

## Improving Text Adaptation Practices among Bilingual Teachers in Sri Lanka

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### Abstract

In the context of Sri Lanka's Content and Language Integrated Learning (CLIL), the adequacy of pedagogical materials continues to be a significant challenge within bilingual education (BE). This study investigates the role of text adaptation in improving bilingual learners' academic performance, language development, and classroom engagement, based on teachers' perspectives. A total of 250 Sri Lankan bilingual teachers participated in the research, which employed an action research design implemented cluster-based (province-wise) and incorporated both quantitative and qualitative approaches. Using purposive sampling, data were gathered through a pre-test and post-test. The analysis involved descriptive statistics, thematic analysis, and paired t-tests. The study revealed a statistically significant enhancement in teachers' awareness, confidence, and capacity to implement adaptation strategies effectively. Both pre-test and post-test results indicated notable improvement, with the mean score increasing from  $M = 9.65$  to  $M = 113.53$  and an extremely large effect size (Cohen's  $d = 12.93$ ). The p-value of 0.0003 confirmed the significance of this change. Teachers demonstrated improved skills in identifying content mismatches, applying techniques such as simplification, elaboration, and discursification. Post-intervention feedback further highlighted educators' recognition of the importance of adapting curriculum materials to support effective CLIL practices and to ensure that resources are both contextually appropriate and pedagogically sound. The findings emphasize the critical need for structured text adaptation strategies to address linguistic and instructional challenges in bilingual classrooms. Moreover, the study suggests that such interventions can support student learning, reduce dropout rates, provide maximum learning outcomes, and encourage greater participation in the bilingual education system. The duration of this research was one year

*Key words:* Adaptation, Simplification, Elaboration and Discursification, Bilingual Education, CLIL

## **Introduction**

### **Problem Statement**

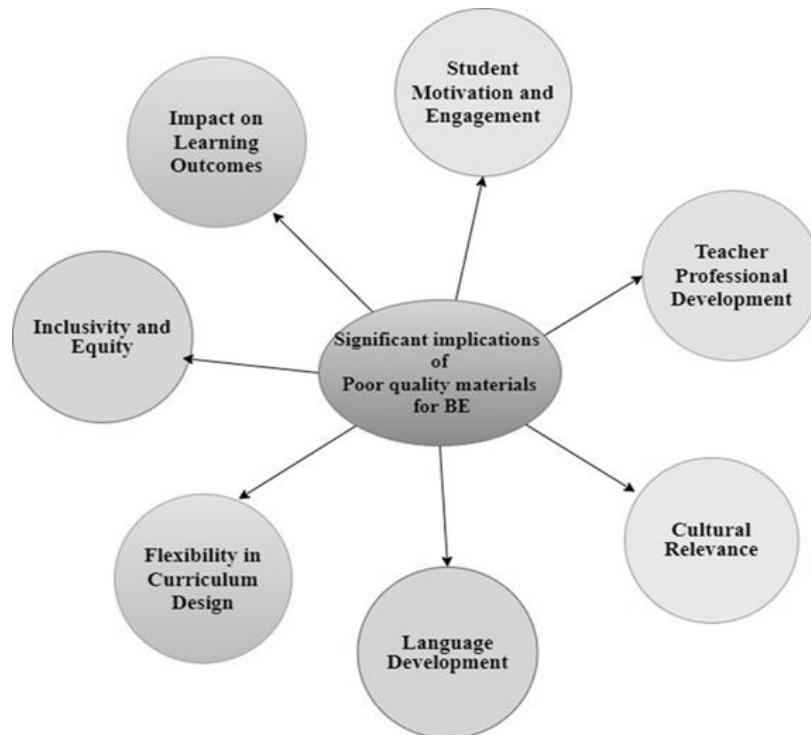
The quality of pedagogic materials for bilingual education programs is a significant issue in Sri Lanka. The absence of well-adapted materials can negatively affect the teaching-learning process and student achievement in bilingual classrooms.

### **Background information**

The curricular materials for bilingual learners often fail to meet the needs of learners due to poor readability, comprehensibility, and inappropriate language levels, it is necessary to modify those materials. Many materials are translated from the original sources or adopted from other contexts without considering the specific needs of Sri Lankan bilingual learners. This mismatch between materials and learners' proficiency levels, learning styles, and cultural backgrounds can negatively impact their motivation, understanding, and engagement with the content. Teachers also have a lack of training programs; therefore, they are not able to scaffold the materials. (Pakeerathy, 2024). When addressing the diverse linguistic and cognitive needs of junior secondary learners, teachers should consider equity in education. Many bilingual teachers face significant challenges in adapting texts to suit learners' language proficiency levels, cultural backgrounds, and content understanding due to the lack of training programs. (Wijesekera & Nanayakkara, 2024). The lack of adaptation to local contexts and consideration for diverse learning styles further exacerbates the problem. (Iluk, 2002; Pawlak, 2010, as cited in Otwinowska-Kasztelanic, 2013).

### **Significance of the Problem**

Inadequate materials hinder learning outcomes by failing to support language development, content comprehension, and cognitive skills, often demotivating learners and limiting participation. Poorly adapted materials disproportionately affect learners with low literacy or diverse learning styles, increasing educational inequalities (Edessa, 2017). Dependence on such materials deskills teachers, making them passive adopters rather than active facilitators, reducing their ability to meet diverse student needs (Gür, 2014). Lack of cultural adaptation disconnects learners from content, diminishing instructional effectiveness (Quispe-Mamani et al., 2024). Inappropriate language levels and insufficient support hinder students' language autonomy and overall linguistic growth. Rigid materials restrict educators' capacity to design tailored curriculum modules, limiting instructional effectiveness (Putra & Putri, 2023). Addressing these issues requires developing and adapting pedagogic materials that are linguistically and culturally appropriate, engaging, accessible, and flexible to meet diverse learner needs in bilingual contexts like Sri Lanka.



(Irambona & Chang, 2023)

**Figure 1**

*The issues in poor quality materials for Bilingual Education*

## Objectives

### General objectives

To enhance bilingual teachers' competencies in text adaptation and application, teacher training programs should be strengthened. These programs should encourage teachers to apply the acquired skills in the teaching–learning process, thereby ensuring the delivery of high-quality education by recommending and proposing curricular material adaptation at national level.

### Specific objectives

To identify the current level of awareness of text adaptation among the selected bilingual teachers.

To design an intervention plan. (Use a moderator guide, which includes common components, Lessons, and practicum)

- a) To implement the intervention plan through the teacher education program.
- b) To assess the effectiveness of the intervention on the text adaptation practices of the teachers before and after implementing the intervention.
- c) To make suggestions and recommendations for curricular material adaptation in the CLIL context at the national level.

## Methodology

The most appropriate research design for the study title is an action research design, because the study aims to address a practical issue within a specific educational setting. The need for bilingual teachers to adapt texts as a scaffolding strategy to suit the linguistic, cultural, and cognitive levels of junior secondary bilingual learners in Sri Lanka. A three-day residential moderators' training workshop was organized to implement the intervention plan on text adaptation across all provinces. In total, twenty-seven days (three days per province) were allocated for the implementation of the moderator guide. The moderator guide consists of three components: (1) a common component covering the theories and concepts of bilingual education, (2) lessons focused on text adaptation, and (3) a practicum component emphasizing application. A total of 250 moderators, comprising 30 teachers from each province, were selected as participants. Their prior knowledge and existing information related to text adaptation were first assessed. The intervention plan was implemented, using a moderator guide that had already been prepared. All participants shared the same classroom context and were provided with an identical intervention plan. Finally, participants were requested to adapt their relevant subject content. A purposive sampling technique was used. Qualitative and Quantitative approaches were used sequentially; therefore, a mixed-methods approach was used as explanatory sequential research. Data was collected through continuous observation, pretest, posttest, intervention, and discussion. Data was analyzed by using the Descriptive analysis method (mean, median), t-test, thematic analysis, and content analysis. A purposive sampling technique was employed. Both qualitative and quantitative approaches were applied sequentially, adopting a mixed-method exploratory sequential design. Data was collected through continuous observation, pre-tests, post-tests, interventions, and discussions. The analysis included descriptive statistics (mean, median), t-tests, thematic analysis, and content analysis.

## Results and Findings

**Table 1**

*Descriptive Analysis (Quantitative approach)*

Statistic	Pre-Test	Post-Test	Interpretation
Mean	9.65	113.53	Indicates a sharp improvement in knowledge after the intervention.
Standard Deviation (SD)	6.36	9.42	Slight variation in scores; improvement was consistent across participants.
t-statistic (Paired t-test)	–	44.98	A high t-value shows a significant difference between pre- and post-test scores.
p-value	–	3.40 × 10 <sup>-31</sup>	Much smaller than 0.05; confirms the result is statistically significant.
Effect Size (Cohen's d)	–	12.93	Extremely large effect shows the intervention was highly impactful.

Initially, many participants lacked knowledge of adaptation, reflected in high “Disagree” and “Need for Support” responses. Post-test responses shifted significantly toward “Totally Agree” and “Agree,” showing better understanding and confidence in adaptation strategies. Participants showed improved ability to apply techniques, reducing pedagogical mismatches. They gained awareness of CLIL-specific adaptations

and the importance of high-quality, contextually adapted materials in bilingual and diverse classrooms. The study, involving 250 Sri Lankan teachers, showed major gains in both conceptual and practical aspects of adaptation. Teachers could now define, explain, and apply adaptation principles, including CLIL strategies suitable for Sri Lankan classrooms. They understood the close connection between adaptation and pedagogical progress, acknowledged the need to integrate adaptation into CLIL syllabi, and saw adaptation as essential in all curricular materials.

The study revealed a significant improvement in teachers' competencies in text adaptation following the intervention, as reflected by the sharp increase in mean scores ( $M = 9.65$  to  $M = 113.53$ ), the statistically significant p-value ( $3.40 \times 10^{-31}$ ), and the extremely large effect size (Cohen's  $d = 12.93$ ). Teachers moved from limited knowledge and reliance on support toward a confident ability to define, explain, and apply adaptation strategies, particularly within CLIL contexts. They recognized adaptation as a key to addressing language and cultural diversity, improving learner outcomes, and ensuring material quality. Teachers disagreed with the view that only language needs adapting, realizing that content, structure, and culture must also be considered. Post-test results show a complete transformation in teachers' knowledge, skills, and attitudes, confirming the training's success and their readiness to implement effective, inclusive curricular adaptation.

**Table 2**

*Pre and Posttest (Quantitative)*

<b>Domain</b>	<b>Criteria</b>	<b>Pre-Test TA+A (%)</b>	<b>Post-Test TA+A (%)</b>	<b>Observation</b>	<b>Interpretation</b>
<b>1. Understanding and Defining Curricular Material Adaptation</b>	1–6	50–60	85–90	Significant improvement in knowledge and understanding of definitions, operationalization, and appreciation	Teachers' baseline awareness and ability to define and explain adaptation were moderate. After intervention, there was substantial conceptual gain, showing effective clarification of adaptation principles.
<b>2. Curricular Material Adaptation in Practice</b>	7–10	40–50	85–90	Marked improvement in describing practical adaptation techniques, including CLIL-specific methods	Teachers initially had limited awareness of practical applications. Post-test indicates successful translation of theory into practice.
<b>3. Techniques and Strategies of Adaptation</b>	11–15	35–50	80–90	Strong gains in understanding and applying adaptation strategies	Intervention strengthened teachers' capacity to link strategies with pedagogy and CLIL contexts.

<b>4. Importance and Benefits of Adaptation</b>	16–22	45–55	80–95	Increased awareness of benefits for learners and teachers, including linguistic scaffolding and cultural alignment	Knowledge of the practical value of adaptation increased, reinforcing motivation to apply in classrooms.
<b>5. Ensuring Quality in Adapted Materials</b>	23–26	50–60	85–95	Improved understanding of producing high-quality CLIL materials	Teachers gained competence in evaluating and producing quality materials, reflecting enhanced pedagogical content knowledge (Shulman, 1987).
<b>6. Adapting for Learner Needs and Pedagogical Alignment</b>	27–30	45–55	85–95	Improved ability to identify mismatches and tailor materials	Demonstrates effective pedagogical adaptation and learner-centered approaches.
<b>7. Misconceptions about Adaptation</b>	31	40	85	Corrected the misunderstanding that adaptation is only about language	Teachers recognized adaptation includes content, pedagogy, and culture.
<b>8. Critical Appreciation of Adaptation</b>	32–34	45–55	85–95	Strong critical appreciation of adaptation relevance in bilingual and CLIL classrooms	Teachers developed a critical understanding of the importance of adaptation in educational practice.
<b>Overall Analysis</b>	All 34	~40–55	~80–95	Dramatic gains across all domains (~40–50% increase)	Teachers moved from moderate understanding to strong awareness, with improved application skills and corrected misconceptions. Supports the effectiveness of training intervention in enhancing teacher knowledge, skills, and appreciation of text and curricular material adaptation.

**Table 3**

*Thematic Analysis (Qualitative approach)*

<b>Theme</b>	<b>Category</b>	<b>Code</b>	<b>Description</b>
and Identifying Addressing Issues in Curricular Materials	Curriculum Analysis & Awareness	CA1	Teachers identify mismatches in curricular content that fail to meet bilingual learners' needs, ensuring

			adaptation for better comprehension.
Understanding Pedagogical Challenges in Adaptation and Adoption	Pedagogical Understanding	PU1	Teachers differentiate between adaptation and adoption, recognizing adaptation's importance in bilingual contexts.
Expressing Views on the Necessity of Adaptation	Pedagogical Understanding	PU2	Teachers articulate and justify the importance of adaptation using academic reasoning and classroom experience.
Enhancing Comprehensibility through Simplification and Elaboration	Adaptation Strategies	AS1	Teachers use simplification and elaboration to enhance content clarity for bilingual learners.
Ensuring High-Quality CLIL Materials	CLIL Application	CL1	Teachers ensure that adapted CLIL materials maintain content integrity while enhancing accessibility.
Collaborative Learning and Peer Engagement	Professional Collaboration	PC1	Teachers engage in peer discussions to refine adaptation practices and grow professionally.
Mastering Academic Communication and Presentation Skills	Professional Competence	PC2	Teachers improve academic language use and structured presentation of adaptation practices.
Developing Analytical Tools for Adaptation	Curriculum Analysis & Awareness	CA2	Teachers use tools like concept maps and checklists to evaluate and plan curricular adaptations.
Appreciating Adaptation as a Pedagogical Tool	Pedagogical Understanding	PU3	Teachers view adaptation as essential in bridging curricular aims with learner needs.
Differentiating Adaptation from Translation	Pedagogical Understanding	PU4	Teachers understand adaptation preserves pedagogical intent, unlike translation, which is language-only focused.
Applying Specific Adaptation Techniques	Adaptation Strategies	AS2	Teachers practice techniques like simplification, elaboration, and discursification to support learning.
Justifying Adaptation over Adoption	Pedagogical Understanding	PU5	Teachers argue about the advantages of adaptation in engaging learners and enhancing outcomes.
Strengthening Classroom Communication and Non-Verbal Interaction	Instructional Communication	IC1	Teachers incorporate visual and non-verbal tools to aid understanding during adapted instruction.

Building Confidence in Curriculum Adaptation	Professional Competence	PC3	Teachers gain confidence in selecting and modifying materials to meet diverse learner needs.
Professional Growth through Curricular Adaptation	Professional Development	PD1	Teachers view ongoing adaptation practice as a means of professional development and improving outcomes.

Based on teachers' perspectives, 15 themes were identified and grouped under six major categories, reflecting a comprehensive understanding of curricular material adaptation in bilingual education. Curriculum Analysis & Awareness highlights the importance teachers place on identifying content mismatches and evaluating curricular materials using structured tools, which guide the adaptation process to meet bilingual learners' linguistic and cognitive needs. In terms of Pedagogical Understanding, teachers showed a clear grasp of the difference between adaptation and adoption, the theoretical basis for adaptation, and its crucial role in bilingual pedagogy, emphasizing that adaptation goes beyond translation by preserving both meaning and instructional purpose. Under Adaptation Strategies, teachers employed techniques such as simplification, elaboration, and discursification to make content more accessible, helping learners overcome language barriers while maintaining academic integrity. The category of CLIL Application & Instructional Communication revealed that teachers ensured adapted materials adhered to CLIL principles by balancing subject content and language learning while supporting student comprehension through visual and non-verbal communication tools. In the area of Professional Competence & Collaboration, teachers engaged in collaborative learning, enhancing their use of academic language and their ability to present adaptation practices effectively. It is fostering mutual professional growth and building confidence in implementing curricular changes. The Professional Development category showed that teachers view the continual refinement of adaptation skills as integral to their professional advancement, committing to educational best practices to deliver inclusive, high-quality, and contextually relevant learning materials.

## Discussion

Adapting texts and tests to suit learners' language needs had a strong positive influence on both their learning outcomes (such as grades and subject understanding) and their classroom participation (including interest, motivation, and involvement) within Sri Lanka's bilingual education system. This study highlights the significant impact of text and test adaptation on bilingual learners' academic performance and engagement in Sri Lanka's bilingual education system. Adapted materials notably enhance comprehension, language acquisition, and subject understanding. Pre- and post-test data confirm a substantial improvement.

Teachers were aware of the mismatch between existing curricular materials and bilingual learners' needs but lacked knowledge of text adaptation—a key strategy to address this gap. This finding resonates with Cummins' (1979, 2000) distinction between Basic Interpersonal Communicative Skills (BICS) and Cognitive Academic Language Proficiency (CALP), which emphasizes the importance of adapting language to support learners in moving from everyday communication to academic proficiency.

Adapted materials offer essential linguistic support, promoting proficiency in both first and second languages through simplified language, visual aids, and glossaries. This aligns with Vygotsky's Sociocultural Theory (1978), particularly the concept of the Zone of Proximal Development (ZPD), which highlights the role of scaffolding in helping learners perform tasks beyond their independent ability. The

use of visual aids and glossaries also reflects principles of Krashen's Input Hypothesis (1985), which stresses the need for comprehensible input slightly above learners' current level ( $i+1$ ).

This approach can reduce dropout rates from bilingual to monolingual education and increase student retention in bilingual programs. Teachers now demonstrate strong understanding of adaptation principles, including defining and applying concepts, using CLIL techniques, and tailoring materials to learners' linguistic and cultural needs. They recognize that adaptation goes beyond language, encompassing content, pedagogy, and cultural relevance—an idea consistent with Coyle, Hood, and Marsh's (2010) CLIL framework, which integrates content, communication, cognition, and culture.

Adapted materials also boost student motivation and classroom participation, while improving teachers' instructional practices. However, national-level curriculum adaptation remains outside teachers' authority. Although they can adapt materials at the lesson level, this is challenging due to time constraints and workload. This echoes Shulman's (1987) concept of Pedagogical Content Knowledge (PCK), which emphasizes that effective teaching requires adapting content to the context and needs of learners.

Finally, the lack of training and professional development programs focused on text adaptation in bilingual education underscores the need for comprehensive teacher training in this area. This connects to Fullan's (2007) theory of educational change, which stresses capacity building and professional learning as central to sustainable reform.

## **Conclusion**

The findings of this study clearly demonstrate the intervention's strong impact on enhancing teachers' knowledge, skills, and attitudes toward curricular material adaptation in bilingual education. The significant increase in mean scores from the pre-test ( $M = 9.65$ ) to the post-test ( $M = 113.53$ ), along with a statistically significant p-value ( $p = 3.40 \times 10^{-31}$ ) and an exceptionally large effect size (Cohen's  $d = 12.93$ ), confirms that the improvement was both statistically and practically meaningful. Before the training, teachers showed limited understanding of text adaptation, low confidence, and a high need for support. Post-intervention results reveal notable growth in conceptual understanding, practical application, and the contextual use of adaptation strategies in bilingual, culturally diverse classrooms. Teachers gained confidence in applying adaptation techniques, addressing textbook limitations. But it is not practicable due to time restrictions. The training effectively bridged theoretical gaps and enhanced classroom practices, fostering inclusive and high-quality bilingual education. It laid a strong foundation for further professional development, highlighting the importance of continued support and targeted training. Ultimately, text adaptation is essential for bilingual learners to achieve optimal learning outcomes.

## **Recommendations and suggestions**

### **Curriculum Development and Material Adaptation at the National Level**

Establish standardized text adaptation guidelines to ensure consistency in BE. Develop materials tailored to Sri Lankan learners' linguistic and cultural contexts. Promote collaboration among educators, linguists, and subject experts to produce high-quality adapted resources.

### **Teacher Training and Professional Development**

Implement professional development to train teachers in adaptation techniques. Offer workshops on scaffolding and differentiated instruction in CLIL settings. Create a resource-sharing network for exchanging best practices and adapted materials.

## Assessment Reforms

Design assessments that support diverse linguistic and cognitive needs by including glossaries and visual aids. Align tests with students' language proficiency levels to ensure accessibility and fairness. Give importance to formative assessment.

## Policy Implications

Educational policymakers should integrate adaptation strategies into the national curriculum framework. Allocate funding for the development of quality-adapted materials. Promote research initiatives on the long-term impact of adapted materials on bilingual education.

## Future Research Directions

Conduct longitudinal studies on the long-term impact of adapted materials. Investigate digital tools' role in text adaptation and how adaptation strategies affect subjects within CLIL.

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