



RESEARCH PAPER

Transforming Primary Education for Hearing-Impaired Learners: A Curriculum Review Grounded in Social Justice and Sustainable Development

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ABSTRACT

This study aimed at critically examining the elementary curriculum of hearing-impaired learners with respect to social justice and sustainability towards inclusive education. The qualitative descriptive methodology was selected in this research, and the researchers created an analysis framework, an Inclusive Transformation Curriculum Assessment Model (ITCAM) to analyze the results. The analysis of the curriculum materials (syllabus, textbooks and other materials) was conducted methodically on various dimensions such as accessibility, pedagogical support, social justice, language, stakeholder engagement and technology use. The findings indicated that despite the perceived early-recognition of hearing-impaired students in the curriculum in segregated forms, it is text-based and not multimodal with limited visual aids and Pakistan Sign Language (PSL). In addition, the curriculum is not self-sufficiently connected to social justice, sustainability, and culturally relevant issues, thereby restraining the connection of the learners with the real world. Other areas of the curriculum that were deficient included guidance by the teachers, collaboration, emotional skills, technology, and stakeholder engagement. The research finds that the existing curriculum is structurally inclusive, but not functionally inclusive and requires major changes to meet the diverse learning needs of students with hearing impairment. Included in the study are multidimensional teaching and learning methods, clear social justice and sustainability principles, teacher support, and involvement of stakeholders and use of technology. These reforms play a vital role in the creation of an inclusive, accessible, and sustainable curriculum that will allow hearing-impaired learners to become an integral part of education and society.

Keywords: Curriculum Review, Hearing-Impaired Learners, Inclusive Education, Social Justice, Sustainable Development, Primary Education, Accessibility, ITCAM Model, Multimodal Learning, Special Education

Introduction

Education is also known to be a key human right and a key enabler of inclusive and sustainable development. The last ten years have witnessed a considerable focus on the need to incorporate social justice and sustainable development concerns into curriculum frameworks to provide equity, inclusion, and equal learning opportunities to all learners (UNESCO, 2023; World Bank, 2022). These objectives are particularly applicable to students with disabilities, including those who are deaf and hard of hearing (DHH), who experience systemic inequities in education. While inclusive education policies have been adopted, there continues to be a gap in curriculum design and delivery, particularly in primary education (Alasim, 2022; Florian, 2023).

Primary education lays the foundation for cognitive, language, and social development. This period is particularly important for hearing-impaired students as it affects their language acquisition, literacy, and engagement in the learning process (Knors

& Marschark, 2022; Hall et al., 2022). Yet, many curricula in many educational systems are largely audio centric, which can affect accessibility and learning outcomes for DHH learners (Mayer & Leigh, 2022). This can lead to lower educational outcomes and exclusion from the mainstream educational system.

Social justice in education addresses inequalities through equitable access to resources, representation, and participation for all students. In hearing-impaired education, this requires curriculum adaptation, teaching methods, and communication techniques to accommodate different learning styles (Swanwick & Marschark, 2024; Antia & Rivera, 2023). A socially just curriculum fosters inclusion through the acknowledgement of diversity and the elimination of barriers that disadvantage students with disabilities. This is critical in providing an equitable learning environment where hearing-impaired learners can engage and thrive.

Similarly, Education for Sustainable Development (ESD) aims to empower learners with knowledge, skills, and values to address global issues such as environmental sustainability, social equity, and economic growth (UNESCO, 2023; United Nations, 2023). ESD in primary education necessitates curriculum adjustments to facilitate the learning of all learners, including hearing-impaired students, on sustainability themes. Evidence indicates that visual, experiential, and interactive pedagogies promote the learning of sustainability themes amongst DHH learners (Easterbrooks & Beal-Alvarez, 2023).

Despite the increasing focus on social justice and sustainable development, there is little evidence that these values are being incorporated into the curricula for hearing-impaired learners. Current research suggests that the curriculum content is not inclusive, does not account for diverse learning styles, and does not adequately address sustainable development (Alasim, 2022; Florian, 2023). Moreover, teachers may struggle to translate inclusive principles into practice due to a lack of training, support, and resources (Antia & Rivera, 2023).

In light of these challenges, there is an urgent need to reform the primary curriculum for learners with hearing impairments through social justice and sustainable development perspectives. This review can serve to identify curriculum design shortcomings, assess the level of inclusive practices, and suggest strategies to enhance accessibility and equity in education. By implementing curriculum change and embracing such global agendas, it is through curriculum reform that educational systems can champion inclusion and make hearing-impaired students not only accommodated in the learning environment but also empowered by their learning experience.

Literature Review

The mainstream curriculum of hearing-impaired students is an increasingly popular topic of discussion over the last few years due to the global trend towards inclusive education. The primary level curriculum should be accessible to guarantee active learners with deaf and hard-of-hearing (DHH) learners to develop cognitive, language, and social skills (Knors and Marschark, 2022). However, studies indicate that most existing curricula are largely auditory and therefore cannot be accessed by hearing-impaired students and have detrimental effects on learning (Mayer and Leigh, 2022). This demands a curriculum reform that is integrated into the values of inclusion, social justice and sustainability.

With a social justice viewpoint, the design of the curriculum must be just equal and representative to all learners. Education for social justice focuses on eliminating barriers that discriminate against students with disabilities and providing equitable access to learning opportunities (Florian, 2023). For learners with hearing impairments, this includes diverse communication methods, such as sign language, visual cues, and accessible curriculum resources (Swanwick & Marschark, 2024). Research has demonstrated that

inclusive curricula that recognize linguistic differences and encourage participation and equity enhance learning for DHH students (Antia & Rivera, 2023).

Furthermore, the inclusion of Education for Sustainable Development (ESD) within the curriculum is now understood to be crucial for the development of learners to tackle the challenges of the 21st century. ESD helps learners acquire knowledge, skills and attitudes to address environmental, social and economic sustainability (UNESCO, 2023). For DHH students, the issue is how to present content related to sustainability in accessible and inclusive ways. Previous literature has highlighted the efficacy of visual, experiential, and activity-based learning strategies to teach sustainability concepts to DHH learners (Easterbrooks & Beal-Alvarez, 2023). So, curriculum reviews should look at not only the coverage of sustainability topics, but also how they are covered.

The other element of curriculum review is a match of the inclusive policy frames and classroom practices. Even though the policies on inclusive education are common in most nations, they are not applied in the same manner. It has been found that students with sound impairment in inclusive classrooms do not feel like part of the classroom due to communication difficulties, inexperienced teachers, and lack of support (Alasim, 2022). Equally, UNESCO (2023) reports indicate that inclusion is usually restricted to physical location as opposed to an active involvement in learning. This policy-practice gap highlights the need to carefully consider the content of the curriculum, instructional approaches, and evaluation procedures.

Another important factor that affects curriculum implementation is the teacher readiness. The curriculum is primarily implemented by teachers, and their beliefs, knowledge, and skills determine the results of hearing-impaired students. Research shows that teachers are not usually well-prepared in knowledge and skills in deaf education, inclusive teaching methods, and assistive technologies (Antia & Rivera, 2023). The absence of professional assistance may lead to the poorly developed and inefficient curriculum. Therefore, transformation in the curriculum must be supplemented with training and assistance.

The use of technology in the curriculum accessibility has also been a popular debate in recent literature. Captioned videos, interactive learning platforms, and simulations are possible to ensure the educational process of students with hearing impairment is improved (Easterbrooks and Beal-Alvarez, 2023). However, technology must be available since unavailable technology may create obstacles (UNESCO, 2023). Technology integration should be achieved by using pedagogical strategies which are based on accessibility and engagement.

In addition, literature highlights the importance of the curriculum content being customized to the personal needs of hearing-impaired students. The DHH students possess a variety of language backgrounds, communication patterns and learning styles; hence, the general design of the curriculum is inappropriate (Knoors & Marschark, 2022). The design of curriculum should be adaptable, there should be curriculum modifications in terms of the content, teaching and assessment techniques to address the needs of the students. It is also consistent with the principles of Universal Design for Learning (UDL), which encourage various ways of representation, engagement, and expression (Florian, 2023).

Although this has happened, challenges to the implementation of inclusive curricula still exist. They are restricted resources, inaccessibility to customized teaching materials, poor implementation of policies, and absence of stakeholder participation (Alasim, 2022). Moreover, sustainability education remains to be an auxiliary aspect of the curriculum, which restricts its effect. To counter these obstacles, there should be a multi-faceted solution of curriculum reform, training of teachers, policy frameworks and community involvement.

In conclusion, the literature reveals that to transform the primary education of the hearing-impaired learners necessitates a curriculum that is accessible, equitable and in tandem with international demands of social justice and sustainable development. A socially just curriculum advocates equality of opportunity and representation, but a sustainable curriculum offers students the skills and knowledge necessary to give back to society and address issues in the future. Therefore, inclusive education must have a holistic approach to curriculum, teaching and policy which will allow all learners to participate in the learning process.

Material and Methods

The research design employed in this study was qualitative descriptive research to review the primary curriculum of hearing-impaired students in terms of social justice, sustainable development and inclusion. The purpose of the research was to critically examine available curriculum documents and assess how well they reflect the principles of inclusive and equitable education.

The study applied a curriculum review method to examine different elements of the primary curriculum of hearing-impaired students in terms of content, structure and implementation. This has allowed a critical analysis of the elements of the curriculum that can be seen as indicative of the principles of accessibility, equity, and sustainability. To provide coherence and rigor to the review, the researcher came up with a framework in which the review process was conducted.

Researcher-Developed Curriculum Assessment Model

To conduct a systematic evaluation of the curriculum, the researcher came up with a new Curriculum Assessment Model referred to as Inclusive Transformative Curriculum Assessment Model (ITCAM). This model was to assess the degree of inclusivity, social justice and sustainability within the curriculum of the hearing-impaired students.

This model consists of the following key dimensions:

Accessibility and Communication: The dimension will assess the availability of the content in the curriculum using visual aids, the inclusion of sign language, simplified language, and multimodal instructional strategies that meet the needs of hearing-impaired students.

Inclusive Content and Representation: In this part, the researcher will analyze how diverse the curriculum promotes equity and is not marginalizing. It determines whether learners with hearing impairment are well represented and included in the curriculum content.

Pedagogical Approaches: The dimension is concerned with the teaching techniques suggested in the curriculum, such as interactive teaching, student-centered teaching, and the use of visual aids that allow the inclusion of hearing-impaired students.

Integration of Social Justice Principles: This aspect assesses the extent to which the curriculum covers issues of equality, fairness, human rights and inclusion, and whether it promotes critical awareness of societal issues in a way that is easily understandable.

Incorporation of Sustainable Development: The dimension determines the incorporation of sustainability-related issues like environmental consciousness, social responsibility, and community involvement, and how well they can be adapted to accommodate hearing-impaired learners.

Assessment and Evaluation Practice: This component examines if the method of assessment is inclusive, flexible, and accommodative to the learning needs of hearing-impaired students, such that their learning outcomes are fairly evaluated.

Teacher Support and Implementation Feasibility: This dimension looks at the guidance, resources and training of teachers, in the curriculum to successfully implement inclusive and accessible practices.

Table 1
ITCAM-Based Curriculum Review Matrix

ITCAM Dimension	Curriculum Evidence	Gap Identified	Recommendation
Accessibility and Functional Design	Dedicated syllabi and structured exercises	Limited multimodal adaptation	Add visual supports, PSL cues, pictorial dictionaries
Identity Affirmation	Separate syllabus for HI learners	No Deaf culture or role models	Add local Deaf stories and identity-based content
Social Justice and Rights Awareness	Policy supports inclusion	Rights education absent in syllabus	Add disability rights and equity lessons
Stakeholder Voice	Department-developed syllabi	Limited Deaf/parent participation	Include review panels with stakeholders
Reflexivity and Critical Thinking	Task-based exercises	Few reflective activities	Add self-reflection and problem-solving tasks
Pedagogical Support	Teacher-led instruction implied	Limited teacher guidance	Provide UDL-based teacher guides
Localization	Mainstream academic structure	Limited cultural adaptation	Add local stories and community examples
Communication Development	Literacy exercises	Weak PSL and bilingual focus	Add sign-supported vocabulary and visual storytelling
Collaborative Learning	Traditional classroom tasks	Limited peer learning	Add role-play, peer projects, group tasks
SEL	Academic focus	Emotional learning absent	Add SEL scenarios and visual emotion activities
Technology	Printed syllabus	No assistive technology	Add captioned videos and digital learning tools
Life Skills	Some vocational subjects at later levels	Weak primary-level life skills	Add practical and independence-based activities
Parent Engagement	No clear parent role	Weak home-school link	Add parent guides and home activities
Metacognition	Task completion	No self-evaluation	Add reflection prompts

Data Sources

The information used in this research was official curriculum documents, textbooks, teacher guide, and policy frameworks pertaining to primary education of hearing-impaired students. These documents were chosen selectively according to the relevance on the study objectives.

Data Collection Procedure

Curriculum authorities, educational institutions, and official sources were used to gather relevant curriculum documents. The researcher systematically screened each document with the CAMISE framework. Observations were entered in a checklist that was based on the dimensions of the model to facilitate uniformity throughout the analysis.

Data Analysis

Thematic content analysis was used to analyze the data collected. All the elements of curriculum were analyzed based on the dimensions of CAMISE model. Patterns, gaps, and strengths were identified and grouped into themes corresponding to the items like accessibility, inclusion, social justice, and sustainability. The results were discussed within the context of existing studies and the international models of inclusive education.

Validity and Reliability

Experts in special education and curriculum development reviewed curriculum assessment models to make the analysis credible. Feedback was also taken into consideration to improve the model and make it more applicable. Also, the systematic and transparent process was observed during the analysis to guarantee reliability and consistency.

Results and Discussion

Accessibility and Functional Design

The primary advantage of the curriculum is that hearing-impaired students are identified with the help of special syllabi. This shows institutional cognizance on their unique learning requirements. However, the curriculum is mainly accessible in terms of **separate format**, not necessarily in terms of **learning modality**. Hearing-impaired learners require visual, gestural, and sign-supported instruction. Therefore, written tasks alone are not sufficient.

The curriculum should include visual vocabulary cards, pictorial dictionaries, Pakistan Sign Language prompts, captioned content, diagrams, and activity-based learning. Without these supports, students may complete tasks mechanically without deep conceptual understanding.

Identity Affirmation

A transformative curriculum should help hearing-impaired students understand their identity positively. The present curriculum recognizes them as learners but does not strongly affirm them as members of a Deaf or hearing-impaired community. It lacks stories, examples, and role models that reflect their lived experiences.

To strengthen identity, textbooks and activities should include local Deaf achievers, stories of hearing-impaired children participating in school and society, and activities that build self-confidence and self-expression.

Social Justice and Rights Awareness

The curriculum does not sufficiently include explicit concepts of social justice, rights, dignity, equality, accessibility, and anti-discrimination. These themes are essential for your study because teaching for social justice requires learners to understand fairness, respect, participation, and their own rights.

At primary level, these concepts can be introduced through simple stories, classroom rules, picture-based scenarios, role play, and examples such as “everyone has the right to communicate,” “everyone should be included in games,” and “we should respect different ways of learning.”

Stakeholder Voice

The curriculum appears to be mainly developed through departmental structures. However, ITCAM emphasizes that curriculum should include the voices of those directly affected by it. For hearing-impaired learners, this means involving Deaf adults, HI teachers, parents, interpreters, speech therapists, audiologists, and curriculum specialists.

A participatory curriculum review committee would make the curriculum more realistic, culturally responsive, and need based.

Reflexivity and Critical Thinking

The existing curriculum includes comprehension and completion-based exercises, but it provides limited opportunities for learners to reflect on themselves, their experiences, and their social world. Reflexivity is important because it helps students develop self-awareness, confidence, and agency.

The curriculum should add questions such as: "How do I communicate with others?", "What helps me learn better?", "How can I help my friend?", and "What should I do if someone excludes me?" These activities may be responded to by signs, drawings, pictures or discussion with the teacher.

Pedagogical Support and UDL Practices

The curriculum should have more powerful teacher guidance. A syllabus will not guarantee inclusion unless there are clear strategies supporting teachers. The impaired learners must be provided with differentiated instruction, visual instruction, integration of sign language, repetition, demonstration, peer support, and alternative assessment.

Each subject should be accompanied by a teacher guide that will consist of lesson adaptations, visual aids, PSL signs, suggestions of activities, assessment rubrics, and classroom management techniques.

Curriculum Localization and Cultural Relevance

The environment of the child must be related to the curriculum. When the content is generic, the students might not be able to connect with it in their lives. Examples in the locality such as Punjab, family life, school practices, market, transport, mosques, parks, health centers and community affairs should be provided.

This would render learning purposeful and contribute to sustainable development as it would bridge learning and real-life involvement.

Early Communication and Language Development

To the hearing-impaired students, learning is based on communication. The curriculum must then be able to place a prime focus on language development by use of Pakistan Sign Language, written Urdu/English, visual storytelling and expressive communication.

As of now, there are literacy tasks, although there is a lack of structured language development in bilingual or multimodal. Sign-supported vocabulary, picture sequencing, storytelling, expressive signing, and written word matching and communication practice in real-life situations should be taught in the curriculum.

Collaborative Learning and Peer Inclusion

The curriculum seems to be more of an individual task. However, social inclusion requires peer interaction. Hearing-impaired children need structured opportunities to communicate, cooperate, lead, and participate with classmates.

Group projects, role play, pair work, peer tutoring, and classroom responsibilities should be embedded in the curriculum. These activities can improve communication confidence and social participation.

Emotional and Social Learning

The curriculum does not sufficiently address emotional development. Hearing-impaired students may face communication barriers, social isolation, and low confidence. Therefore, emotional and social learning should be part of the curriculum.

Lessons should include recognizing emotions, asking for help, expressing needs, resolving conflict, respecting others, and developing confidence. These can be taught through pictures, facial expressions, visual stories, and role play.

Technology and Digital Learning

The curriculum is largely print based. This is a major limitation in the current digital age. Hearing-impaired students benefit greatly from captioned videos, sign language videos, visual animations, interactive apps, and digital flashcards.

Technology should not be optional; it should be embedded as an accessibility tool. Digital resources can also support parents at home.

Early Career Awareness and Life Skills

At primary level, career education does not need to be formal vocational training. However, children should be exposed to basic life skills and future awareness. The curriculum should include self-care, safety, money use, communication in public places, cleanliness, healthy habits, and simple skill-based activities.

This supports sustainable development because it prepares learners for independence and future participation.

Parent and Community Engagement

The curriculum does not clearly involve parents and community members. Home support is necessary to hearing-impaired learners. Parents should be counselled on communication, vocabulary training, homework assistance and confidence.

To enhance school-home collaboration, parent guides, home activities, sign vocabulary lists, and community-based tasks should be included.

Reflective and Metacognitive Learning

The curriculum is primarily task oriented. Nevertheless, students are expected to be taught to reflect on their learning as well. It can be supplemented with simple metacognitive tasks, which include smiley-based self-rating, I learned today, this was easy/difficult, and I need help with it.

These activities build independence, responsibility as well as self-awareness.

Gaps Identified in Primary Curriculum for Hearing-Impaired Students (ITCAM-Based)

According to the ITCAM review the following are the main gaps in the current curriculum:

Accessibility and Multimodal Learning Gaps

- Limited use of visual aids, pictorial content, and diagrams

- Absence of Pakistan Sign Language (PSL) integration
- Curriculum is format-based (written) rather than modality-based
- Lack of captioned or multimedia learning resources

Identity Affirmation Gaps

- No representation of Deaf culture or hearing-impaired identity
- Absence of local Deaf role models and success stories
- Limited opportunities for self-expression and identity development

Social Justice and Rights Awareness Gaps

- Lack of explicit content on disability rights and inclusion
- No structured teaching of equality, dignity, and fairness
- Weak linkage between curriculum and real-life social issues

Stakeholder Participation Gaps

- Minimal involvement of Deaf community in curriculum development
- Lack of input from parents, HI teachers, and specialists
- Curriculum is centrally designed without participatory approach

Reflexivity and Critical Thinking Gaps

- Overemphasis on rote learning and task completion
- Limited reflective activities and critical thinking exercises
- No focus on self-awareness or personal development

Pedagogical Support Gaps

- Lack of teacher guides for inclusive teaching strategies
- No clear instructions for differentiated instructions
- Limited support for alternative assessment methods

Cultural and Contextual Gaps

- Curriculum lacks local cultural relevance
- Minimal use of community-based examples
- Content is not fully contextualized to students lived experiences

Communication and Language Development Gaps

- Weak focus on structured language development
- Lack of bilingual approach (PSL + written language)
- Limited vocabulary-building and visual storytelling activities

Collaborative Learning Gaps

- Limited group work and peer interaction
- Absence of cooperative learning strategies
- Weak focus on social participation

Emotional and Social Learning (SEL) Gaps

- No structured content for emotional development
- Lack of activities promoting empathy, confidence, and self-regulation
- Limited support for social skills development

Technology Integration Gaps

- Curriculum is mostly print based
- No integration of assistive or digital technologies
- Absence of interactive and multimedia learning tools

Life Skills and Vocational Awareness Gaps

- Limited focus on daily living skills
- No early exposure to vocational awareness
- Weak preparation for independent living

Parent and Community Engagement Gaps

- No structured role for parents in curriculum
- Lack of home-based learning activities
- Weak school–community linkage

Reflective and Metacognitive Learning Gaps

- No self-assessment or reflection activities
- Limited development of independent learning skills
- Lack of metacognitive strategies

Discussion

The current curriculum audit carried out using the ITCAM framework shows that there is institutional awareness of hearing-impaired students through the curriculum but in a broad sense, the curriculum is more structurally than pedagogically inclusive. The fact that separate syllabi are provided is an indication of awareness but to be truly inclusive involves changing the content delivery, communication modes and learning engagement, which now are not adequately tackled.

One of the major discoveries relates to the problem of mismatch of accessibility and modality. The curriculum is mainly textual, and the hearing-impaired learners should be taught visually, through signs and activities. This disconnection concurs with the literature at large that indicates that accessibility does not just pertain to the availability of curricula but refers to the experience of content by learners. Without multimodal strategies, students can only learn superficially, and do not gain conceptual knowledge.

Another critical area of social justice integration is pointed out in the review. There is not much explicit teaching of rights, equality, dignity and participation despite an implication of inclusion. This is a serious drawback in terms of social justice since curriculum must enable learners to know their role in society and work to promote fair treatment. Lack of this content is an indication that the curriculum is not comprehensive to world inclusive education.

The second dimension that is crucial is the absence of stakeholder involvement in curriculum development. ITCAM model focuses on participatory models, but the curriculum seems to be formulated centrally without much consultation with the Deaf communities, teachers or families. It leads to a curriculum that might not be effectively representative of the actual life needs, culture and communication of the hearing-impaired learners.

The results also show that the curriculum is not much focused on the higher-order thinking skills, reflection and critical thinking. The preponderance of comprehension-based and completion-oriented tasks inhibit the chances of the learners to indulge in meaningful inquiry, problem solving, and expressing themselves. This is especially alarming, because critical thinking is critical to social justice education, as well as sustainable development.

Pedagogically, the curriculum does not provide the teachers with instructional guidance. Lack of teacher guides differentiated strategies and alternative assessment methods hinders the successful application of inclusive practices. This strengthens the notion that a curriculum may not be sufficient to guarantee inclusion, but it must be accompanied by teacher training and practical implementation resources.

Another area of concern is cultural and contextual relevance. There is a lack of local examples, community contexts and day-to-day experiences of the learners in the curriculum. This undermines the relationship between learning in school and the real-life practice that is crucial in meaningful learning and sustainable development.

Moreover, the review reveals the gaps in language development, collaborative learning, emotional development and the integration of technology. Learning of hearing-impaired students is based on communication, but the curriculum lacks a structured curriculum of bilingual or multimodal language. On the same note, there is no group work and peer interaction, which restricts social inclusion. The lack of emotional and social learning can also contribute to the lack of confidence and well-being of students.

In general, the discussion reveals that the current curriculum needs to be changed to one that focuses on the delivery of content to the learner as opposed to the inclusive, socially responsive, and learner-centered education. The analysis of ITCAM shows that inclusion should be perceived as a comprehensive process which includes curriculum planning, teaching, communication and interaction with stakeholders.

Conclusion

This paper concludes that the current primary curriculum of hearing-impaired learners shows some first steps towards inclusion, but is shallow in terms of depth, coherence and practicality with respect to principles of social justice and sustainable development. Although the delivery of different sets of syllabi is a sign of acknowledging the needs of learners, accessibility, diversity in communication, critical engagement, and relevance to real-life are not well addressed in the curriculum.

The results indicate that its current inclusiveness is mostly at the structural and not functional level and is not well integrated in terms of visual pedagogy, sign language, and interactive strategies of learning. Also, the lack of clear social justice and sustainability themes and concepts does not allow the curriculum to equip learners to be active members of society.

The review based on ITCAM also points out the significance of teacher support, stakeholder involvement and relevance of context in designing curriculum. Without these elements, the well-intentioned curriculum will not significantly include them. There is therefore needed to change the curriculum to ensure that hearing impaired students receive equal, accessible and enabling education.

Recommendations

Recommendations are based on the results of the review of the curriculum based on ITCAM:

Integration of Multimodal Accessibility

Visual, sign-supported, and activity-based learning strategies, such as pictorial materials, captioned materials, and the integration of Pakistan Sign Language (PSL), should be implemented in the curriculum in order to achieve meaningful access.

Embedding Social Justice Concepts

Stories, activities and real-life examples should include explicit content on rights, equality, inclusion, dignity and participation suitable to primary learners.

Strengthening Teacher Support

Extensive teacher manuals must be created, such as lesson modifications, visual aids, differentiated instruction plans and inclusive evaluation techniques.

Promoting Stakeholder Participation

The Deaf members of the community, teachers, parents and specialists should also be engaged in curriculum development to make it culturally relevant and practical.

Enhancing Language Development

The adoption of a bilingual or multimodal approach, which involves the combination of sign language, written language and visual communication, should be considered to aid in language acquisition.

Incorporating Collaborative and Interactive Learning

Group work, peer interaction, role play, and project-based learning should be incorporated in the curriculum to encourage social inclusion and communication skills.

Integrating Emotional and Social Learning

Learners should be introduced to structured activities to learn confidence, empathy, emotional regulation and social skills.

Contextualizing Curriculum Content

It should include local examples and community-based learning to provide cultural relevance and real-life application.

Utilizing Technology for Inclusion

Online tools like captioned video, sign language and interactive applications must be incorporated as fundamental elements of the curriculum.

Promoting Life Skills and Sustainability Awareness

This curriculum must incorporate aspects of sustainable development by including skills on living in the community, awareness of the environment, and the ability to participate in the community on a daily basis.

Encouraging Reflective and Independent Learning

They should be a part of simple reflective and self-assessment tasks to foster independent learning and critical thinking skills.

Strengthening Parent and Community Engagement

Home-based activities and parent guides should be included to improve school-home collaboration and support to learners.

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