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EXPLORING THE OBSTACLES ENCOUNTERED BY THE CURRICULUM REVIEW COMMITTEES IN SINDH

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ABSTRACT

The present qualitative study explores the mechanisms of the curriculum review process in the Directorate of Curriculum, Assessment, and Research Sindh, Jamshoro (DCAR), its difficulties and the points of improvement. The study was informed by three objectives (1) to determine the overall challenges being experienced by the curriculum review committees; (2) to understand the perception and experience of the stakeholders in the curriculum development and review process, (3) to give recommendations on what can be done to make the curriculum review process effective and relevant. The data were gathered by means of structured interviews with 24 people (8 females and 16 males) who were DCAR officials, educators and subject specialists, using purposive selection. Substantive coding resulted in the identification of ten identified themes; integration and communication gaps, lack of clarity in roles, lack of resources, political influence, socio-cultural relevance, curriculum-assessment integration, workload challenge, preparation to be innovative, inclusion of stakeholders, process reforms to be made. The results pointed out strengths (sophisticated specialists and vigorous consultations) and weaknesses (poor infra-structure and insufficient transparency as well as involvement of contrasting stakeholders). Recommendations include strengthening communication, enhancing political neutrality, upgrading resources, enhancing innovation and aligning curricula with the local and international scales. National priorities. The research will be of benefit to policymakers, curriculum developers, and education administrators on both governance and outcomes in curriculum review.

Keywords: *Investigating, hindrances, Curriculum review committee, qualitative research, purposive stakeholder-land perceptions, education policy, Sindh, thematic study, obstructions, recommendations, framework of governance curriculum implementation*

INTRODUCTION

An investigation about the challenges along the way that the Curriculum Review Committees in Sindh faced brings forward a complex picture of the challenges that do not only hinder the effective curriculum development and implementation but also indicate the deeper gaps within the educational system. The review of the literature shows that there are some themes that seem to repeat themselves which can be divided into resource constraints, pedagogical issues, socio-economic factors, and institutional inadequacies.

First of all, the absence of sufficient resources is a serious obstacle in the way of Curriculum Review Committees developing and introducing effective curricula. Memon, for example, points out the comprehensiveness of training and resource provision that is needed to support gender-inclusive climate teaching, which further demonstrates that the availability of resources

directly influences the possibility of educators to apply innovative educational practices in gendering education (Memon, 2023). Similarly, Khoso et al. cite the constraints caused by the organizational shortcomings in the educational system, claiming that these shortcomings undermine the attempts to improve the curriculum (Khoso et al., 2019). Further, research on the economics of the environment is also known as Jumani and Kazimi exploration of the economics of environment.

The findings of this integration of the role of entrepreneurial education indicate that lack of resources may be a hindering factor in the reform of education (Jumani & Kazimi, 2024).

The other important determinant of the challenges that Curriculum Review Committees encounter is the fact that educators have not been developed adequately. According to Hashmi, lack of organized competency level among teachers in Sindh also leads to chaotic standards of teaching hence affecting the effectiveness of any revised curriculum (Hashmi, 2025). Regarding the barriers to teacher training, highlighted by Shah and Jabeen, one would say that the traditional pedagogical solutions still prevail, which leaves a lack of connection between curricular goals and teacher readiness to achieve them (Shah & Jabeen, 2024). It is not only the fact that such professional inadequacy interferes with the review process, but also related to the fact that it provokes doubts in the compatibility of educational practices and the general educational standards.

The soci-economic factors contribute more to the problems experienced by Curriculum Review Committees in Sindh. As per the literature, the consequences of socio-economic inequalities could be a sustained effect on educational access and quality (Shah & Jabeen, 2024). As it is explained with the example of the primary education system in Sindh, its socio-cultural barriers have a tremendous effect on the education of women underlining the argument that they have a great impact on curriculum needs and priorities (Khokhar & Shaikh, 2025). Further, there are systemic pressures in terms of socio-economic backgrounds that put additional burdens on Curriculum Review Committees charged with the responsibility of designing comprehensive and inclusive curricula.

Institutionally, there has been a major challenge in incorporating stakeholders in the development of the curriculum. Albeit the reference was irrelevant to the context of Sindh curriculum review, the interplay between policy and practice in education frequently represents an incongruence between goals created by policy-makers and those perceived by educators in the field, with the cause of the challenges many curriculum-reviewing committees are liable to encounter (Diba & Hindun, 2023).

In a nutshell, the challenges facing Curriculum Review Committees in Sindh include a combination of resources, professional growth, socio-economic and institution issues as well as complexities. To support the successful steps toward improving the overall quality of education within the province, there is a need to create a viable environment within education that will enable us to develop and apply a fine curriculum in an effective way.

Statement of the Problem

The Directorate of Curriculum, Assessment and Research (DCAR) has the role to ensure that all curricula, textbooks and assessment are within the relevant provincial and national laws and regulations. At the core of this requirement is the role of its curriculum review committees, which review and confirm curricular material prior to its implementation. Nonetheless, provincial policy reports and development-partner appraisals indicate that such committees must contend with ongoing obstacles in their operation, institutional set up and context, which can hamper their effectiveness (Government of Sindh, Education & Literacy Department, 2014; World Bank, 2022). Resource constraints, lack of technical expertise, lack of coordination, political sensitivities and inadequate use of assessment data have all been stumbling blocks to timely and high-quality curriculum reviews.

Unless these obstacles are overcome there is a likelihood that any changes to the curriculum will not equate into better teaching and learning outcomes in schools in Sindh. This can be achieved through delays, cursory assessment and poor stakeholder decision making, resulting in a non-alignment of the desired learning outcomes with what takes place in the classroom and exacerbating the achievement gap. The strategic value of DCAR notwithstanding, little research has been done in terms of empirically assessing the factors that have hampered the work of its review committees. This paper fills that gap and the insights herein can be used to coordinate capacity building, policy-

making and procedural changes to expressly build the rewiew function and enhance the quality of education in Sindh.

Significance of the Study

The challenges experienced by Curriculum Review Committees (CRCs) in Sindh, Pakistan, are limiting the optimizing and efficiency of education systems in this province to a huge extent. It is quite clear that these committees have a pivotal role to play in as far as ensuring that the curricula of the students address their needs and relate to the education standards; nevertheless, they face the different faceted challenges which are associated with administrative, pedagogical, and even socio-economic grounds. The insufficiency of the professional development of educators is one of the problems that hinder the quality of curriculum implementation. A research by Aslam et al. also points out that the teacher related issues such as lack of training and out of date

Furthermore, CRCs in Sindh have minimal authority and autonomy which is required to make significant alterations as the top administrative tiers can neutralize their recommendations. Research shows that most CRCs have operated under limited systems that lack creativity and flexibility to make changes that should have been adopted according to the new education trends (Kirwin et al., 2019). This bureaucratic obstacle is a major setback in the dynamic nature of educational requirements where promptness and agility is a matter of concern.

Moreover, the current socio-economic situation in Sindh catalyses these issues. The poor poverty levels and an insufficient infrastructure are other significant challenges to education in the country because it restricts available basic infrastructures in education that support quality teaching and learning (Ghunio, 2023). This systemic unequal treatment further prevents CRCs to pursue holistic reviews and reformations, a fact evidenced by the inter-relation between socio-economic status to the educational performance (Soomro, 2024). Access to education- Multimedia education materials and facilities CRC needs access to education-related materials and facilities in a challenging environment to contribute to curriculum quality-enhancement and to improve the relevance of a learning opportunity to many students.

Research Objectives

1. To identify the key obstacles faced by the curriculum review committees at Directorate Curriculum Assessment and Research Sindh.
2. To explore the perceptions of stakeholders regarding factors hindering the committee's performance.
3. To suggest strategies for overcoming these challenges based on stakeholder insights.

Research Questions

1. What are the major challenges encountered by the curriculum review committee at Directorate Curriculum Assessment and Research Sindh. Jamshoro?
2. How do stakeholders perceive the factors affecting the committee's efficiency?
3. What strategies do stakeholders propose for overcoming these obstacles?

Literature Review

Pakistan and Sindh Educational Policy Context

Pakistan has a long history of educational restructures based on national- and-provincial level priorities that weigh centralization with independence (Ministry of Federal Education, Pakistan, 2009). The 18 th Amendment (2010) gave control of education to provinces leading to different reactions in policies (UNICEF, 2015). Sindh responses focus on Sindh Education Sector Plan and the Curriculum Implementation Framework (CIF, 2014), and are meant to overcome chronic problems such as absence of alignment between textbooks, poor assessments and mismatches between syllabus design and teaching delivery (Government of Sindh, E&LD, 2014). This policy had created training ground of specific curriculum agencies at the provincial education set-ups.

Development of SACAR (Sindh's Former Curriculum Unit)

Understanding of the education scenario in Sindh, Pakistan is quite essential in the development of SACAR (Sindh Former Curriculum Unit). Such change in the educational curricula (especially in the field of medical and teacher education) has brought to the fore the issues of challenges and opportunities of aligning local practices of teaching, against national and international standards of education.

The problem has been confirmation of such a disjuncture between policy and practice in education in Sindh that involves a considerable weakness in curriculum development. According to the research conducted by Hashmi, there exist significant gaps in such vital issues as digital pedagogy and formative assessment owing to the modern educational system (Hashmi, 2025). This means that there is a necessity to develop a localized framework, that is, the Sindh Contextual Teacher Competency Framework (SCTCF), which will cater to these gaps and improve teacher competency to synchronize local practices with international trends (Hashmi, 2025).

Besides that, the community oriented medical education curriculum (COME) is a good example of local needs that should influence curriculum development. According to the information provided by Baig et al., medical program graduates need to not only be able to learn aboutnovel diseasesbut also combat the priority health-care burdens of their populations (Baig et al., 2006). This methodology is reflected by Beauchamp and colleagues, who remarked that stakeholders (faculty and students) joined efforts to update conventional curriculums, to include medically applicable locally relevant problems they refer to as a broader expression of developing innovative education formats in response to health needs in the region (Beauchamp et al., 2011).

The significance of the improvement of science education, as well as the inability to advance without improving on the science education front, was reported by Nandwani et al. as well (Nandwani et al., 2021). This is in line with the premise of what Jumani and Kazimi have done with edupreneurship in integrating into the higher education system, both dealing with entrepreneurship skill shortage, as well as possible merger of requirements of modernization in certain areas of the curriculum in Sindh (Jumani & Kazimi, 2024). In their study, I would say that they have a clear eminent request regarding innovation into approaches to teacher training, which is the determinant of these curriculum implementation success.

Moreover, the challenges associated with availability of resources and methods of instruction add to the problems of effectiveness of the curriculum in Sindh. As mentioned by Khoso et al., the Sindh education system has serious issues that require well-designed policies to support the quality of education and eliminate disparities due to social and economic status (Khoso et al., 2019). Unar and Hussain went further to explain that the moral development of the curriculum should also be emphasized in order to achieve holistic educational outcomes (Unar & Hussain, 2021).

This is because, SACAR conceptualization within the educational colored Sindh should consider a multi pronged approach that would build a single institution within the local community expectations and requirements, global education principles, and pedagogy. The need to hear the voices of the stakeholders is critical, along with taking into account the systemic obstacles that affect the quality of education. Such an all-encompassing approach would probably lead to the creation of curriculum that improves not only the quality of education but also student performance in the Sindh region.

Evolution and Rationale for in DCAR.

The debate around the Distributed Coherent Aperture Radar (DCAR) technology has changed majorly with it now revolving around its enhanced features as opposed to the typical radar systems. First, DCAR was used to increase the signal-to-noise ratio (SNR) of radar systems in a coherent framework with distributed antennas (Zeng et al., 2016; . Synergy between antennas is observed in coherent radar systems, where phased signals can be received, leading to better capabilities to detect a target and a balanced estimate of the angle, important in military and aeronautical systems (Long et al., 2017; . DCAR can provide sizeable SNR improvements through complete coherence on the transmitter and receiver, and therefore is a major advance in radar technology (Long et al., 2017; .ugs highest lack of dependency.

The tech implications of this go beyond performance improvements; DCAR can be developed in a manner which will support a flexible deployment and is highly scalable across different operational context. Design mitigates the limitations that come with larger traditional radar, including issues of simulative space constraints and the associated high cost of upkeep due to their size (Long et al., 2017; . In addition to that, new developments indicate that the fixed-loop feedback considerations might be introduced to adjust radar settings in real-time, bringing even more efficiency to vehicle tracking and target detection Zhang et al., 2024).

In addition, in-depth studies on DCAR have also uncovered its possible use in various disciplines, especially where the vision tracking process has to be done on moving targets and in situations where large scale situational awareness is required. This flexibility shows that DCAR is not an improved version of the already established technologies but a change towards increasingly adaptive and resilient radar techniques that can be customised to particular field requirements (Zeng et al., 2016; , (Long et al., 2017; . Research has shown positive experimental findings based on which the practical side of DCAR can be applied in a variety of settings, as the increase in the sensitivity and accuracy of detection can significantly contribute towards operational success (Long et al., 2017; , Zhang et al., 2024).

As a way to wrap up the development of DCAR technology it is anchored in the need to enhance radar technology in order to satisfy the current requirement. The move to DCAR has been necessitated by the traditional radar systems to have a better SNR, flexibility and the prospects of real-time operational flexibility. These developments make DCAR a key platform in military/civilian radar systems.

Mandate and Institutional Functions of DCAR

The conceptualization of DCAR mandate and institutional operations are informed by a fusion of theoretical and applied onto distinct conceptual areas to create new knowledge and engage in confronting contemporary social issues. It is intended that the DCAR serve as a conduit of interdisciplinary research that maximizes artistic expression and develops critical discourse around some of the most relevant concerns being faced in the world today. In particular, the focus of the program is to encourage participants to pursue complex problems, so-called 'wicked problems', about which there is an increasing concern in our social and political life, such as homelessness or alienation in society (Kerby et al., 2017).

The desire to come up with new knowledge due to their creative arts is an important element within the mandate of DCAR. According to Kerby et al., this project represents the spirit of higher education institutions to serve the common good, making the community life more fulfilling, and creating an inquiry atmosphere that fits the mission statement of universities (Kerby et al., 2017). The view aligns with the general goal of numerous educational theories today that encourage studies with real world implications thus making the research more relevant and practical to the needs of the society.

Also, the role of DCAR is not limited to academic discussion; it is the role of fostering community engagement and development of collaborating networks between actors in the arts, scholarship, and community. This cross-departmental collaboration allows the smooth flow of thoughts and actions, which are likely to result in unconventional solutions that can solve societal problems (Kerby et al., 2017). Moreover, the focus on collaborative projects in the program is aimed to augment artistic pursuits as well as promote inclusivity and diversity of thoughts, which can be seen as an augmentation of the total learning experience (Kerby et al., 2017).

The DCAR incorporates a strategic synthesis between arts and research to be deeply involved in the process of understanding and responding to complex and many-faceted social challenges. The fact that it focuses on creation of meaningful knowledge through creative practice makes it an academic institution that meets the mandate of the institution of higher education and has become a central force in transforming the community in a positive way.

5. Structure and Role of the curriculum Review Committee

The Curriculum Review Committee (CRC) is instrumental to the ongoing development and betterment of the educational bodies most especially in such disciplines as pharmacy, and nursing. The main responsibilities of the RCs require them to evaluate the curriculum in order to make it relevant, of high quality and relevant to the accreditation requirements and those of the society (Carter et al., 2011; Trent, 2022). They typically have a strong faculty representation, and although some institutions also seek administration and student feedback on these committees, not all of them allow students voting rights on these committees (Carter et al., 2011; Trent, 2022).

An organized way of looking at the functions of CRC is core to management of curriculum. As an example, a web-based curriculum management system has been introduced in certain programs that help to gather and evaluate course content, learning outcomes, and approaches to instruction

(Kirwin et al., 2019). Such systematic approach is instrumental in the process of mapping and reviewing a curriculum in the way that assumes its coherence and specifies gaps in knowledge and skills throughout the program (Kirwin et al., 2019). Incorporation of a well-outlined rubric during course reviews will help the committees to review the course fully basing on course layout, integration, learning outcomes and assessment modalities (Persky et al., 2012).

The continuous evaluation processes undertaken by CRCs play a critical role to ensure quality standards of education as upheld by accreditation bodies. These standards also mandate a rigorous review procedure whereby the assessment information will be used to make administrative alterations in the curriculum (Stevenson et al., 2011; . More so, CRCs in different institutions have embraced new methods. Both these approaches can be characterized by other structures, e.g., subcommittees assigned to review certain elements of the curriculum, as it will enable such a structure to focus separately on different elements of the curriculum and may reflect greater expertise in particular subjects (Stoddard et al., 2016). This stratification may allow more effective implementation of comprehensive changes and modernization of the curriculum based on an ever-changing educational needs and accreditation requirements (Stevenson et al., 2011; Stoddard et al., 2016).

Further, the participatory roles of different stakeholders, such as faculty, students, and external reviewers in the review process add value to the review process and make different viewpoints captured in curriculum making and assessment. It should be noted that ad hoc committees established in the CRCs frequently provide an important contribution to the assessment of curricular streams thanks to the expertise of professors and preceptors involved (Conway et al., 2011). This initiative facilitates the thoroughly holistic approach to curriculum development because it is based on competency-based education and concerns particular learning outcomes associated with the modern professional practice (Chou et al., 2018).

To conclude, CRCs play the role of core organizations in the education sector and direct ongoing development of curricula through the systematic processes of systematised reviews. Their activities aim at operating at high educational standards, based on thorough analysis and the input of a variety of stakeholders. This collaborative process helps in transforming programs in response to the current needs of the society and the healthcare professional domain, translating into an efficient responsive educational culture.

Stakeholder Ecosystem and Governance Interfaces

The management of multi-stakeholder ecosystems has literally become a critical area of concern especially in the areas of vital sustainable development, natural resources and corporate responsibility. There must be a strong patrimony of a variety of actors such as governments, non-governmental organizations, civil societies, and the private sector which have distinct roles in decision-making and resource management. The associated collaboration and coordination of these stakeholders play a vital role in effective governance and realization of sustainable results.

Engagement by different stakeholders plays a key role in developing collaborative governance where different interests are represented and bargained upon. As an example, Ardian et al. assert that any agricultural policy formulation process needs to incorporate a wide range of stakeholders, especially NGOs, as in the case of the Indonesian Sustainable Palm Oil (ISPO) governance structure. Their discussion backs the statement that the involvement of stakeholders is essential to sustainable development and institutionalized forums can improve collective decision-making and synergy in agricultural projects (Ardian et al., 2018). Equally, it is suggested by Maharjan et al. that multi-stakeholder platforms are effective in dealing with disputes over natural resources and multi-authority governance models should be introduced in the situations where constructive dialogues amongst stakeholders are facilitated (Maharjan et al., 2024). These results would indicate that by designing unilateral participation, one is able to establish win-win situations whereby different interests are taken into consideration.

The significance of governance interface in these ecosystem cannot be overestimated. The stakeholder engagement strategies should be well crafted to be sensitive, open and accountable. Vian et al., demonstrate how multi stakeholders initiatives can be used to increase transparency and accountability by taking advantage of effective

practices in other sectors e.g. Such as the Extractive Industries Transparency Initiative. Open stakeholder meetings and active information distribution have become commonplace in such initiatives and contribute to the establishment of trust and the ability of different stakeholders to hold each other responsible (Vian et al., 2017).

In addition, the complexities of the behaviors of multi-stakeholder system are often prone to complexities as evidenced by Kazancoglu et al., who point out that the dynamics present in a multi-stakeholder genuinely survive on the interconnection of multiple actors. They declare that proper stakeholders collaboration could result in systems that are more resilient and able to adapt to sudden changes (Kazancoglu et al., 2022). Such flexibility is essential because distinct groups of stakeholders in various sectors would have different amounts of resources and power available, and the governance framework must consider all efforts and give equal importance.

Moreover, interactions in the ecosystems need to be approached strategically to make sure that all the stakeholders are heard, particularly the ones who are normally underrepresented. The same can be seen in the work by Mutoro et al., who state that a multi-sectoral and multi-stakeholder approach should result in a high-level engagement outcome with the purpose of gaining the commitment of governmental organizations and sustainable practices (Mutoro et al., 2024). This underlines the importance of comprehending the local contexts of the stakeholders and how they can apply influence over the governance.

In the real world, it will be necessary to define an effective stakeholder engagement process by establishing strict governance structures, which define the roles, responsibilities, and decision-making authority. Plummer et al. stress the notion that the experiences of positivity in environmental governance matters hugely in how stakeholders rate and sustain involvement processes, which means that the engagement processes should be well designed to ensure that there is a sense of trust and friendship in all of that (Plummer et al., 2017). Finally, the dynamics of multi-stakeholder ecosystems should be enabled by recursive learning and evolving. The engagement of stakeholders is not supposed to be viewed only as a consultation process but rather as a dynamic and continuous partnership that entails mutual gains, common goals and shared problem solving. Institutions of governance shall therefore be effective by creating an environment, which encourages diverse stakeholder inputs, hence, increasing the resilience and sustainability of such ecosystems.

Key Challenges to Review Committee

Coordination and Communication Gaps

Incoordination and miss communication differences may be pointed out in different areas such as interpersonal relationships, healthcare areas and technology communications. It is important to understand such gaps in order to foster competent communication and group work. Pressing communication barrier on a personal relationship can hardly be ignored especially in the family interaction, an issue of technology and generational divide. Such over-dependence on social media has been revealed to decrease in-person interactions, subsequently resulting in confusion and psychological problems among family members. Studies have shown that these interactions have a capacity to aggravate cross-department communication breakdowns leaving the participants of such interactions to run into emotional difficulties especially in the family setup of the middle classes whose socio-economic pressures seem to enhance their experiences of such issues (Khuhro et al., 2021). In addition, the presence of generational dissonance brings another difficulty into the family in the form of adolescents struggling to communicate their ideas and emotions to their parents, which cannot be effectively resolved (Nasir & Johari, 2023). Such generation gap may cause misunderstanding that continues to increase with time unless resolved effectively.

The failure in communication in professional environment, especially in medicine usually results due to the hierarchical hierarchies that discourage free communication among the team members. Studies have shown that in operating rooms these hierarchies make the lower-ranking personnel unable to raise concerns, therefore, increasing the chances of errors that may result in either poor patient outcomes or adverse results (salman et al., 2024). Moreover, to provide safe patient care, proper coordination during the hospital rounds process is essential but without interprofessional communication even with nurses and therapists, serious lapses in communication and error can occur (Stickrath et al., 2013). A critical review revealed that lack of teamwork is directly linked to

clinical overall performance, and therefore implementation of a structured communication rules should be adopted to reduce such gaps (Manser, 2009).

Also, the nuances in the management of crisis communication demonstrate how widespread the communication gaps might be in bureaucracies. Research that occurs inside government agencies depicts the fact that hierarchical systems of decision-making are slow in nature and thus respond poorly in emergency situations thereby failing to elicit responses to a given emergency because of a breakdown in internal communication. This is indicative of the need to have better processes and mechanisms to communicate effectively and in a timely manner in high integrity settings (Sulistyanto & Jamil, 2020). Equally, discussion of community networks further demonstrates the significance of relevant content, community ownership, and localization to address inequalities in connectivity by highlighting the role of locally-driven approaches to improve communicative productivity (Gwaka et al., 2022).

Based on these observations, it can be said that solutions to bridge communication gaps can be resolved by first identifying the source of these predicaments either through reliance on technology, effects of hierarchy or bureaucratic nature. An interdisciplinary strategy of establishing an open dialogue, focusing on face-to-face communications, and introducing structured systems of communication can go a long way towards enhancing coordination and reducing misunderstandings in diverse settings.

Role Clarity and Committee Composition

The committees work most effectively when their roles are well defined and membership continues to be stable (OECD, 2018). Similar weaknesses of policy documents (vagueness) can be observed in Sindh with regard to the role of a committee didactic vs. advisory vs. the executive power is not clearly defined (E&LD, 2014). Also, member selection is usually project-specific and is frequently without clear criteria (academics one year, administrators the next, and no system of continuity or succession). It makes institutions more fragile by limiting institutional memory, undermining technical competence and disparate accountability (RSU Sindh, 2022). According to the literature on governance theory, the best structure in signifying legitimacy and quality of output generated by a committee has been understood through clear demarcation of roles and continuity in representing the committee (Harris & Chapman, 2015). Without this, curriculum review committees will just become rubber stamping bodies as opposed to the evaluative actors they are supposed to be.

Resource Availability and Infrastructure Gaps

Scarcity of sources of review compromises the quality of review on various levels. Provincial funding is regularly weighted towards the recurring expenses salary and buildings rather than the developmental task such as the overview of a curriculum (Ahmad, 2014). Workshops held by CAR, which are essential to collaborative review, often do not include funds to test in the field or to print prototypes or cover consulting payments (Global Partnership for Education, 2019). The use of technologies DCAR is also held back by the old ICT infrastructure, the lack of access to digital databases, and the disproportionally low degree of digitization of item banks (World Bank, 2022). The local studies confirm that sound educational planning needs financial and technological support in records, test runs as well as data examination (UNESCO, 2016). Within the Sindh context, the lack of such resources translates to the poor resources in place within review committees that encourage expediency and not contemplation.

External Influence and Political Interference

Results of curriculum review processes are sensitive especially in political terms leading to difficulties. This comes as the federal government has brought up the Single National Curriculum (SNC) in curriculum which brings about politically charged decision points in the context of language of instruction, history narratives, and religious education in Sindh (Shaikh, 2024). Policians and leading administrators sometimes have intervened in the review procedures in order to support specific content since they wish to favor electoral or ideological inclinations (Agrawal, 2019). The consequences of such dynamics are the pressure on committee members to make conservative or non-pedagogic decisions that restrict groundbreaking and technical excellence (Guajardo, 2018). Scholarly accounts have also emphasised that politicized curriculum choices create review paralysis or lowest-common-denominator

decisions, neither of which is helpful in supporting educational improvement (Apple, 2009).

Relevance to Local Socio-Cultural Contexts

The multicultural/ multilingual demography of Sindh, Sindhi, Urdu, Punjabi, Pashto, Balochi and cultural diversity of Sindh require curricula that are relevant to the ground. The cultural relevance of the learning materials in learning would increase their level of engagement and assurance on their identity, especially among the minority groups (Hornberger & Brock-Utne, 2006). Curriculum review committees have the responsibility of achieving a balance between the national standardization and the linguistic diversities in Sindh (E&LD, 2014). Literature however illustrates that reviewers tend to follow generic models and not contextualize this due to lack of cultural preparation, the pressure to standardize or no provision of local context with the stakeholders (RSU Sindh, 2022; Global Partnership for Education, 2019). Devoid of such localization, the frustratingly alien curricular materials may fail to work in important ways at the classroom level.

Alignment Between Curriculum and Assessment

Constructive alignment theory assumes that curriculum, teaching, and assessment have to support each other in order to facilitate learning (Biggs & Tang, 2011). In Sindh, there is found to be a discrepancy with assessments particularly summative examinations prioritizing rote learning and recall despite revised curricula being more interested in deep cognitive skills (RSU Sindh, 2022). the curriculum review committees do not have assessment specialists that can assess the discrepancy between learning goals and test items (World Bank, 2022). Also, item banks are ill developed, shallow in nature and coverage, and without analytic capacity. Evidence of how students interact with materials is essential to the review decision- and without such evidence, review actions are speculative, not evidence-based. Thereby, assessment-curriculum misalignment is the concomitant cause and effect of ineffective reviews.

Workload Management and Time Constraints

Getting squeezed under inflexible timelines Such paradigms may be determined by angstrom donor time cycle, by academic schedule deadlines or by administration mandates, all of which compress deliberation and boost risks of mistakes (OECD, 2018). They have to go through enormous amounts of books and materials within weeks in every single cycle, which restricts iterative improvements, and testing (Directorate of Curriculum, Assessment & Research Sindh, 2025). Applying the results of international research, the information that hurried curricular activities generate a worse generation of products, alienate stakeholders, and continue to implement setbacks is confirmed (Fullan, 2016; Harris & Chapman, 2015). In Sindh, such shifting trade-offs undermines the content and stakeholder participation of reviews.

Change Readiness and Innovation Capacity

The preparedness of organization to innovation in terms of adaptive leadership, professional learning systems and openness to experiment is scanty in the department of Curriculum Assessment & Research Sindh. Such projects as SELECT have introduced a lot of innovation, including leveled reading materials and formative assessments, but these measures have not yet become an ingrained part of daily DCAR work (World Bank, 2022). Literature on educational reform (Kotter, 1996; Fullan, 2007) supports this assertion because sustainable reform requires practices that are anchored, rather than the one driven by projects. The review committees in Sindh lack structural incentives to maintain innovation such as recognition systems, ongoing learning programs, or institutional demands of experimentation creating situations in which the innovation stagnates after funding of a project ceases to continue.

Stakeholder Inclusion and Representation

Inclusive governance is core to legitimacy in the curricular reforms. Investigations indicate that the relevant consultation of teachers, head teachers, parents and community-based organizations leads to greater local ownership and improvement in implementation outcomes (UNESCO, 2016). But DCAR review committees do not usually have frontline teachers or community representatives, which RSU Sindh (2022) and Global Partnership (2019) also identify. Teachers voices are likely to be only heard during piloting processes but not on core materials vetting processes (Global Partnership for Education, 2019). This omission creates a top-down mentality, making it less teacher

owned and less practical in a variety of classroom situations.

Curriculum Review Process and Structural Reforms

The curriculum review process and structural reforms in education have become popular such as mechanisms of improving the performance of education and responding to social-economic needs. The importance of these reforms can be explained by the fact that higher education serves an essential part in socio-economic development (Volchik et al., 2018). The intention of these reforms is to streamline educational institutions and enhance governmental systems to better fulfill the demand of society and the market, which indicates the change towards accountability and performance in education systems in a global sense (Kovaevic et al., 2020).

Within the scope of curriculum implementation, stakeholders should be carefully engaged as well as educational practices and cultural settings of every country/region. Speaking of school reforms being market-oriented, Suarez explains how they can increase inequalities, especially among the marginalized social groups (Suarez, 2021). This question in particular is topical in the context of transitional education systems in which the motivation to reform agencies may result in policy implementation that lacks harmony with the principles within the education system (Kovačević et al., 2020). According to the Teacher-Centered Systemic Reform (TCSR) model by Woodbury and Gess-Newsome, educational reform should pay attention to the role of a teacher and the interdependence of elements of reform as they argued that a holistic change has to be considered within the context of change (Woodbury & Gess-Newsome, 2002).

This has been followed up by research that indicates the importance of empirical assessment of new curriculum programmes. Emphases on improving educational beliefs and practices in Gansu Province, for example, were also found to be put into place, although thorough evaluations have not yet been conducted to provide clues about their efficacy (Sargent, 2011). In Denmark, the rearrangement in governance in adult education has led to a vast change in the accessibility and the roles of the institutions, showing the intertwined nature of educational policy and socio-economics (Rasmussen & Lolle, 2021).

Also, the interaction between the educational systems and the needs of the labor market cannot be ignored. Studies show that universities and colleges need to adjust their course of study to the needs of the industry in order to develop relevant human resources, which is an important point to note about supply-side structural adjustments (Tang et al., 2022)Yuan & Wang, 2021). This harmony is also witnessed in the initiatives to stimulate physical education in the University in China through establishing links between educational policies and the overall economic policy framework (Tang et al., 2022).

Overall, curriculum review mechanism and institutional arrangements in education requires a comprehensive lens with which socio-economic contexts, stakeholder considerations and complex interplay between educational practices and the market need to be involved. It is an effective integration of the diverse aspects that are important in bringing some sort of significant changes in the field of education to bring about equality and sustainability in the educational systems.

Additional Theme: Comparative Provincial and International Best Practices

Looking at curriculum systems in other regions, e.g. Punjab, India (State Council of Educational Research and Training), or related decentralized systems in Kenya or South Africa, provides an insight into the best practice that Sindh could implement. Public feedback due to transparent brushes, online portals, and even dedicated curriculum researchers can be helpful to the Curriculum and Textbook Board of Punjab (Punjab Textbook Board Annual Report, 2021). The DBE in South Africa employs stringent item-bank practices and inclusion to make sure that materials are linguistically diverse (DBE, 2018). The 2016 UNESCO catalogue codifies international best practices in regards to principled participatory review, data-based policy, and digital platforms. Comparative investigations indicate that allocating money in digital infrastructure, open consultation procedures and transparent governmental system remarkably enhance the effectiveness of review mechanisms and their legitimacy guidelines that DCAR can implement by converting the same into modified policy protocols.

Methodology

The qualitative research design was taken to analyze the procedures, experiences and practices of the Curriculum Review Committees of Social as well as Science curriculum in the Directorate of Curriculum Assessment and Research (DCAR), Sindh, Jamshoro. A qualitative method was deemed the most appropriate since it provides an opportunity to dive deep into the dynamics within an institution and the lives of its participants, which cannot be reflected sufficiently through the quantitative measure (Creswell & Poth, 2018). Purposive sampling was also utilized to recruit the participants involved directly in the appraisal of the curriculum, which allowed ensuring that information-rich and contextually relevant data was collected (Patton, 2015). The stakeholders involved in the curriculum review activities at DCAR were the people who were subjected to sampling and total was 24 citizens (16 males and 8 females) with very close expertise in curriculum evaluation. An in-depth structured interview protocol consisting of 12 open-ended questions was used as the primary research tool because it would provide an opportunity to achieve uniformity in the responses provided across the interviews as well as the flexibility to provide their own interpretations, examples, and details of the practices that are context specific. Interviews were conducted and data was collected face-to-face, with each lasting 45-60 minutes, in a professional confidential setting to allow confidence and comfort to the interviewee. Field notes were thoroughly recorded in the process of each interview, and, at the consent of the participants, the audio recordings have also been done to ensure accuracy and reliability in the transcriptions. The obtained information was analyzed through the thematic analysis with the help of the six-step approach explored by Braun and Clarke (2006): familiarizing with the data, generating the initial codes, identifying the themes, reviewing the themes, defining and naming resultant themes, and formulating the final report. This methodical and iterative analytical procedure allowed the identification of common threads and institutional issues as well as operational habits, thereby producing thick, credible, and contextually based knowledge of how the curriculum review process at DCAR works.

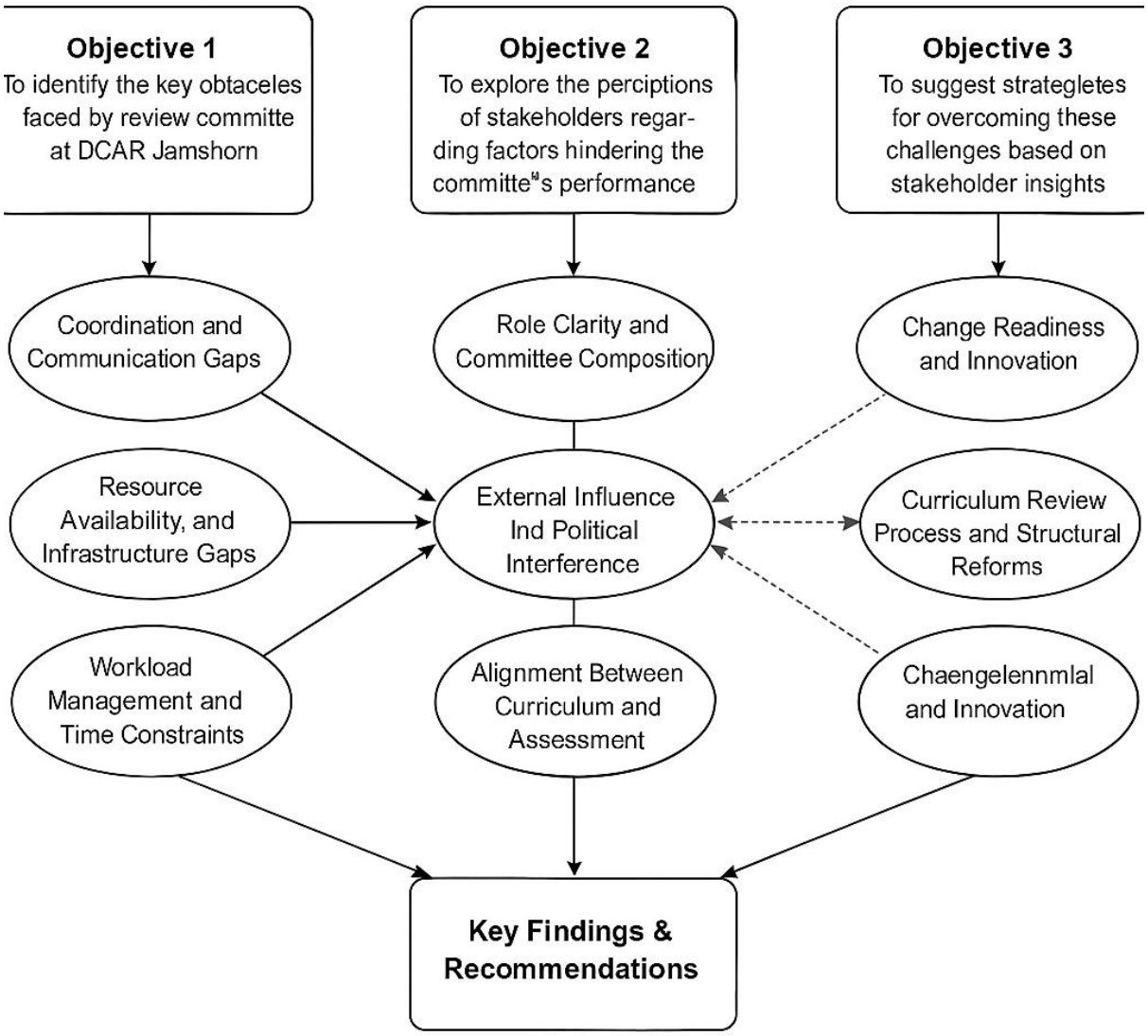
Results and Discussion

Themes, Sub-Themes, Objectives, and Research Questions Alignment

Serial No.	Theme	Sub-Themes	Aligned Research Objective	Aligned Research Question
1	Coordination and Communication Gaps	Lack of timely communication Ineffective information sharing	To identify the key obstacles faced by the curriculum review committee's at DCAR Sindh Jamshoro.	What are the major challenges encountered by the curriculum review committee's at DCAR Sindh Jamshoro?
2	Role Clarity and Committee Composition	Unclear roles Inadequate representation	To explore the perceptions of stakeholders regarding factors hindering the committee's performance.	How do stakeholders perceive the factors affecting the committee's efficiency?
3	Resource Availability and Infrastructure Gaps	Limited financial resources Lack of physical infrastructure	To identify the key obstacles faced by the curriculum review	What are the major challenges encountered by the curriculum review

			committee's at DCAR Sindh Jamshoro.	committee's at DCAR Sindh Jamshoro?
4	External Influence and Political Interference	Political pressure External stakeholder influence	To explore the perceptions of stakeholders regarding factors hindering the committee's performance.	How do stakeholders perceive the factors affecting the committee's efficiency?
5	Relevance to Local Socio-Cultural Contexts	Mismatch with local needs Lack of inclusivity	To explore the perceptions of stakeholders regarding factors hindering the committee's performance.	How do stakeholders perceive the factors affecting the committee's efficiency?
6	Alignment Between Curriculum and Assessment	Disconnection between syllabus and evaluation Inconsistent assessment methods	To identify the key obstacles faced by the curriculum review committee's at DCAR Sindh Jamshoro.	What are the major challenges encountered by the review committee's at DCAR Sindh Jamshoro?
7	Workload Management and Time Constraints	Overlapping responsibilities Unrealistic deadlines	To explore the perceptions of stakeholders regarding factors hindering the committee's performance.	How do stakeholders perceive the factors affecting the committee's efficiency?
8	Change Readiness and Innovation	Resistance to change Lack of training for innovation	To suggest strategies for overcoming these challenges based on stakeholder insights.	What strategies do stakeholders propose for overcoming these obstacles?
9	Stakeholder Inclusion and Representation	Limited teacher input Underrepresentation of rural schools	To explore the perceptions of stakeholders regarding factors hindering the committee's performance.	How do stakeholders perceive the factors affecting the committee's efficiency?
10	Curriculum Review Process and Structural Reforms	Outdated review mechanisms Need for procedural reforms	To suggest strategies for overcoming these challenges based on	What strategies do stakeholders propose for overcoming these obstacles?

			stakeholder insights.	



Theme 1: Coordination and Communication Gaps

Respondents repeatedly reported on a need to better coordinate in Curriculum review committees. One male explained, "There is lack of coordination between left hand and the right hand at other time the right hand will do, but the updates will not reach to everyone in time." Although a few realized that the meetings had helped to better communication some still believe that information flow was not well established as it still relied on few members. Several respondents spoke of a common digital document system where documents would be shared and updated. Without such, miscommunications are likely to slow down the process of curriculum review. However, the desire of members to regularly attend the meetings was mentioned as an indication that the team can overcome these gaps.

Theme 2: Role Clarity and Committee Composition

Most of the interviewees were of the view that the problem of overlapping responsibilities generated confusion. One of the female stakeholders stated that, I did not know whether I should revise study

material or offer policy suggestions it was not made clear to me. The variety of educational backgrounds of the committee members was appreciated by some, however, since this gave opportunities to discuss issues more deeply. Efficiency was however constrained by the fact that there was no role specific orientation. Making clear roles and conducting role-based training were the typical recommendations. Participants believed that this might be possible by clarifying expectations at the initial part of the project so to allow more focused contributions without necessarily losing the collaborative diversity which many valued.

Theme 3: Resource Availability and Infrastructure Gaps

Respondents have repeatedly reported the lack of access to needed resources, including up-to-date textbooks and reference materials as well as working meeting space. A Male observed, Sometimes we are in a room that lacks proper lighting or even functioning projectors this slows everything." Most supported the idea that the physical and digital infrastructure should be improved although some were content with the presence of basic administration support. Suggestions were made to set aside specific budget to facilitate the activities of review and the use of laptops or tablets to give members. A number of stakeholders identified that improved infrastructure would help to a great extent to decrease delays and enhancing the nature of curriculum analysis.

Theme 4: External Influence and Political Interference

The involvement of politics also became a very delicate issue but was mentioned more than once. Other respondents stated that decision-making is sometimes influenced by the presence of persons not included in the review committee One respondent stated cautiously, stating that recommendations change after meetings and that they are unsure why. Although some people thought that the external control had a chance to establish the greater accountability, the majority believed that the political intercession destroyed the objectivity of the procedure. The suggestion by stakeholders involved formal protection of curriculum review process so that the external input can be constructive and can be posed through transparent channels. This equilibrium was thought to be important in upholding the quality of the work of DCAR.

Theme 5: Relevance to Local Socio-Cultural Contexts

The stakeholders were divided in expressing their opinions on how well the curricula under review reflected the realities and local cultures. One of the female participants said, students in Jamshoro do not always identify themselves with what they read about places that they have never visited. Some members commended recent efforts to include regional history and examples but others still felt that these were superficial. Among recommendations, there was greater participation of the local teachers and cultural experts in drafting stages so as to involve a much deeper adaptation of Sindh heritage. The committee understood that cultural relevance meant not only representation, but also the creation of student engagement and pride in themselves.

Theme 6: Alignment Between Curriculum and Assessment

Various respondents mentioned the problems of misalignment between the teaching content and how the students are evaluated. "As we insist on critical thinking, the tests also dish out in memorizing," a participant noted. Whereas others praised new pilot projects which have tried to align assessment procedures with student results, such initiatives were reported as having been narrow in scope. It is desirable that the committee employs an ongoing review policy so that the assessment is continuously updated with changes in the curriculum. Discussing such alignment may improve teaching quality and student learning because it was common placement that assessment informs a significant portion of the classroom practice.

Theme 7: Workload Management and Time Constraints

Major concerns that prevented or interfered with members delivery to duties were overlapping responsibilities beyond the Curriculum, Assessment and Research Directorate Sindh. This was described as a challenge by one stakeholder who said, "We are supposed to review curriculum in addition to teaching full-time, it is very difficult

to give it the necessary attention it requires." Whereas expectations of the Curriculum review committee to be flexible with the timing of scheduled meetings were applauded to some, others observed that the deadlines were not always realistic. Several suggested staggered phases of review to provide more evenly distributed workload. Better scheduling, and enough time allocated to the simultaneous process of curriculum evaluation, would allow a more comprehensive and deliberate approach to it.

Theme 8: Change Readiness and Innovation

Participants varied regarding how open they were to curriculum innovation. One male respondent stated, We should modernize our strategy, but some of the members will not venture into something new. Others referred to successful small-scale innovations such as the embedding of digital resources that showed preparedness to change when the rewards became apparent. Resistance was usually not blamed on lack of willingness instead of lack of training. Respondents advised that capacity-building programs should be structured to promote the confidence in embracing innovative practices so that reforms can be embraced and made sustainable.

Theme 9: Stakeholder Inclusion and Representation

The composition of the committee was well-received in general, with some people pointing out that some other specific groups were not represented enough, in particular rural teachers. One participant- a female wrote, "we cannot review a curriculum of the entire province without the voices of remote schools". Although stakeholders admitted that they have improved on outreach relative to the past, they still believed that balanced representation is a must. Possible recommendations involved membership rotation or organization of regional consultation sessions in order to obtain a broader opinion.

Theme 10: Curriculum Review Process and Structural Reforms The organization of the review process itself brought the praise and criticism. One of our respondents observed that, At least now, we have a documented process; it used to all be verbal and ad hoc. Nonetheless, some believed the existing procedure to be too structured, which did not allow the iterative feedback to take place. It was suggested by members that a tiered review process be implemented allowing a draft to undergo several reviews before being full reviewed. It is a matter of introducing the flexibility of adoption that does not mean a lack of discipline in the procedure followed by DCAR. decision-making.

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THEMES, SUB-THEMES, OBJECTIVES, AND RESULTS

S.No.	Theme	Sub-Themes	Aligned Research Objective	Result / Key Insights
1	Coordination and Communication Gaps	Ineffective information sharing; delayed decision-making	To identify the key obstacles faced by the curriculum review committee's at DCAR Sindh, Jamshoro.	Stakeholders reported that lack of timely communication often resulted in duplicated efforts and missed deadlines. Some appreciated the existing informal communication channels, but called for structured coordination mechanisms.
2	Role Clarity and Committee Composition	Undefined responsibilities; skill mismatch	To explore the perceptions of stakeholders regarding factors hindering the committee's performance.	Respondents highlighted that overlapping roles created confusion, while some members lacked expertise relevant to the review process. They suggested clearer role definitions and inclusion of more subject specialists.

3	Resource Availability and Infrastructure Gaps	Inadequate funding; outdated facilities	To identify the key obstacles faced by the curriculum review committee's at DCAR Sindh, Jamshoro.	Participants agreed that limited financial resources and lack of modern equipment hindered efficiency. Some noted that resource allocation had improved slightly, but gaps remained critical.
4	External Influence and Political Interference	Political appointments; biased decision-making	To explore the perceptions of stakeholders regarding factors hindering the committee's performance	Many expressed concerns about political pressure influencing committee outcomes. A few felt political support sometimes expedited processes, but the majority saw it as undermining objectivity.
5	Relevance to Local Socio-Cultural Contexts	Curriculum mismatches; lack of contextualization	To identify the key obstacles faced by the curriculum review committee's at DCAR Sindh, Jamshoro.	Respondents observed that some reviewed content failed to reflect local cultural realities. While certain improvements were acknowledged, adaptation to Sindh's socio-cultural context remained insufficient.
6	Alignment Between Curriculum and Assessment	Misaligned content and exams; outdated assessment methods	To explore the perceptions of stakeholders regarding factors hindering the committee's performance	Stakeholders agreed that misalignment reduced educational quality. Some recognized recent attempts to modernize assessment tools, but felt these were still not fully integrated with curriculum changes.
7	Workload Management and Time Constraints	Excessive assignments; unrealistic deadlines	To identify the key obstacles faced by the curriculum review committee's at DCAR Sindh Jamshoro	Members cited heavy workloads as a key stress factor, leading to rushed reviews. A few noted improved scheduling in recent projects, but most called for better workload distribution.
8	Change Readiness and Innovation	Resistance to change; limited adoption of new methods	To suggest strategies for overcoming these challenges based on stakeholder insights	While some members embraced new approaches, others resisted due to fear of uncertainty. Training programs and exposure visits were recommended to build confidence in innovations.
9	Stakeholder Inclusion and Representation	Limited participation of teachers and parents	To explore the perceptions of stakeholders regarding factors hindering the committee's performance	Participants emphasized that broader involvement from grassroots educators and parents could enrich the review process. Inclusion was seen as both a need and an

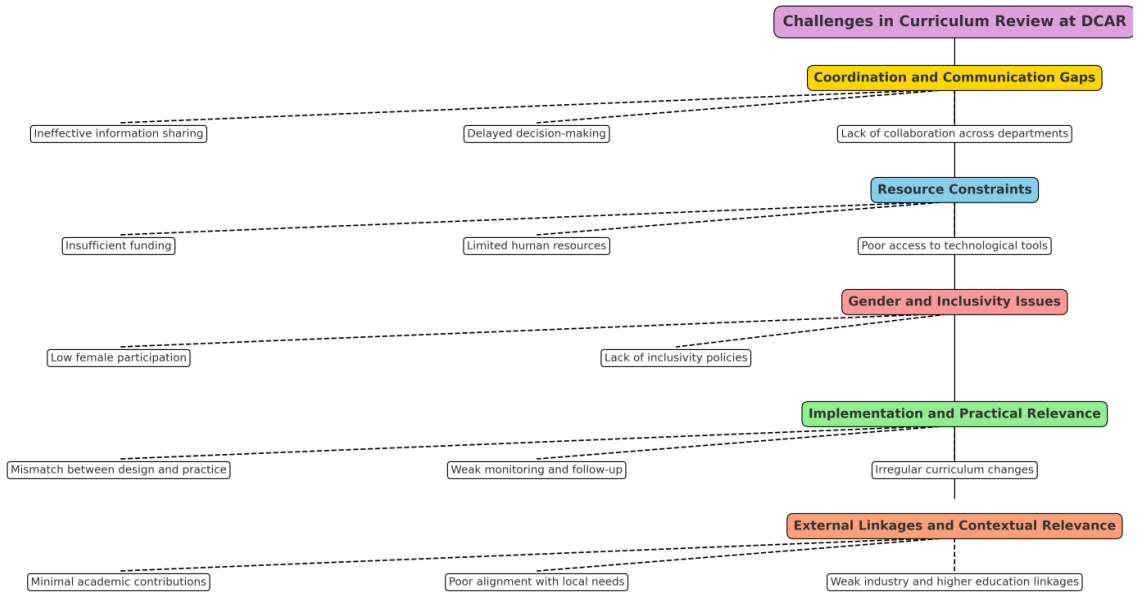
				opportunity for better outcomes.
10	Curriculum Review Process and Structural Reforms	Bureaucratic delays; rigid structures	To suggest strategies for overcoming these challenges based on stakeholder insights	Respondents agreed that structural bottlenecks slowed down curriculum reforms. Some noted progress in streamlining review stages, but stressed the need for further procedural flexibility.

Summary of Discussion of Thematic Analysis of the study

The thematic analysis of the research work provided profound information about the various difficulties and the opportunities that the Directorate of Curriculum, Assessment, and Research (DCAR) has to meet in its curriculum review and implementation procedures. The apparent trends-coordination and communication gaps, gender disparity in participation, insufficiency in providing funding, and inefficiencies in documents handling, weak school-level integration, insufficient feedback mechanism, irregular reviews of the curriculum, underuse of external experts, and lack of attention to local socio-cultural settings and political interventionism provide a compounding picture of systematic problems. Another strong point of the analysis is the usage of verbatim quotation of the participants one of the strongest aspects is the use of quotation of the participants that makes it real and brings the study near to life and living. An example is that one respondent stated, "There is a problem too late submission of curriculum documents and sometimes they are received with mistakes hence hard to effect them properly." Equally, another respondent noted that, "Political figures find themselves influencing curriculum decisions a lot of the time based not on what is best of students," evidencing the negative effect of political intervention. These voices make the identified themes have credibility and depth.

More importantly, the thematic analysis can get beyond descriptive accounts as the individual participant accounts are connected to larger structural issues. Illustrations can be given of when the theme of inadequate funding was linked continuously with stagnation of operations, which has been alluded to by wider literature as an effect of resource constraints on curriculum development. Nonetheless, there are limitations in the analysis, as well, as systemic barriers are captured as themes but relatively less attention is given to success stories or positive accomplishments that can offer a balance.On the same note, the undue focus on gender disparity theme should not have ignored the focus on the effect of this disparity on the quality of decision making.

Altogether, thematic analysis proves a methodologically sound inductive research method because it behaves rigorously through a standardization of the coding and theme-identification process, yet the actual power of the method lies in critical interpretation depth. It does not only identify problems but it also questions their origins and consequences, to policy and practice. By inserting the voices of participants into wider institutional and cultural frames, the analysis points to the necessity of reforms that reach beyond the procedural to reforms that are at least structurally transformative. In this manner, the thematic analysis not only provides a descriptive report of the situation within the two sections of Sindh government, but a critical view of the disjunction between curriculum policy and actual practice within the same governmental sections, which also provide useful guidance in terms of policymaking and education practice and research.



Conclusion

The paper concludes that the Curriculum Review Committees at the Directorate of Curriculum, Assessment and Research (DCAR), Sindh, Jamshoro are faced with systemic, procedural and contextual challenges that limit their ability to produce effective changes in curriculum. Despite the fact that the members of such committees represent committed professionals demonstrating relevant expertise, their work is limited by the lowest level of institutional support, coordination, transparency, and lack of finances and technological infrastructure. Bureaucratic delays, political interference and other phenomena tend to eclipse expert judgment in terms of objectivity and credibility of the decision-making process. Moreover, poor alignment between the objectives and the aims of the curriculum and assessment processes and the underrepresentation of local socio-cultural needs leads to inadequate contextual relevance and community approval of reforms.

It needs a multi-dimensional reform strategy to tackle all these challenges. The need to build capacity by engaging in sustained professional development of the workforce, providing long-term financial financing support and implementing advanced digital infrastructure like a Content Management System (CMS) to enhance efficiency and transparency. Introducing institutionalized systematic curriculum review on a regular basis would facilitate responsiveness to new demands in education and international standards. By ensuring minimal involvement of political stakeholders, facilitating convergence between curriculum and assessment strategies as well as incorporation of socio-cultural realities in as far as the design process is concerned, more relevance, ownership and effectiveness in terms of reforms will be attained.

The results show that a unified, research-driven initiative toward curriculum change is necessary in Sindh. The challenge that faces policymakers, practitioners, and researchers is that there is a need to create frameworks that are not only academically sound but can also make sense to the environments they are being applied in. Through capacity building, provision of resources and tools to operationalize the Curriculum Review Committees and ensuring autonomy, DCAR can be more effective in achieving equitable, credible and future oriented curriculum reforms than happen to meet both the global and the local aspirations in education.

Recommendations

1. Develop capacity building by developing systematic and continuous training programs on curriculum review committees to enhance the skills of curriculum design, evaluation, and assessment.
2. Ensure the provision of sustainable funds through the appropriation of permanent budget lines to guarantee continuity of the curriculum revision processes.

3. Establish a Content Management System (CMS) based digital repository to ensure structured, secure and accessible storing and sharing curriculum documents, which promotes transparency and efficiency.

4. Introduce regular curriculum reviews at regular preset intervals (perhaps every five years) to make evaluation systematic, planned and evidence-based.

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