantages and limitations. According to Roberts-Mahoney et al. (2016), technology can improve learning by providing access to a wide range of resources, fostering collaboration, and enabling personalized instruction. However, integrating technology into curriculum development may be limited by technical barriers like insufficient infrastructure, limited access to devices, and inadequate educator training (Dinc, 2019). Another challenge in creating an educational curriculum is keeping up with the rapid pace of technological advancements. As Koehler and Mishra (2016) highlighted, updating the curriculum to incorporate the latest technological innovations and ensuring that teachers are proficient in using new tools and resources requires continual investment and professional development.

Cultural and Contextual Constraints

Cultural and contextual factors pose significant barriers to effective curriculum design, as

socio-political and economic realities shape educational priorities. Cultural and contextual variables significantly impact the design of educational curricula. Cultural differences can affect the acceptance and implementation of various teaching methods (Gay, 2002). These differences may include variations in values and attitudes towards education. For example, educational systems prioritizing teacher authority and rote learning may need to be better suited for learner-centered and problem-centered designs. Economic disparities further exacerbate these issues. In sub-Saharan Africa, resource shortages hinder curriculum implementation, with many schools lacking the infrastructure for integrating technology into modern education (Shaoan, 2021). Contextual constraints, such as economic circumstances, political pressures, and academic regulations, also play a crucial role. Schools in underprivileged communities may require assistance adopting innovative curriculum ideas due to budgetary limitations, inadequate infrastructure, and lack of support (Darling-Hammond, 2010). In many regions, curricula are influenced by dominant cultural narratives that often marginalize minority perspectives. Similarly, the exclusion of Indigenous knowledge in Australia's curriculum highlights the challenges of fostering inclusivity.

Conclusion

The different curriculum designs have limitations that affect the efficiency of educational programs. Subject-centered designs encourage expertise in specific fields but can lead to fragmented knowledge and inflexible frameworks. Learner-centered designs prioritize individualized learning but may need to help to accommodate varied learning requirements and to maintain academic rigor. Problem-centered designs promote critical thinking skills but have complex design, implementation, and evaluation processes. Integrated designs aim to take a comprehensive approach but face challenges in achieving genuine interdisciplinary integration and balancing the depth and breadth of content. Technological progress offers opportunities to improve education but faces obstacles such as inadequate infrastructure and unequal access. The challenges of diverse curriculum designs reveal the complexities of creating equitable and effective education systems worldwide. It is crucial to balance standardization and flexibility so that curricula can meet global standards while addressing local needs (Pak, et al., 2020). Educators must adopt adaptive teaching strategies that cater to varied learning preferences. Professional development programs should equip teachers with the skills to navigate cultural and contextual challenges while promoting creativity and critical thinking. Cultural and contextual considerations, such as socioeconomic conditions, political influences, and educational legislation, make various curriculum designs more complex (Parsons et al., 2018). A comprehensive strategy involving cooperation among educators, governments, and communities is necessary to address these limitations. It is crucial to create adaptable, inclusive, and culturally appropriate curricula that cater to the needs of a wide range of learners (Woodcock et al., (2022). Future studies should focus on developing innovative approaches to overcome these obstacles, drawing from various educational environments. By thoroughly analyzing and resolving the shortcomings of different curriculum designs, the academic community can improve the standard and efficiency of teaching and learning, ultimately promoting broader educational objectives and enhancing student achievements. Investing in educational infrastructure, particularly in low-resource settings, is vital for bridging economic and technological gaps. Furthermore, integrating interdisciplinary approaches like project-based and problem-centered learning can enhance relevance and boost student engagement

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