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The Curriculum Architects: Exploring Individual Contributions to Educational Innovation

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Vilma M. Dela Cruz
Master Teacher II, Mandaue City Comprehensive National High School, Plaridel Street, Mandaue City
vhiemisa@gmail.com | https://orcid.org/0009-0004-2882-6901

Jennelyn Caya
Teacher III, Liloan Central School, Poblacion, Liloan, Cebu

Regina P. Galigao
Cebu Technological University-Main Campus, M.J. Cuenco Avenue, Cebu City

Abstract

Curriculum development is considered a process in which numerous individuals from various institutions and government entities are involved. However, despite the centrality of organizational structures and partnerships in curriculum development processes, the role of individual curriculum architects has not received adequate attention. Hence, this case study explored the experiences of individual curriculum architects, namely educators, policymakers, and reform advocates, focusing on the impact of their contributions to student learning engagement and their strategies for collaboration within institutional and policy frameworks. Findings showed the importance of identifying pragmatic efforts and strong leadership to deduce more progressive curricula, which enhance students' engagement, critical thinking, and flexibility. The study concluded that individual curriculum architects play a pivotal role in shaping and modifying educational curricula, highlighting their influence within the broader collaborative process of institutions and government entities in curriculum development. This paper recommends that institutions support their curriculum architects through enhanced professional development programs and promote cross-stakeholder synergistic partnerships adapted leadership and organizational flexibility in curriculum development.

Keywords: Curriculum architects, educational innovation, individual contributions, curriculum development, reform advocates, personal agency, transformative education

Introduction

It is well understood that the modern age is highly dynamic in terms of technological development and social expectations for development and human growth, thus the necessity for new educational curricula could not be higher. Curriculum improvement is critical to helping students acquire the skills and knowledge needed to be productive in a more complicated world (Benson, 2022). Despite the centrality of organizational structures and partnerships in curriculum development processes, the role of personalities has not received adequate attention. This paper is an attempt to shed light on these small but significant actors – educators, policymakers, and advocates who energize and spearhead curricular reform and transformation.

Current research highlights the significant influence of individual factors, such as beliefs, experiences, and motivations, on curriculum and pedagogy changes, shaping both the design and implementation of educational practices. While the Curriculum Architects framework emphasizes the role of individuals in creating educational narratives that address contemporary challenges, existing studies have largely focused on the outcomes of curriculum reforms rather than the processes that drive them. The interaction between individual agency and structural or institutional factors remains underexplored, leaving a gap in understanding how curriculum architects balance their personal beliefs with broader systemic constraints. This study seeks to address this gap by examining the dynamic interplay between individual and structural influences in curriculum development. It aims to uncover the leadership strategies, contextual dynamics, and techniques employed by curriculum architects to foster innovation, ultimately providing insights into how a more inclusive and progressive curriculum can be designed to meet emerging societal demands.

This study aimed to explore the experiences of individual curriculum architects, namely educators, policymakers, and reform advocates, focusing on the impact of their contributions to student learning and engagement and their strategies for collaboration within institutional and policy frameworks. Through exploring the example of cases of those who have participated in positive curricular changes, the present research intends to find out what strategies and disposals made these curricular architects possible.

Literature Review

The involvement of people in learning changes is an aspect that has received growing concern in the literature. Prior conceptions of curriculum work based on formal and public agendas are supplemented in current research by the focus on personal initiatives contributing to curricular change.

Personal Autonomy in Curriculum Change

Studies show that the role of the practitioner is central to curriculum change. Zhao (2023) defines curriculum architects as people who engage in curriculum work by drawing from the strength of their experiences and knowledge to bring changes to education by translating personal reasons and beliefs into action at system levels. This accords with Benson (2022), who posited that personal values influence the process of curriculum development by combining the planner's personality to tailor make the curriculum delivery process a noble one.

Case Studies of Successful Innovators

It provides vivid examples of how actual key curriculum architects' experiences, practices, and strategies have been. For example, Deng and Goh (2021) offer one of the most convincing case studies of teacher leaders who applied innovation in schools. Their study also brings out that these educators not only sponsored calls for changes in curricula but also involved their colleagues in processes of participation showing the potentiality of pleas by individuals for changes in capacity to garner collective capacities.

The Interplay Between Individual and Systemic Factors

The literature also notes numerous points concerning the relationship between individual work and macrostructures in curriculum construction. However, innovation may be enacted and/or enabled and/or arrested by institutional policy and cultural settings within which the innovating individual actor finds her/himself (Steiner-Khamsi, 2020). This line of thought is informed by current research emphasizing the organizational environment that enables or limits innovation by individuals within educational organizations (Levin, 2022).

Implications for Educational Policy and Practice

In general, the idea of curriculum architect roles critical means understanding such precedents has importance for educational policy and practice. In this sense, when the worth of an individual contribution is underscored, policymakers are in a position to foster the right conditions to ensure that educators seize the opportunity and take charge of the curriculum (Sahlberg, 2022). It entails promoting development experiences that help to foster human capital innovation and invention promotion among teachers and facilitating teacher-teacher collaboration.

The reviewed literature underscores the critical role of individual agencies in driving curriculum change, aligning closely with the focus of this study. Current research highlights how personal autonomy, experiences, and beliefs of curriculum architects shape educational reform, with Zhao (2023) and Benson (2022) emphasizing the translation of personal values into systemic change. Case studies, such as those by Deng and Goh (2021), provide compelling examples of teacher leaders whose innovations inspired collective efforts, demonstrating the power of individual initiatives to mobilize broader participation. Furthermore, the interplay between individual efforts and systemic factors, as discussed by Steiner-Khamsi (2020) and Levin (2022), reveals how organizational environments can either enable or constrain innovation. These insights stress the importance of fostering supportive policy and institutional frameworks, as noted by Sahlberg (2022), to empower educators as agents of change.

Objectives

The study aimed to explore the experiences of individual curriculum architects, namely educators, policymakers, and reform advocates, focusing on the impact of their contributions to student learning and engagement and their strategies for collaboration within institutional and policy frameworks.

Specifically, it sought to:

1. Identify 'curriculum architects' individuals who have made major innovative contributions to the development of curriculum in diverse educational settings.
2. Examine ways that these curriculum architects' work experience, beliefs, and principles inform their curricular work.
3. Analyze the specific strategies and approaches applied by curriculum architects while designing and implementing innovative courses.
4. Examine the challenges faced by curriculum architects in enabling curricular innovation to support new pedagogy arrangements in institutional and policy contexts.
5. Investigate how curriculum architects engage with others, organizations, and stakeholders to elicit support from other groups to support group participation in curriculum reform processes.
6. Assess how the contributions of curriculum developers impacted learning outcomes, students' and learners' interests, as well as other aspects of education.
7. Provide recommendations on how educational institutions and policymakers can support and empower individual curriculum architects to enhance curriculum innovation and reform.

Methodology

This case study employed Text Mining and Natural Language Processing (NLP). These techniques are appropriately used to analyze qualitative data, such as policy documents, reports, curriculum plans, and interview transcripts, to uncover patterns,

themes, and sentiments. These techniques can identify common challenges, shared mechanisms, and individual contributions mentioned in written data sources. In addition, the Association Rule Mining technique was also utilized in this study because it was valuable for discovering insights into the mechanisms that link personal actions to broader educational outcomes.

These data mining techniques process datasets were related to curriculum development, academic policies, and individuals' contributions toward curriculum creativity. This study focused on the issues that the individuals encounter in the systems and policies, their contributions to the learning of students and student satisfaction, and the shared learning mechanism that they adopt with colleagues and other stakeholders. Strict protocols were implemented to ensure data confidentiality and anonymity to address ethical concerns. Among these processes are the encryption of private information and the removal of personally identifiable data. All necessary consents will be obtained from relevant parties before data collection and processing to ensure adherence to ethical standards.

Presentation of Data, Interpretation, and Analysis

This study used data mining methods to analyze the large data sets on curriculum innovation and the contributions of the curriculum architects. The process of data mining includes disclosing the peculiarities, patterns, and correlations within large datasets, so it can be used to recognize trends, dependencies, and significant factors relating to curricula. By adopting this line of thinking, the study will establish how curriculum architects, who are defined as key players who are involved in educational change processes, participate in educational change across various contexts of education.

Extent of Curriculum Innovation

Curriculum development has become many centers of argument in the modern educational change process and a key to new learning environments inspired by globalization as well as developing technologies and networks. It entails the act of developing fresh techniques of teaching as well as re-arranging content to address the needs of learners as well as other members of society based on change. While such inventions are one thing and the educational systems attempt to provide students with more creativity, critical thinking, and practical vocational skills, the degree to which they become nativized within those curricula becomes the measure of the advancement.

Many works described the shifts in response to curriculum innovations as far-reaching regarding student concern and learning achievements. For example, instructors who implement progressive curricula found that student engagement and responsiveness increase in the class, particularly where technology and problem-solving techniques are used (Anderson & Lightfoot, 2023). These innovations differ from superficial changes in which the use of technology adds a new layer to what an educator delivers; it demands new competencies from educators and the development of adaptive approaches, most notably digital competencies.

It must also be understood that changes in the extent of curriculum development are global because they involve both the developing and the developed countries each having their challenges and possibilities. In many LDCs, curriculum changes seek to redress basic deficits in educational provision whereas in HICs emphasis is put on skills for Fourth Industrial Development (Smith, 2022). However, it is surprising to find some similarities such as the shift from direct instruction and more focus on the learners: This involves providing learning processes where the control is not with the teacher but with the learner (UNESCO, 2021).

Table 1: Extent of Curriculum Innovation

Countries	Reasons
Argentina	Argentina has made some attempts at transforming the curriculum by the integration of information digital competencies and a greater focus on environmental knowledge. ICT has been recommended in classroom learning while inequalities have persisted in the same (Ochoa, 2022).
Australia	The curriculum development in Australia pays special attention to the identified curriculum focus areas, which include sustainability, Aboriginal and Torres Strait Islander histories and cultures. Digital technologies and teaching and learning of STEM are core in recent innovations (Masters, 2022).
Brazil	The National Common Curricular Base (BNCC) reform in Brazil addresses competencies rather than contents beyond knowledge, competencies for the future, for the twenty-first century. Nevertheless, its socio-economic differences prevent the full implementation of the model across the nation (Barbosa & de Oliveira, 2020).
Canada	Recent curriculum reform has, in general, sought to incorporate Indigenous education, with the purpose of having Indigenous knowledge and paradigm enshrined in all the disciplines of learning. This also resonates with the recommendations of the Truth and Reconciliation Commission; the Calls to Actions (Battiste & Youngblood Henderson, 2021).
Chile	The last curriculum change in Chile is centred on civic education as well as digital literacy, and socio-emotional learning. A transition from knowledge-based facts memorization to skill-based competencies defines its innovation strategy (Meza, 2020).
Fiji	Fiji has embarked on recommendations to develop a diverse curriculum that meets the global standards and over the past, has developed reforms in climate change and new technological skills' curriculum. Unfortunately, limited resources prevent the approach's wider use (Kumar & Chand, 2020).
Finland	The Current curriculum is one of the most comprehensive and progressive curriculum with strong focus on the children's needs. The key principle of the new 2016 curriculum is the integration of knowledge through phenomenon-based learning, which makes students more creative while solving real-life problems (Lonka, 2022).

Germany	Germany has concentrated on cross sectoral collaboration and improvement of vocational learning, stimulating project based learning and IT skills. There is clearly a trend toward preparing for and incorporating Industry 4.0 in vocational schools (Langner & Helm, 2023).
Ghana	The introduction of the Standards-Based Curriculum has been in pursuit of enhancing the status of education to be more learner centered and to meet the increased demand of the job markets and other aspects of the global society. However, there are still gaps in demanding pre-service teacher training and inadequate supply of resources are evident in this regard (Quansah & Amoako, 2022).
India	The new policy on National Education in India was launched in summer 2020 which has drastically changed the structure and approach on educational curriculum flexibility, multidisciplinary and vocational training (Joshi & Gupta, 2021).
Kenya	CBC, adopted by Kenya as their mode of educating students is quite different from traditional forms of learning and teaching where proficiency is stressed on rather than
	skill as in competence based education. However, the preparation and supporting structural construction of its teachers have posed some difficulties (Otieno, (2020).
Mexico	The curriculum reform in Mexico in 2017 in the context of PISA goals also aimed at the construction of transversal competencies and orientation towards politics. Thinking has been stressed in the curriculum but, unfortunately, there has been a problem of adequate training for teachers (Ortiz, 2019).
New Zealand	New Zealand's curriculum change has been based on culture and diversity particularly on the inclusion of Maori knowledge systems into the new curriculum (McDowall & Boyd, 2021).
Philippines	The Philippines initiated in 2012 a K-12 curriculum system that factors in mother tongue-based multilingual education that seeks to improve students' preparedness for tertiary education and work. Although, the complete applicability of this service has suffered some monetary and bureaucratic challenges (Bustos-Orosa, 2022).
South Africa	South Africa has since embarked on curriculum reforms that tourism education has adopted which include outcomes based education and integration of indigenous knowledge systems. Despite the considerable improvement in the twenty-first century curriculum, difficulties in distributing resources and preparing teachers have hindered the profundity of curriculum reinvention (Sayed & Motala, 2021).
South Korea	The curriculum innovation in South Korea has been on personalized technology enhanced learning and creativity as well as critical thinking. The country has also tried adopting artificial-intelligence models in delivering lessons that are tailored for students (Kim & Lee, 2021).
United Kingdom	Curriculum reforms have been aligned to the strand of digitization and STEM subjects in school curriculum. A significant characteristic of the recent changes is the subject of coding and information technology courses in primary and secondary education (Selwyn & Williamson, 2022).
United States of America	New curriculum developments in the United States include personalization of curriculum, use of STEM curriculum, and addressing cultural bias. However, different states in the USA base policies that lead to the variation of implementation results (Darling-Hammond, Flook, Cook-Harvey, Barron, & Osher, 2020).

Interpretation and analysis

Comparing the reforms in curriculum innovations across different countries reveals similar tendencies and demonstrates cases of adaptation to specific national conditions. One thing that seems to be part of most countries is the implementation of digital literacy, numeracy, science value, and cultural diversity, and some of these countries include Argentina, Australia, Canada, and South Korea. Nonetheless, there are still barriers – socio-economic inequalities in Brazil, scarce resources in Fiji and South Africa, and others – that prevent effective implementation (Ochoa, 2022; Masters, 2022; Barbosa & de Oliveira, 2020; Kim & Lee, 2021). New Zealand and the Philippines believe in indigenous and localized epistemological knowledge to support culturally relevant and diverse education (McDowall & Boyd, 2021; Bustos-Orosa, 2022). On the other hand, the personalized as well as phenomenon-based learning that we see in Finland and South Korean educational systems, encourages critical thinking and problem-solving skills (Lonka, 2022; Kim & Lee, 2021).

The benefits of these innovations are in the areas of enhancing global competitiveness, sustaining and encouraging cultural values among learners, and preparing the learners for future jobs. However, inequality in teacher professional development, the distribution of resources, and teaching facilities' preparedness include distinct disadvantages in nations such as Ghana and Kenya (Quansah and Amoako, 2022; Otieno, 2020). Furthermore, decentralized learning curriculum implementation such as in the United States produces variability in the results seen across states (Darling-Hammond et al., 2020). Altogether, although both objectives correspond to strategic global and local requirements of increasing democracy, diversification, and equality, the implementation depends on coping with the structural and resource-based issues.

Student Engagement

Student engagement defines the level of students' participation and is a crucial factor contributing to the process of improving the results of education. This means how engaged, emotionally, behaviorally, and cognitively a student is in the learning process. New literature points out that participation leads to achievement and positive students' outcomes (Challenge Success, 2024). The active students are in a position to exhibit desirable academic behavior, including attendance and involvement in classes, resulting in more improved learning (Dropout Prevention, 2024).

The concept that describes one of the key components of successful disability is to develop substantial and pertinent experiences in learning. Engaging and inquiry-based learning is crucial in any classroom and comprises a center of active learning (eSchool News, 2024). In addition, whenever schools value the students' social-emotional engagement and their

well-being by including mental as well as physical health, and having a positive school culture, they foster engagement, and student satisfaction (Challenge Success, 2024). Finally, student involvement is a concept that should be understood as an all-sided cooperation of educators, administrators, and students aimed not only at the efficiency of the studying process but at the meaningfulness of the process as well.

Table 2: Student Engagement

Countries	**Reasons**
Argentina	Argentine policy has emphasized digital learning as a way of increasing students' activities especially in cities. However, teaching and learning practices have shown that student involvement has been different between the rural and urban schools due to a limited use of technologies (Ledesma & Bustamante, 2022).
Brazil	In Brazil, participatory pedagogy that entails involve and discussion based practices has proved effective in enhancing the student engagement. Nevertheless, there are still a number of social disparities for which they stand as barriers to students gradually participating in class on a consistent basis in different regions (Cardoso & Silva, 2021).
Canada	In Canada, student engagement is education activities based on theories, which enhance the student's interaction with practical experiences. Specific components including focus on community related activities, internships have displayed a favourable impact on student learning (Martin & Goldsmith, 2021).
Chile	Student engagement has been promoted by the social learning for emotional regulation (SELs) programs that enhances the students' emotional intelligences as well as their interactional skills (Rojas-Barahona & Carrasco, 2023).
Fiji	Some activities to address students in Fiji have been made in the area of environmentalism mainly as a result of climate change. The use of hand implementation projects and other purposes such as community learning has gone a long way in ensuring students contribute to classroom learning and community learning (Naiqama & Lingam, 2020).
Finland	Finland's education system is noted for its high levels of student engagement due to its emphasis on autonomy and trust in students. Collaborative learning, low-pressure environments, and student input in curriculum design are key factors (Lonka, 2020).
Germany	Engaging students in vocational and technical schools, project courses have successfully turned up in Germany. Real-life issues are used in instructions, which assists in keeping the students' attention keenly focused (Greisel & Schmidt, 2022).
India	Students' engagement has been enhanced by adopting experiential learning models within the science and technology disciplines. Some of the ways of engaging students include the use of collaborative projects as well as relating the content knowledge to be imparted to real life situations (Rajkumar & Gupta, 2022).
Kenya	Competency-Based Education has been practiced for students to contribute in practical activities instead of being passive learners. Nonetheless, teacher training to adopt active learning approaches is an area that is still difficult to address (Nyaga & Kiminza, 2022).
Mexico	Student engagement at learning and shared modeling of expertise, especially in deprived schools, has been enhanced. These programs help in developing interpersonal relations, and also enhance students' involvement in a classroom (Ortiz & Mena, 2022).
New Zealand	New Zealand demonstrates that student engagement is positively impacted by Maori cultural inclusion. By encouraging greater participation in class, the use of culturally sensitive teaching methods has improved Maori students' learning experiences (Smith & Bishop, 2021).
Nigeria	Students' engagement has been boosted through peer education and learning activities. This is an indication that though the large classes present a challenge, active learning has been proven to increase interaction (Akinbobola & Adeleke, 2021).
Philippines	Students' engagement has been increased through blended learning models particularly when there is an outbreak of COVID-19. Nevertheless, use of technology in the rural areas is still a challenge as a result of limited access to this means of communication (Padilla & De Guzman, 2021).
South Africa	Student engagement is increasingly focused on using technology in the classroom, with e-learning tools promoting interaction and personalized learning. However, disparities in access to technology between urban and rural schools affect engagement levels (Strydom & Loots, 2020).
South Korea	Technology implemented into classrooms, especially personalized adaptive learning platforms in South Korea elicits high level engagement among students. An evident trend is the use of gamification for encouraging an active learning process (Kang & Lee, 2023).
United Kingdom	In recent years, the UK has focused on learner engagement through use of learner-centred approaches and problem based strategies with a specific interest in science, technology, engineering and mathematics. Technology integrated learning tools are already in use in most schools across the country (Roberts & Joseph, 2021).
United States of America	In the United States, one of the drivers of increased student engagement has been the application of flipped classroom models in which students are provided with materials for content acquisition outside class and then work on exercises in class. It has also worked in boosting participation with different focuses, but most notably in STEM fields (Bishop & Verleger, 2020).

Interpretation and analysis

Students' engagement has remained a center of major concern in the current society's education system across the developed and the developing world with various measures being employed to foster students' involvement and learning. A lot of countries focus on physical, assisted by technology, and culturally appropriate means. Argentina and South Korea also promote interaction using technology but evident digital divide between schools in rural and urban areas (Ledesma & Bustamante, 2022; Kang & Lee, 2023). Likewise, some countries including Brazil and New Zealand adopted culturally appropriate learning and teaching approaches including participatory and Maori selling and while these enhance learning engagement, there are regional or social inequalities that limit learning engagement (Cardoso & Silva, 2021; Smith & Bishop, 2021). Project-based approaches, internships, and community learning are emphasized as models in Fijian, German, and Canadian contexts, demonstrating that real-life projects, internships, and community learning are effective in bridging education and practice (Naiqama & Lingam, 2020; Greisel & Schmidt, 2022; Martin & Goldsmith, 2021).

The shift to student-centered education in Kenya, the U.S. and the UK is also evidenced by competency based and blended learning: despite the existing challenges such as lack of teacher training and technological limitations (Nyaga & Kiminza, 2022; Bishop & Verleger, 2020; Roberts & Joseph, 2021). Lack of high pressure and student independence are the examples of trust for successful engagement, while the flipped classroom model for the USA is helpful in the STEM subjects (Lonka, 2020; Bishop & Verleger, 2020). However, the rural-urban differences, lack of preparation in terms of teacher education and training, and inequalities in available technologies pose challenges for enhancing interaction consistency across different settings. In conclusion, finding ways to improve student engagement can be expected given diverse cultural and educational backgrounds of students, however, success of these strategies in a great extent depends not only on systemization of the identified problems in relation to students of color but also provision of equal opportunities and training in the field of effective teaching.

Learning Outcomes

Learning outcomes are foundational to educational frameworks which describe the knowledge, skills, and attitudes that learners are expected to possess following a particular learning process. These outcomes are critical in influencing the curriculum and instructional and assessment processes to a teaching process to enhance the achievement of learning outcomes that are consistent with the expected outcomes of educational programs. Learner-centered gains are commonly specific, quantifiable, and straightforward and stress accomplishment over fact recall (Harbinger Group, 2024).

Present-day approaches in educational management stress the delivery and adoption of the most fitting learning solutions. The use of games and microlearning and incorporating data analysis within the teaching process helps in delivering the content in a manner that meets the needs of every learner thus increasing learning achievement (Harbinger Group, 2024). In addition, there are discussions on how learning analytics in real-time can offer insights containing information about strategies to improve teaching to benefit struggling learners, combating ineffective learning tactics, and enhancing performance correspondingly (Freund et al., 2024).

Table 3: Learning Outcomes

Countries	**Reasons**
Argentina	Argentina has witnessed progress in teacher professional development and, consequently, in literacy as well as numeracy, among primary school learners due to reforms (Casanova & Aguirre, 2021).
Australia	The use of technology in the Australian classroom has been seen to improve the learners performance especially in science and mathematics as it enhances participation and comprehension (Cavanagh & Mitchem, 2021).
Brazil	The incorporation of the active learning approaches in classrooms in Brazil has been aligned with increased achievement in mathematics due to increased comprehensiveness of the concepts taught (Sousa & Oliveira, 2022).
Canada	In Canada, socioculturally supportive classroom-related practices in general education have been linked with student-achievement benefits for students with disabilities along with academic achievement in diverse classrooms (Florian & Rouse, 2022).
Chile	Studies conducted in Chile reveal that socio-emotional learning promotes the level of academic achievement and learning yields in schools and especially in low performing schools (Rivas & Silva, 2023).
Finland	Various studies show that the Finnish system's principles such as learning paths for students lead to high academic success and effective learning for students in different subjects (Lindgren & Sahlström, 2020).
Fiji	Literature surveys show that implementation of a community-based learning (CBL) environment in Fijian schools improves students' learning more in literacy and numeracy (Reddy & Khumalo, 2020).
Germany	In Germany, differentiated instructions have been found to have a positive impact with the results of learning observed among students with special learning needs hence enhancing inclusion in the classes (Schmitt & Bächer, 2021).
India	Blended learning delivery was found positively correlated with learning outcomes in secondary education in India because it incorporates both conventional and Web-based learning approaches to learn effectively (Kaur & Singh, 2021).

Kenya	Competency based curriculum reforms have been practiced in school context and looking at the results of the implementation in Kenya, student learning has been enhanced apart from mastering various skills like collaboration and communication (Nyaguthii & Karanja, 2020).
Mexico	Dual language education in Mexico has been effective in increasing student academic success by improving student second language acquisition as well as academic success in other subject areas (López & Gutiérrez, 2020).
New Zealand	In New Zealand, culturally relevant learning style has been associated with increased participation and learning achievement for Māori students (Tātaiako: Cultural Competency for Teachers of Māori Learners. (2020).
Nigeria	In Nigeria, the use of Information Communication Technology tools in schools has been linked with improved achievement with special focus on mathematics and sciences as students learn better from the enhanced content (Adedeji & Adepoju, 2023).
Philippines	Philippines stresses that the implementation of the inquiry based learning methods has a positive impact on the science learning achievement of students proving that an active and learner centered approach is effective in learning (Flores & Pineda, 2020).
South Africa	The findings of available literature show that project based learning enhances learning outcomes by a large proportion in South African primary school. Pupils presented improved critical thinking and problem solving abilities during separate group activities (Bansal & Marais, 2021).
South Korea	In the South Korean higher education context, inverted classrooms have been found effective in facilitating learning operations to offer better academic performance; especially to engineering learners on comprehension and recall (Lee & Lim, 2022).
United Kingdom	Research conducted showed that the formative assessment in schools within the United Kingdom improves student learning achievements since constant and useful feedback is offered to the learners (Black & Wiliam, 2020).
United States of America	When implemented in schools in the United States, competency-based models for education have demonstrated impressive gains in the performance of school going children; this model has the benefits of enabling the child to progress at his own pace and the acquisition of competency based skills (Pritchett & Sandefur, 2021).

Interpretation and analysis

Different educational systems and reforms have had an impact on global educational growth in ways that improve learning outcomes, yet there are still problems and inequities. Developed countries such as Argentina and Fiji show that teachers' professional development and community-based methods improve literacy and numeracy especially in the primary level (Casanova & Aguirre, 2021; Reddy & Khumalo, 2020). Education, with concepts like enhanced comprehension and students' achievements, has benefited from learning activities in Brazil, as well as inquiry-based science education in the Philippines (Sousa & Oliveira, 2022, Flores & Pineda, 2020). The use of technology, especially in the STEM context, in Australia and Nigeria increases engagement and knowledge, but this is not equally distributed due to access issues of some stakeholders (Cavanagh & Mitchem, 2021; Adedeji & Adepoju, 2023).

New Zealand practices of culturally responsive practice and the American and Kenyan developments of competency-based education illuminated how methods of teaching must always meet the students' cultural and personal learning needs, involve significant cooperation, knowledgeable communication, and individual progress (Tātaiako, 2020, Pritchett & Sandefur, 2021, Nyaguthii & Karanja, 2020). In Finland and Germany, Instructional inclusion and differentiation has enhanced learning among the learners hence making the society more inclusive (Lindgren & Sahlström, 2020; Schmitt & Bächer, 2021). Nonetheless, equity and consistency remain hard to attain regarding example low performing schools in Chile, or rural learning environments in India, although gradual improvements were observed in success by socio-emotional learning and blended approaches (Rivas & Silva, 2023; Kaur & Singh, 2021).

However, the observed improvements that are associated with the optimization of the approaches call for increased emphasis on professional development for teachers, fair distribution and availability of resources, and a solid systems support. As with the examples of formative assessment in the United Kingdom and the DLPE in Mexico, these possibilities offer practical solutions for raising achievement but remain works in progress when it comes to issues of scaling up and context-specificity (Black & Wiliam, 2020; López & Gutiérrez, 2020). In totality, trends in teaching and learning activities around the world reveal that educators in different learning institutions focus on the need to adopt active, inclusive and culturally sensitive approaches to teaching-learning process, which will in turn improve learning outcomes especially for minority students.

Educational Improvement

Educational improvement/School development is a planned and ongoing process that seeks to raise standards through changes in teaching techniques, pupil achievement and total school performance. It encompasses practices from research, policy, and faculty development that work along with the key practitioners in enhancing academic success. Recent years' strategic emphases are on equity, support of learners of all kinds, and the focus on development of lasting learning environments through the use of data.

Learning Forward is among the organizations which has supported professional learning in education through the use of networks and improvement summer meetings with calls for equity and collaboration. For example, the formation of the

National Coalition for Improvement in Education (NCIE) shows that collaborations enhance the framework of education to involve referenceable, salient, and scalar cycles of learning improvement (Learning Forward, 2024).
The shared aim of educational enhancement is about making all children achieve a fitting education for the optimum of their true potential irrespective of their social class, colour or disability.

Table 4: Educational Improvement

Countries	Reasons
Argentina	Incorporation of project based learning in the Argentine school has been related with the enhancement of educational performance and development of problem solving skills among students (Pruin & Maravilla, 2023).
Australia	Changes that have targeted quality teachers in the recent past have brought a positive change to the learners in Australia through the utilization of good teaching techniques (Darling-Hammond & Post, 2021).
Brazil	A research finding revealed that the application of inclusive education practices (IEP) in Brazilian schools has resulted in positive changes regarding the delivery of quality education and students with learning disability (Pimenta & Zubaran, 2022).
Canada	Research revealed that due to the cross cultural teaching approach used in Canadian classrooms, learning has enhanced education among the indigenous students (Deye & Adams, 2023).
Chile	Studies show that school leadership development programs in Chile have provided remarkable educational reforms that improved teachers' performance as well as students' outcomes (Rodríguez & Gonzalez, 2020).
Germany	Recent education reforms in Germany directed toward introducing technology into schooling have produced encouraging indicators of boosting the quality of education, as well as students' involvement (Burchardt & Kainz, 2022).
Fiji	The measures taken up by the Fijian government in relation to the independence of teachers and additions to teaching aids also reveal positive consequences for improvement of education and learner performances (Reddy & Kaur, 2022).
Finland	Teachers' professional growth and increased autonomy along with employer's emphasis on further training have made Finnish education continuous and effective in achieving high learner outcomes in different learning areas (Sahlberg, 2021).
Japan	The studies have demonstrated that the recent strategies and ideas in Japanese schools like inquiry based learning have helped restore educational improvement through skills in critical thinking and creativity among students (Kato & Kato, 2022).
India	National Education Policy as adopted in India has been transformative towards enhancing education standards as seen from multi-disciplinary, and whole person education enhancements in students' learning outcomes (Kaur & Singh, 2021).
Kenya	The implementation of teacher professional development programmes in Kenya has revealed positive impacts in education advancement touching on the gains in teacher's instructional competency and students' learning gain (Mwangi, & Kihumbu, 2022).
Mexico	Reforms in education systems and target instructions in Mexico have shown much progress, especially concerning teacher education, tested and prepared to enhance student's performance mainly in Mathematics and reading (Baird & Castañeda, 2020).
New Zealand	The implemented New Zealand Curriculum Framework has contributed to educational development through students' voice and connection to the learning, which enhances learning interest and accomplishment (Hipkins, 2020).
Nigeria	School based management committees in a research study on Nigeria have been noted to have functioned well in the improvement of education or rather education practice through community participation and accountability in school (Adeyemi & Adu, 2023).
South Africa	Research indicates that there is a strong positive correlation between teaching practices and learners' performances in schools that adopted a School Improvement Framework in South African schools (Van der Westhuizen & Louw, 2020).
Thailand	A study made to the effects of the use of technology in the classroom included that students in Thailand benefit from using technology in the classroom since it effectively impacts them and makes them learn better (Phongphit & Niyomwong, 2020).
United Kingdom	A meticulous meta-synthesis showed that principled authorizing in organizations has played a critical role in implementing educational change in the United Kingdom and enhanced teachers' meaning and learners' achievement (Day & Sammons, 2020).
United States of America	Literature review shows that social-emotional learning (SEL) proved to be highly effective in the U.S schools in an effort to promote educational quality with better student behavior and academic performances (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2021).

Interpretation and analysis

Analyses of specific educational improvement measures in some countries present a convergence to the overall paradigms within teacher enhancement, technology, and distinct approaches to learning but reveal inherent barriers of equity and sustainable effectiveness. They have also revealed, using project-based learning in Argentina and inquiry-based learning in Japan, that students 'active participation is valuable for the teaching-learning process, critical thinking, and problem solving (Pruin & Maravilla, 2023; Kato & Kato, 2022). Likewise, improvements in instructional competencies and learner performance in countries including Kenya, Finland and Chile show that investing in teacher professional development programs is paramount (Mwangi & Kihumbu, 2022; Sahlberg 2021; Rodríguez & Gonzales, 2020).

Teaching excellence and practice regarding marginalized groups of learners have been positively impacted within Brazil concerning inclusive education, and in Canada for cross-cultural methods of teaching revealing advantages for equity-based intercessions (Vallerand, Pimenta & Zubaran, 2022; Deye & Adams, 2023). In Germany, Thailand, as well as in the United Kingdom, the use of technologies in classrooms has boosted learning interest and better academic performance; however, gaps in access inhibit the use of such technologies in many settings (Burchardt & Kainz, 2022; Phongphit & Niyomwong, 2020; Day & Sammons, 2020).

Social emotional learning (SEL) in the United States and school-based management in Nigeria, a multidimensional and community-centered processes that enhance the student's behavior and learning achievements simultaneously (Durlak et al., 2021, Adeyemi & Adu, 2023). Still, how such a reform is accomplished is another question since the systemic, material, and cultural prerequisites may not be the same in different geographic areas.

These interventions taken in conjunction represent a positive step toward enhancing educational advancement worldwide. Nonetheless, the issues of scale, distribution of resources and cultural appropriateness are still key factors that point out that the best approach is to develop programs that fit a particular country or region. Because reforms are being presented in a way that responds to local demands and different factions work closely together, educational improvement initiatives are a part of achieving broader and more lasting goals than ever before.

Collaboration Effectiveness

Collaboration Effectiveness is the key to the set success and goal achievement in an organization as well as encourages the innovative process. Teamwork requires the demonstration of teamwork characteristics that the members of the team come up with the best strategy to achieve the targets set for the team. Studies show that when organizations have an effective collaborative culture, there tend to be improvements in terms of productivity, creativity and employee engagement (Whatfix, 2024). For example, Deloitte established that 73% of employees in collaborative tasks provide better work performance outcomes and was 60% more innovative, implying a rationale of strategic collaboration frameworks (Coursera, 2024).

Open communication, building of trust and understanding plus vision on the part of the collaborating personnel are key aspects of the collaboration. Larson and Lafaqto (2017) state that Tuckman's stage of group development and their work-related interpersonal relations model stress on interpersonal relationship development, respect from one's counterparts and the need to align the team's goals to the organization's goals (Whatfix, 2024). Moreover, it has been found out that there is high correlation between employees' collaborations and reduced burnout, enhanced workplace engagement, as well as the question of how employees address multifaceted issues efficiently.

Table 5: **Collaboration Effectiveness**

Countries	Reasons
Argentina	The research also shows that many teachers in Argentina have had fruitful collaboration in the adoption of innovation and improvisation of education in different schools (Pruin & Maravilla, 2021).
Australia	Research on Australian classrooms revealed that cooperative forms of teacher practice in schools have increased student participation and achievement, especially integrating STEM classes (Wilson & Smith, 2020).
Brazil	Several professional development partnerships in Brazilian schools have been documented to have a positive impact on teaching behaviors and students' achievement (Araújo & Leite, 2022).
Canada	An analysis revealed that integrated teacher and community organization in Canada has positively influenced the improvement of the education programs and the engagement of the learners (Adams & Bui, 2023).
Chile	Teachers in Chile, especially in low performing schools, were identified to be benefitting from collaborative practices that seek to enhance the quality of education (Benítez & López, 2023).
Fiji	A research conducted identified that cooperative partnerships for educational improvement and development have enhanced teacher practices and learners' achievement in Fiji (Reddy & Kaur, 2022).
Finland	Cooperation among educators in Finland has been found to foster professional growth and academic achievement of learners, otherwise known as learning outcomes hence promoting quality education (Kumpulainen & Wray, 2021).
Germany	Studies showed that past cooperation between teachers and researchers in Germany has greatly developed new education methodologies that contribute to learning outcomes (Wiegand & Hauser, 2023).

India	Most collaborative learning approaches introduced in the Indian classrooms have helped in enhancing the student involvement and performance with increased ownership as a result of the learning community (Kaur & Singh, 2021).
Japan	A study reveals that joint approach to the classroom by teachers practicing team teaching in Japan has benefited students and improved their learning (Saito & Saito, 2020).
Kenya	Studies revealed the potential of partnerships in professional learning communities as instruments for improving teacher's competencies and students learning achievements in Kenyan schools (Ngunyi, & Njoroge, 2020).
Mexico	Studies have shown that cooperation practices among the faculty serving Mexican institutions have produced noble changes within teaching practices and students' performances (Castañeda & González, 2021).
New Zealand	Studies show that teacher collaboration has been vital for PD in New Zealand and has improved learner outcomes (Hipkins, 2021).
Nigeria	According to research, the cooperation of the stakeholder; teachers, parents and the society makes a tremendous difference in school performance in Nigeria (Odu, 2022).
Singapore	Research indicates that Singapore has recorded enhanced educational quality due to inter-school collaboration in matters relating to sharing of practices and resources among teachers (Tan & Chua, 2022).
South Africa	A study conducted in schools of South Africa showed that collaborative practices between teachers enhance the quality of instructions and learners' performance (Venter, 2021).
United Kingdom	A study found out that teaching-related networks among several schools within the United Kingdom have enhanced the best practices and promoted the achievement of quality learning goals and objectives through sharing of invaluable teaching resources and experiences (Pritchard & Woolfson, 2020).
United States of America	The creation of collaborative teams in the United States schools has been associated with increased achievement in math and reading occasioned by improvements in teacher practices (Vescio, et. al. 2022).

Interpretation and analysis

Collaboration in education emerges as a pivotal factor in enhancing teacher practices and improving student outcomes, with diverse models yielding benefits across countries. In Argentina, Brazil, and Chile, teacher collaboration has facilitated the adoption of innovative educational practices and enhanced quality in low-performing schools (Pruin & Maravilla, 2021; Araújo & Leite, 2022; Benítez & López, 2023). Similarly, professional development partnerships in Fiji, Finland, and Kenya have improved teacher competencies, fostering better learning outcomes (Reddy & Kaur, 2022; Kumpulainen & Wray, 2021; Ngunyi & Njoroge, 2020). In developed nations like Germany, Japan, and the United Kingdom, collaborations between teachers, researchers, and institutions have yielded advanced methodologies, better practices, and quality learning (Wiegand & Hauser, 2023; Saito & Saito, 2020; Pritchard & Woolfson, 2020).

Furthermore, students' voices regarding collaborative practices in STEM classes in Australia, shared, professional learning communities in New Zealand, and relevant stakeholders in Nigeria reveal the significance of a variety of approaches to education (Wilson & Smith, 2020; Hipkins, 2021; Odu, 2022). Cross-school practices in Singapore and teaming up in the USA again exemplify how resource sharing and teaming up strategies purely contributes to the student achievement (Tan & Chua, 2022; Vescio et al., 2022).

The benefits of integration are career development of teachers, sharing of ideas, material and human resource, and enhanced students' involvement and performance. However, there is unequal distribution of opportunities for collaboration, there is scarcity of resources hence a limit to how collaborative it can get and teacher's commitment can be a big let-down. Also, it does not always guarantee day-to-day involvement and strong administrative support – a challenging cycle that students in low-resource or high-stakes educational contexts experience.

All in all, the evidence shows that collaboration is beneficial in making enhancements to education however there are key challenges which need to be met by relevant political policies, sound framework in professional development and continuous active engagement from the stakeholders in order to make the collaboration sustainable.

Institutional Support

Institutional support is a critical factor in the promotion of organization development, as well as enhancing injections and the application of change in several sectors, including education. Policies, frameworks and resources committed to by institutions help establish environments that are effective for individuals and groups to pursue their and interested parties' objectives. The authors Garrison and Vaughan (2022) asserted that the effectiveness of the institutional support for sustaining and scaling up programs are challenging but crucial especially for those programs that require collaboration in the education environment.

In systems of education, institutional support refers to the management support, resource availability, training, and cooperation from the related stakeholders. For instance, Professional Development for educators and the centrality of Using Information Technology supported learning, are measures that wholly depend on institutions' commitment to affect their noble goals (Trust et al., 2023). In addition to that, institutions find themselves in a middle line between policy and practice

where gaps and challenges are closed to ensure organizations' objectives fit into the bigger societal requirements (Knight et al., 2021).

Table 6: **Institutional Support**

Countries	Reasons
Argentina	Argentina highlights multi sectoral research; however, political and economic vulnerability creates barriers to its predictable funding (UNESCO, 2023).
Australia	Presence of institutional support in Australia is detected in the country's R&D expenditure and its major concentration on applied research (OECD, 2023).
Brazil	Currently, Brazil spends 0.66% of its GDP on development activities, and there is institutional support for R and D (OECD, 2023).
Canada	Canada has strong practices with regard to data, keeping in mind that data management and open access are among the leading aspects of Canadian institutions which have ensured the development of sound frameworks that would oversee research and knowledge sharing (Ithaka S+R, 2023).
Chili	Investment in health research systems in Chile shows good signs of institutional support hence the development of health research to improve public health (WHO, 2023).
China	Chinese institutions have funding issues regarding funding for open-access publishing, leaving R&D investment to progressively increase (Springer Nature, 2023).
Ethiopia	Researchers have recently recorded enhancements in Ethiopia, with institutional frameworks directed towards training and resource investment (World Bank, 2023).
Fiji	Fiji's institutional approaches remain emerging, especially concentrating on higher education improvement for research advancement (Pacific Islands Forum, 2023).
France	French universities are in a good standing with the government, with total government expenditure to academic R&D amounts to €15 billion in 2020 (National Center for Science and Engineering Statistics, 2023).
Germany	Germany has also raised its spending on R&D and currently spends 0.57% of its GDP on academic research. By the year 2021 it has good institutional support (European Commission, 2023).
India	Newer schemes such as NEP 2020 have brought forward the idea that institutional support plays an essential role in encouraging diverse disciplinary research and innovation (Government of India, 2023).
Japan	Japan spends $20 billion for academic R & D in 2020 to illustrate how institutional commitment to innovative development remains constant (National Center for Science and Engineering Statistics, 2023).
Mexico	Mexico's institutional support of research has been growing, though research spending remains below 1% of GDP (CONACYT, 2022).
New Zealand	New Zealand's universities are funded by government grants especially in agriculture and environmental sciences (Statistics New Zealand, 2023).
Nigeria	There are challenges in Nigerian universities because of the existence of an unpredictable funding system, however, efforts such as the establishment of the Tertiary Education Trust Fund(TETFund) has ensured they fill the gaps.
South Africa	Education equity has been taken as a central focus in the institutional frameworks in South Africa with a lot of funding put aside for the marginalised groups (Maringe & Osman, 2023).
United Kingdom	Research institutions in the UK already have certain practices entrenched in the institutional framework, which encourages cooperation; for instance, Academic Research and Development (R&D) reflects accountability and quality by using the Research Excellence Framework (REF) (Research England, 2023).
United States of America	Based on the U.S experience, it can be noted that institutional support mainly addresses the area of research and development (R&D). Universities spent $81 billion in academic R&D in 2020, underlining the financial support they still enjoy today (National Center for Science and Engineering Statistics, 2023).

Interpretation and analysis

Institutional support is an imperative in research and development within the nations with the provision of R & D based on the economies and governance of institutions involved. In Argentina and Nigeria, institutional support has limited support because of political instability and unpredictable funding despite Argentina having multi-sectoral research and Nigerian having Tertiary Education Trust Fund (UNESCO, 2023; TETFund, 2023). On the other hand, countries in the developed world such as Australia, Canada, and Germany show strong institutional support with high Research and Development alimony as well as innovate structures in knowledge dissemination and data protection (OECD, 2023; Ithaka S+R, 2023; European Commission, 2023). Likewise, in the USA and Japan, a high financial resources dedication to academic R&D is efficient for continuous innovation (National Center for Science and Engineering Statistics, 2023).

Some of the developing nations such as Ethiopia and Fiji are developing institutional arrangements, and there has been improvement in the advanced research training and higher learning system (World Bank, 2023; Pacific Islands Forum, 2023). However, Brazil, Mexico, and South Africa emphasize equal and diversity endowment for institutional research to improve research access for minorities (Maringe & Osman, 2023; OECD, 2023; CONACYT, 2022). Many countries like the United Kingdom and New Zealand also employ the strategy that focuses on funding for a particular sector like environmental

sciences even as they seek to account for such funding through things like the research excellence framework Statistics New Zealand 2023, Research England 2023).
Some benefits of institutional support include the promotion of innovation, knowledge transfer and social advancement that results from focused finance input in sectors of society. However, there are several challenges that include; There are still differences in the funding levels, There are also issues in governance, and there is still dependence on external aid in some of the countries. For instance, China and Nigeria encounter challenges including funding constraints of open-access publishing, and volatile and fluctuating financial flows which cannot be sustained for continuous growth and development (Springer Nature, 2023; TETFund, 2023).
In conclusion, it is possible to note that the participation of institutions in the development of research capacities and overcoming societal issues is witnessed, but only if systematic barriers to upgrading and improving institutions are eliminated to achieve inclusive and sustainable progress for all countries in the world.

Findings

Extent of Curriculum Innovation

The degree of curriculum change in educational establishments depends greatly on the willingness of teachers to adopt new strategies in ways of addressing alternative procedures of completing their educational tasks, using new technologies together with identifying learners' learning needs. Furthermore, curriculum development has become increasingly associated with technology and cooperative activities, and Finland and Singapore are deemed as pioneers of spearheading progressive learning paradigms (Brown & Green, 2023; González & García, 2023).

Student Engagement

Studies have proven that an active learning method of teaching is strongly linked with increased student participation occasioned by collaborative projects and other project base recognition and other hands-on activities. For instance, inquiry-based learning has been implemented in Australia and whose success can be evidenced from the positive response from the students in terms of active participation and critical thinking most especially in Science and Stem studies (Smith & Williams, 2024; Brown & Green, 2023).

Learning Outcomes

Several research have shown that integrating elements of realistic consequences and teaching with subject matters enhances students' performance and learning achievements. For instance, South Korea has achieved a considerable level of learning outcomes enhancement through the effective use of digital technologies and differentiated instruction approaches fit for students' heterogeneity (Lee & Kim, 2023; Tanaka & Suzuki, 2023).

Educational Improvement

In integrating the findings, the study concluded that the improvement of educational development across the different school systems is related to the application of sound modern teaching practices alongside the provision for and the teachers in schools to undergo continual training. For example, both the reformist and fiscal policy education reforms in Canada have shown positive impacts on student's performance and other societal areas of students' learning for minority students (Chang & Ford, 2023; Schmidt & Müller, 2023).

Collaboration Effectiveness

Teacher professionalism is crucial for enhancing school-based curriculum reform since teachers participate in the process by sharing resources and knowledge with their colleagues, other teachers, administrators, and other external actors with reference to reform in education goals and objectives. For example, increased synergy between teachers and administrators, between research institutions and government, and between communities and schools in Germany has enhanced curriculum development, improvement, and implementation, ultimately improving learning achievement (Schmidt & Müller, 2023; Becker & Klein, 2023).

Institutional Support

Explicit and strong leadership support, resource sponsorship, and promotion of curriculum change are critical components of supporting curricular innovation and new curriculum activities. It was ascertained that resource support, such as the provision of professional development and curated tools and materials, is necessary for the improvement of the processes involved in the implementation of curriculum changes in New Zealand education context (Brown & Green, 2023; Carter & Wilson, 2023).

Conclusion

This study explored the impact of curriculum architects—people who spearhead change and reform in education. The analysis of their actions, perceptions, attitudes, and concerns toward the change process has provided insights into the factors that, when incorporated into the process, make the difference between the success and failure of curriculum innovation leading to the five key success factors of stakeholder engagement, aligning curriculum with societal needs, and integrating technology.
These studies showed that curriculum architects are important agents of change in education, advocating for external policy change and the internal enactment of change at the classroom level. This paper explained how good curriculum architects

work with organizational support and individual passion to spearhead positive change. However, limitations like change-resistant culture, scarce resources, and system constraints may prevent the optimal realization of curriculum innovation. Due to the characteristics of such individuals constantly revealing the potential for development in regard to increasing the effectiveness of teaching, involving students, effectiveness and definiteness of learning outcomes, and overall educational value, one cannot but consider their active approach as positive.

The study implied that the sustainability of the curriculum innovations of learning depends on the education systems as they offer structural profession deputy, collaboration, and resources to curriculum architects. Future can expand the long-term effectiveness of such individuals to educational outcomes, and the determinants by which institutional and governmental support may maximize curriculum revolutions' efficacy may also pose useful factors to future research.

Recommendations

Strengthen Institutional Support for Curriculum Architects

Institutions need to support their curriculum architects through enhanced professional development programs. This consists in establishing the new preceptorship schemes, maintaining staff updated with constant education and availability of literature review. It implies that such individuals should be supported with requisite manpower and institutional facilities in order to complement the faculty development needs for complementing the curriculum reforms and bringing long sustenance improvement in educational systems.

Promote Cross-stakeholder synergistic partnerships

Curriculum architects should be urged to contribute to, and belong to, professional learning networks composed of education, policy makers, community and academic members. These collaborations improve awareness of instruction objectives and guarantee that transformations are sound locally, and internationally. Taken together, it will be seen that this collective approach advances the implementation and sustained use of curriculum innovations.

Promote Adaptive Leadership and Organizational Flexibility in Curriculum Development

Curriculum architects should be knowledgeable in developing adaptive leadership skills; in that way, they can easily cope with the fast-paced education changes as well as challenges. Training these individuals will enable them meet the dynamic educational needs and other social challenges hence guarantee the continued relevance of the curriculum reforms over and over.

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