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Efects of Mediated Learning Experiences on Motivation to Learn for Hearing and Hard of Hearing Children

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Abstract
In this study, the question was explored of whether teachers' use of Mediated Learning Experiences (MLE) might significantly add to students' intrinsic motivation in first grade. Having viewed intrinsic motivation as a key driver of learning and achievement, the study took on a quasi-experimental approach with 200 children from two elementary schools, a control and an experimental group, pre- and post-tests. While there was a significant increase in the motivation of the experimental group, the difference with the control group was not statistically significant, and thus the first hypothesis that MLE alone would be able to bring significant differences in the motivation of the children was rejected. Interestingly, the intervention effect was identical for hearing and hard-of-hearing children. The findings report that MLE, while having some positive effects, is not strong enough on its own to make a significant contribution to the intrinsic motivation. Curriculum design, test methods, teacher behavior and personality, styles of teaching, parental involvement, home environment, and peer relationships ought to also be taken into account in later research work for the understanding and encouragement of student motivation.

Keywords: Experiment, meadiation, intrinisic motivation, intentionalisy, meaning, transedence

1. Introduction

Learning revolves around motivation. It's the catalyst that makes students engage, persevere, and strive for greatness, not out of command, but because they want to. According to Pintrich and Schunk (2002), motivation is the process of inducing and sustaining goal-directed behavior. Brophy (1998) also adds that it dictates direction, intensity, and persistence of activity that is associated with learning goals. Whether the motivation is the inner desire to study a subject or the external pressure to succeed, motivation plays an important role in defining students' academic existence.

One of the powerful ways through which this motivation is encouraged is through Mediated Learning Experiences (MLE), a factor that highlights the importance of mediated interactions, most often with adults such as parents or teachers who help children make sense of the world and, in the process, fall in love with learning (Feuerstein et al., 1980; Woolfolk, 2001). Through MLE, motivation may be created in one of three ways, intrinsic, extrinsic, and achievement-based, depending upon the manner in which students are guided and motivated.

But motivation does not develop in isolation. It is highly influenced by the environment, by schools, by cultures, by families, and by broader social values (Wlodkowski & Jaynes, 1990:12-23). For example, if children are raised in environments where questioning and curiosity are valued, they tend to have more intrinsic motivation (Carlton & Winsler, 1998: 159–166). But when such contexts are controlling or punitive as in the case of overcontrolling parenting, the internal motivation of the child will get damaged (Rigby et al., 1992).

In Ethiopia, motivation remains a challenging and poorly researched phenomenon. Studies such as Alemayehu and Mohamed (2012) report alarming trends such as increases in academic dishonesty, which could be signs of deeper motivational and moral failings. At the same time, social change, family changes, declining communal values, and growing economic pressures are altering students' orientation toward learning. Parents, teachers, and peers still act on students' motivation and interest, but to what extent in the context of Ethiopia is ambiguous (Alemayehu, 2018).

Currently, international literature in recent times has deepened our understanding of motivation. For instance, Ryan and Deci’s Self-Determination Theory (2020) emphasizes autonomy, relatedness, and competence as essential components of sustained motivation. In low-resource settings, scholars like Kiwanuka et al. (2022) and Suárez-Orozco et al. (2021) have highlighted how socio-economic adversity, unstable schooling systems, and inadequate teacher training can create barriers to fostering meaningful engagement. However, these studies are in contexts light years away from that of Ethiopia, a cry that is called for further localized research.

Although decades of work in education have enriched our knowledge base in motivation immensely as a result of work by theorists like Pintrich, Brophy, and Carlton & Winsler, there are still essential gaps that exist, especially with the

knowledge of motivation and how it is constructed in non-Western, poor settings like Ethiopia.

A significant amount of cross-cultural research continues to support the importance of MLE for developing motivation in the early years (e.g., Feuerstein et al., 2020; Ryan & Deci, 2020). However, a lot of this research is based on Western educational systems and family structures and therefore might not be extrapolated to culturally diverse settings. In Ethiopia, religious and moral education, patterns of parenting, and community expectations all take quite different forms, but these culture-specific factors are rarely controlled for in motivation research.

Local research, while on the rise, only touches upon the question of motivation indirectly. Alemayehu and Mohamed (2012) expose student dishonesty as being rooted in motivational and ethical failures, but neither of which grapples with deeply the socio-cultural roots. Works of Ethiopian literature like Fikir Eske Mekabir by Haddis Alemayehu and Oromay by Be'alu Girma quietly explore these contradictions, ambition, ethical conflict, societal decay, but these learnings await to be meaningfully bridged into education scholarship.

One of these under-explored areas is the application of MLE in early childhood education. While authors like Carlton and Winsler (1998) construct rigorous arguments to suggest that early life shapes motivation later, little empirical research can be found for monitoring the extent to which Ethiopian schools especially rural or public schools include or exclude MLE strategies. Similarly, teacher training initiatives in Ethiopia often overlook practical, culture-sensitive training on motivational approaches, and as a result, teachers are poorly equipped to generate curiosity or interest in the classroom (Tiruneh et al., 2023).

Furthermore, the literature tends to idealize intrinsic motivation and minimize the influence of extrinsic factors such as praise, rewards, or grades on tests especially in environments where basic needs are unmet. In Ethiopian classrooms where children may be undergoing poverty, hunger, or overcrowding of classroom space, extrinsic motivation can be a tangible and realistic factor. There are few studies, though, that explore how to thoughtfully combine the two types of motivation in such settings (Admasu & Tsegaye, 2022).

Emotional and ethic concerns also widely get misframed. Decline in motivation, cheating, and disengagement are framed as behavioral issues rather than as symptom of a deeper disconnection from productive learning environments. As per Alemayehu (2018), when students do not receive caring relationships or do not feel any connection between learning and their lives, motivation fails not due to them being lazy, but due to emotional, ethic, or cognitive needs not being fulfilled.

To really advance motivation research, we need to shift away from relying solely on universal theories and begin basing our understanding in the everyday realities of specific social and cultural contexts. In Ethiopia, this will involve asking timely and pressing questions that directly relate to the lived lives of students, teachers, and families. For instance, how do parenting styles whether supportive or

authoritarian interact with religious values and community norms to affect a child's learning motivation? These forces of culture exert considerable power in determining whether or not students feel encouraged, pressured, or disconnected from learning.

No less important is the understanding of how Mediated Learning Experiences (MLE) might be initiated or strengthened in early childhood, especially in schools that are under-resourced and have over-stretched teachers. In these settings, where textbooks might be limited and class sizes are large, we need to ask: What does good mediation look like, and how can we make it localizable?

Teacher education programs should also be taken into account. The majority of the curricula practiced depend on ideal pedagogical schemata that do not sufficiently prepare instructors to deal with intricate motivational challenges faced in Ethiopian classrooms. It is clearly necessary to establish training encompassing culturally sensitive, experiential approaches for promoting intrinsic and extrinsic motivation across different learners.

In regard to motivation, we must be pragmatic regarding the conditions students are living under. While intrinsic motivation is optimal, the impact of extrinsic motivators like grades, praise, or tangible rewards can't be eliminated, especially in communities where children are experiencing poverty or volatile home life. Attempting to reconcile these two forms of motivation ethically, sustainably, is an experiment that demands more thoughtful, contextually nuanced research.

Finally, student disengagement or cheating behaviors must not be dismissed as simple behavioral pathology. They typically reflect deeper emotional and psychological pathology hopelessness, alienation, or performing without either support or reciprocity. Reframing these signs as evidence of a pervasive motivational crisis allows us to develop interventions that are empathic, situated in students' worlds, and focused on refounding real engagement.

In short, to truly make progress, motivation must be considered not just as a personality trait, but as a product of the larger system in which a child is developing shaped by tachers, families, schools, culture, and the pressures of everyday life.

1.1. Teacher-Student Relationship

Teacher-student relationship is essential in defining how students view learning. Whatever a teacher does in class through what they utter, their gestures, tone, or demeanor can enrich or debase a student's motivation. Andersen (1986) noted that classroom communication involves both verbal and non-verbal messages that operate together to influence how students interpret and respond to what is being conveyed.

Positive teacher-student interactions help build intrinsic motivation a student's internal motivation to learn for the sake of learning alone. Stipek (1996) contends that when teachers foster settings that support inquiry and autonomy, students become more tolerant of challenges and explorations of creative

assignments. This form of motivation is linked with deeper engagement, enhanced learning achievement, and even enjoyment in academic tasks (Ryan & Powelson, 1991; Stipek, 2002).

Brophy (1998) and Small (1997) argue that Mediated Learning Experience (MLE) principles of conscious, intended interaction between an adult and a learner are essential in maintaining intrinsic motivation. Intrinsic motivation fosters confident students who are capable and maintain positive attitudes outside the classroom (Ryan & Powelson, 1991). Passive and disinterested students are normally the unmotivated ones (Stipek, 1996).

Recent research in Ethiopia by Tadesse and Melese (2022) also confirm that teacher-student relationships that are emotionally supportive promote resilience and sustained motivation to learn, especially in multilingual and diverse classrooms.

1.2. Hard of Hearing and Motivation

Hearing ability plays a significant role in the way children interact with learning and, by extension, motivation. Hard of hearing children are characterized as having hearing thresholds of 26 dB to 70 dB and could potentially miss a lot of speech that obstructs normal language development and interaction in the classroom. Under normal definitions, individuals within the mild (26–40 dB), moderate (41–55 dB), and moderately severe (56–70 dB) ranges are "hard of hearing."

Even though children with deep (91 dB+) or deep-seated (71–90 dB) hearing impairment may not be able to benefit from oral language even when wearing hearing aids, the current research addresses children in the mild to serious hearing loss range. Children in this category generally use hearing aids and specific accommodations like special classroom placement and MLE techniques.

Recent studies from Ethiopia (e.g., Abebe & Mekonnen, 2023) show that with the successful introduction of inclusive education practices such as MLE, hard-of-hearing children are able to do academically and socially. They respond positively to environments where communication is facilitated, support is systematic, and expectations are high but reachable.

1.3. Intrinsic Motivation

Intrinsic motivation is something done because it is enjoyable in itself and not for external pressure or reward. It is to do something because it is meaningful or fascinating. Carlton and Winsler (1998) refer to it as the joy of learning itself, while Deci and Ryan (2001) emphasize that intrinsic motivation results from seeing one's actions as a choice and being proficient in doing so.

When students are intrinsically motivated, they are likely to feel confident, persistent, and learn more about the subject matter. Their learning is more meaningful and sustainable (Burden, 2000). It has been shown in research that this type of motivation is closely linked to a child's belief in their own competence and feeling of self-efficacy (Pintrich & Schunk, 2002).

Harter (1992) and other constructivist theorists assert that pupils are not born competent; their competence is developed through successful experience. Mediated Learning Experience is critical in this case, especially for those children who otherwise can get demotivated or disengaged. Bandura (1986) and Harter (1990, 1992) found that early interventions based on establishing the child's belief can lead to greater persistence and eventual success.

Local Ethiopian research by Getachew and Tesfaye (2021) confirms this idea, showing that intrinsic motivation is boosted when students are encouraged to think about, inquire about, and participate actively in their own learning process.

1.4. Extrinsic Motivation

Extrinsic motivation, on the contrary, is doing something in anticipation of a reward or to avoid punishment. It is not necessarily negative but can diminish the intrinsic motivation of a learner when overused or misused. According to Woolfolk (2001), excessive use of rewards or punishments can divert a student's attention away from learning and toward mere performance.

Deci and Ryan (1992) warn that extrinsic rewards especially those perceived as controlling can limit the sense of autonomy experienced by a student and undermine intrinsic motivation. As soon as students have grown to depend on external, they start losing interest once such rewards are withdrawn (Stipek, 1996).

MLE, in contrast, is not doing bribe-grade rewards to children. It is building on the child's internal motivation through encouragement, belief in them, and positive interaction. While occasional use of extrinsic incentives may be acceptable at times (Burden, 2000), the final goal must be to help learners internalize their learning motivations.

Rigby et al. (1992) observe that while extrinsically motivated behaviors vary as far as the degree of personal preference is concerned, only intrinsically motivated behaviors are truly self-initiated. In the context of Ethiopia, Yilma and Gebremariam (2024) have observed that students in inclusive classrooms respond best when teachers combine structure with autonomy-supportive methods offering support while making space for student-initiated learning.

1.5. Statement of the Problem

This study is not intent on comparing intrinsic and extrinsic motivation. Instead, it is specifically interested in how intrinsic motivation the inherent drive to accomplish and learn is impacted through the application of Mediated Learning Experience (MLE), utilizing quasi-experimental design.

There has been a lot of research on intrinsic and extrinsic motivation in learning in the subsequent years (Schunk et al., 2014; Deci & Ryan, 2000). MLE has been noted around the globe as a successful teaching strategy that promotes the development of intellectual and affective skills by focusing on real meaningful interaction in learning (Feuerstein et al., 2006; Tzuriel, 2021). With careful

mediation, students are not just led through material but prepared to build independent thinking and inner motivation.

Despite the global recognition of MLE, there is nonetheless a discernible lack in the Ethiopian educational environment. The researcher was not able to find any previous research conducted in Ethiopia that applied MLE as an experimental intervention specifically targeting the cultivation of inner motivation among school children. Most of the previous local studies were descriptive targeting generic motivational factors (Asrat, 2021; Mulugeta & Desta, 2022), or discussed inclusive education without linking it to structured interventions like MLE.

Therefore, the present research intends to fill that lacuna by implementing MLE in real classroom settings and ascertaining its impact on the intrinsic motivation of hearing and hard-of-hearing students. MLE offers a unique approach to create a learning environment that is not only cognitively engaging but also considerate, interactive, purposeful, forceful, and affective nurturing attributes that are vital to cultivate learners' internal drive to learn (Feuerstein et al., 2006; Tadesse & Mekonnen, 2023).

In most Ethiopian classrooms, including those for the hearing-impaired students, teaching is still teacher-centered, providing very little opportunity for mediated interaction or individualized learning (Yilma & Gebremariam, 2024). This limits the degree to which the students can develop the kind of self-directed, lifelong learning practices intrinsic motivation promotes. MLE can potentially be a game-changer here by offering a model that promotes facilitated discovery, self-regulation, and deeper cognitive processes.

To examine this potential, the present research draws on the following hypotheses:

1. Hypothesis A: MLE application will have a strong effect on students' intrinsic motivation growth.
2. Hypothesis B: The effects of the MLE intervention will be transferred to hearing and hard-of-hearing children, demonstrating its applicability and effect for different learner profiles.

By its focus on these goals, this research not only adds to the academic literature on motivation and learning in Ethiopia but also offers a practical perspective on how mediated, inclusive strategies of teaching can bring all learners regardless of their ability to hear by creating curiosity, confidence, and an authentic passion for learning.

2. Theoretical Framework

The theoretical foundation of this research is Mediated Learning Experiences (MLE) and its conceptual roots, to a very large extent, lie in Vygotsky's (1978) earliest work and Feuerstein (1988). At the heart of MLE is the role of a mediator a parent or teacher intentionally shaping and guiding a child's discovery about their world. That mediation is not simply the presentation of information; it's

creating rich, effective learning experiences that spark a child's intrinsic motivation to learn.

For the sake of this study, the mediator is the educator who possesses both the know-how and know-why to mediate learning in a way that is able to move children from the inside out. This means that the educator picks appropriate tools, sets learning activities into context, and makes time effective to further maximize the intervention effect. Such intentional mediation constructs a contact bridge between the child and learning content, producing an more nourishing and driven process of learning.

Major principles of MLE are:

• Intentionality and Reciprocity: Intentionality is the deliberate direction of learning by the teacher, directing the child's attention to desired stimuli, and organizing the interaction to promote intended learning objectives. Reciprocity is dynamic two-way interaction whereby the child responds and remains open to learning, creating an interactive setting with rich feedback and interaction. Reciprocity promotes more participation and motivation.

• Meaning: Effective mediation takes place when the teacher not only presents an activity but also emotionally connects with the child in order to explain to him or her why it is significant. Feuerstein (1980) describes mediation of meaning as the transmission of knowledge, values, and beliefs from one generation to another. Without this, children will miss the rich cognitive and affective nuances required for significant learning. Teachers in the classroom who validate the child's responses and comment upon them allow students to construct understanding and intrinsic motivation. This collaborative meaning building generates interest and enthusiasm for learning more.

• Transcendence: This principle takes learning into contexts beyond its immediate needs, so that children develop a sense of more universal concepts and principles with applications in many situations. Through transcendence, learners achieve a greater understanding of how everything relates to one another, furthering their inner motivation to seek and discover new relationships and explanations. It is further consistent with contemporary international perspectives centered on critical thinking and lifelong learning skills (OECD, 2023). Ethiopian researchers such as Tadesse and Mekonnen (2023) highlight that transcendence is particularly helpful for inclusive classrooms whereby learners can appreciate how learning extends beyond the classroom.

Apart from these basic principles, MLE also involves other major determinants like provision for a feeling of competence, facilitation of self-regulation and management of behavior, support towards goal planning and goal setting, facilitation of individuation and sharing, and provision for optimism and feeling of belonging. All these determinants fit into a well-rounded learning context that supports students' interest and motivation.

In this research, the independent variables the components of MLE (intentionality and reciprocity, meaning, and transcendence) are applied as the

intervention framework. The dependent variable is learning motivation, measured using a set of 22 experimental items by Stipek (1988). Pretests and posttests were administered to the experimental and control groups with the same questionnaires in order to evaluate the difference in motivation.

Some recent Ethiopian studies validate the use of MLE in local classrooms. For example, Worku et al. (2024) set out to prove that mediation-trained teachers fostered better engagement and interest among students, particularly those with varying learning needs. Across the world, added emphasis on learner-centered, mediated pedagogy coincides with UNESCO's appeal for inclusive and equitable quality education (UNESCO, 2022).

By grounding this research on the rich theoretical tradition of MLE, combined with present evidence from Ethiopian and international environments, the study aims to shed light on the manner in which mediated learning can transform motivation, particularly among children who are hard of hearing or otherwise have special needs.

3. Methodology

3.1. Research Design

The study used a quasi-experimental design with experimental and control groups, and pretest and posttest measures. There were two government primary schools in Gulele sub-city, Addis Ababa, where the study was carried out. These schools have predominantly low socioeconomic status families, and students are relatively culturally homogeneous, and thus served as a tool to control extraneous variables of cultural diversity. Matching techniques were employed during sampling to ensure that experimental and control groups were comparable for significant characteristics such as sex, age, language background, socioeconomic status of parents, and ability to hear. The approach is in line with recommendations made by Tadesse and Mekonnen (2023), who emphasize the importance of group equivalence for Ethiopian education intervention.

3.2. Participant Sampling

200 children participated in this study. Out of 480 for ten sections, an initial screening of 100 children from each school were selected with both normally hearing and mildly to moderately hearing-impaired children in order to find out the impact of hearing level on intrinsic motivation. Children with hearing loss have been included as part of Ethiopia's growing emphasis on inclusive education (Alemayehu, 2018; Yilma & Gebremariam, 2024). Ten teachers from the first grade in the same sections were also recruited, and home visits were conducted using a sample of ten randomly selected parents for gathering contextual information.

3.3. Experimental Procedure

Pretests for motivation and hearing tests were administered to both groups before commencing the intervention. Intervention was conducted for eight months with the Mediated Learning Experience (MLE) program administered to the experimental group exclusively. Teachers were trained to implement MLE strategies, and this is extremely crucial in line with Tzuriel (2021) and Worku et al. (2024), who emphasize teacher capacity development in mediation-based research. Posttests and follow-up hearing assessments were administered at the conclusion of the program to measure changes in motivation quantitatively.

3.4 Instruments and Data Collection Procedures

Research permits were obtained from principals of schools and the sub-city education office. Training in data collection methods, including hearing testing, motivation questionnaires, and qualitative data collection through observations and interviews, was conducted with teachers and research assistants.

3.4.1 Quantitative Data

Hearing Test: Two audiologists conducted hearing levels through Pure Tone Audiometry (PTA), and Sound Level Meters (SLM) measured background noise and classroom acoustics, enjoying the influence of sound environment on learning (Abebe & Mekonnen, 2023).

Motivation Measurement: Stipek (1988) adapted motivation questionnaire was used to quantify students' intrinsic work orientation, confidence, and intrinsic interest. The Likert-type scale ranged from 1 (not usually true) to 3 (usually true). Data analysis for pretest and posttest comparisons was done using SPSS.

3.4.2 Qualitative Data

Qualitative data collection involved home and classroom observation of learning settings, teacher conduct, and teacher-student interaction, in addition to open-ended interviews with the teachers to identify their professional ability and the effect of such ability on motivation. This process aligns with studies by Asrat (2021) and Getachew and Tesfaye (2021), who highlight the importance of qualitative data in Ethiopian educational research.

3.5 Data Analysis Procedures

3.5.1 Qualitative Data

Interview and observation information were transcribed, translated, and thematically coded according to the MLE guidelines. Primary themes of parental socioeconomic status, teacher knowledge, and classroom acoustics were categorized and analyzed descriptively (Feuerstein, 1988; Tzuriel, 2021).

3.5.2 Quantitative Data

All quantitative data were coded and inserted into SPSS. Descriptive statistics cross-tabulated scores of motivation, whereas inferential statistics (two-way ANOVA) was used to test the influence of hearing status and intervention on intrinsic motivation. Repeated measures ANOVA tracked change across time and

interactions between hearing capacity and intervention, as in similar analyses in overseas and Ethiopian research (Pintrich & Schunk, 2002; Worku et al., 2024).

3.6 Ethical Considerations

The study followed rigorous ethical standards: informed consent was obtained from all participants; confidentiality was ensured; debriefing of participants was done following data collection; and delayed intervention was applied to the control group to ensure equity. These practices follow international research ethics guidelines (UNESCO, 2022; OECD, 2023).

4. Result

4.1. Competence of Teachers in the Profession

Research at home and abroad identifies teacher competence as a long-standing challenge, particularly in teaching effectively with approaches like Mother Tongue-Based Multilingual Education (MLE). Teachers typically struggled to craft engaging and intentional learning experiences before the intervention. They controlled classroom discussions, with children remaining passive, not engaged, much less as active participants. Teachers tended not to set clear learning goals, listen with empathy to children's spoken and written contributions, or motivate learners sufficiently. This is characteristic of a broader pattern witnessed in conventional teaching methods, where neither reflective planning, learner-centered interaction, nor responsiveness to the students' individual needs exists.

The study underscores that such teacher practice limits children's participation and obstructs meaningful learning. Similar findings have been noted at the national level, where teachers fail to adapt to the varied interests and abilities of the learners, rarely challenging or stimulating them in meaningful ways. But through targeted professional development or intervention, teachers shift towards more participatory, child-focused approaches, aligned with MLE principles fostering active learning, goal-setting, and sustained motivation which are reported to improve student outcomes.

4.2. Characteristics of Sampled Children

World studies consistently show that student characteristics, including language origin and sensory functioning, have strong effects on learning. For this study, the majority of children were native speakers of Amharic, as are national populations, but some spoke other native languages but had Amharic as a second language. This multilingual setting is both strength and a challenge for language learning.

Of special interest, the sample's prevalence of borderline or mildly impaired children on the hearing impairment issue helps to highlight an important problem often understated in educational research. The rates of drop-out calculated as about 10-13% are indicative of larger trends of student loss in similar socio-economic environments, often linked with family mobility as well as entrenched health and social issues. Attrition is a recognized limitation of national and international studies, and thus the need for more expansive and adaptive paradigms of education.

4.3. Parent Socioeconomic Status

Parent socioeconomic status and parent education are worldwide established predictors of children's academic achievement. The findings of this study that a high percentage of parents have low educational levels and are unemployed or engaged in informal, low-paid employment correspond to national trends documented in the literature. Low parent educational levels, particularly among mothers, restrict families' ability to support their children academically or provide a rich learning environment in the home.

At the global level, studies show that such socioeconomic disadvantage influences the motivation, attendance, and general school engagement of children. In line with this, the research established that teachers observed that most parents live on below the poverty line, and this worsens the plight of children, making it tough for them to attend school and learn continuously.

4.4. The Acoustic Environment

The impact of noisy environments on learning has been adequately researched globally, with consistent findings that poor acoustic conditions affect communication and compromise students' attention and comprehension. The results of this study replicate that the environment of the experimental school commercial roads, crowded markets is characterized by high noise levels way in excess of standards.

Instructors reported that the ambient noise interferes with their teaching and learners' focus significantly. Nationwide, schools in similar urban setups are beset by the same issues, which are poorly observed but greatly affect learning quality. This means that acoustics optimization must be considered when adopting interventions designed to enhance learning outcomes, especially in low-resource environments.

4.5. Effects of Intervention on Motivation

Table 1 Mean and SD comparison

Time	Measurement	Experimental group (n = 90)	Control group (n = 87)	Total n = 177
Pretest Assessment	Mean	34.63	40.36	37.45
	SD	11.18	10.43	11.17
Posttest Assessment	Mean	38.53	43.14	40.79
	SD	10.17	11.12	10.87

The repeated-measures ANOVA showed that there was a significant within-subject main effect of time on the development of motivation ($F [1,175] =23.676$, $p<.05$, $\eta^2 =.119$) with small effect size, showing that all children had high desirable motivation to learn. However, there was no within subject interaction of time of measurement and group, ($F [1,175] =.674$, $p>.05$, $\eta^2 = .004$) with very small effect size. On the other hand, there was statistically significant effects between subject ($F [1,175] =12.527$ $p<.05$, $\eta^2 =.067$), with small effect size. This result pointed out that all children are motivated through time, but, the intervention had no significant effect on the development of motivation to learn.

The study indicated that, generally speaking, motivation improved with time across all the children. This is to say that irrespective of the group, children were more eager to learn over time. The improvement in motivation was, however, minimal. Interestingly, the intervention itself actually did not create a notable difference in motivation compared to the control group. That is, although motivation did improve as a whole, the intervention did not create a noticeable change in boosting motivation above what happened naturally over time.

4.6. Effects of Hearing Status on Motivation

Table 2 Mean and SD comparison

Hearing status	Measurement	Experimental group	Control group	Total
Normal Hearing	N	28	37	65
	Mean (SD)	35.32 (10.77)	41.40 (9.80)	38.78 (10.59)
Borderline Hearing	N	57	51	108
	Mean (SD)	33.67 (11.24)	40.21 (11.00)	36.76 (11.56)
Hard of Hearing	N	15	12	27
	Mean (SD)	38.00 (13.17)	37.25 (11.50)	37.67 (11.23)
Total	N	100	100	200
	Mean (SD)	34.78 (11.40)	40.30 (10.60)	37.54 (11.32)

Average motivation scores for students by hearing status and group designation (experimental or control) are displayed in Table 2 data. Students were divided into three groups of hearing: normal hearing, borderline hearing, and hard of hearing. Control group students were higher on average motivation scores than experimental group students at all levels of hearing. For example, for students with normal hearing, the experimental group's average motivation score was 35.32 compared to 41.40 for the control group. For borderline hearing students, 33.67 was the score for the experimental group and 40.21 for the control group. For hard of hearing students, the scores were also quite similar—38.00 for the experimental group and 37.25 for the control.

To examine these differences, a two-way ANOVA was applied. The results showed that hearing status by itself did not contribute significantly to the motivation of students ($F[1,194] = .335$, $p > 0.05$). It means that variability of hearing ability—normal, borderline, or hard of hearing—was not significant in affecting students' learning motivation. Nevertheless, overall the effect of group classification (experimental group and control group) was significant ($F[2,194] = 4.644$, $p < 0.05$). This indicates that overall, group hearing status did affect motivation levels, but there was no specific interaction between hearing status and type of group ($F[2,194] = 1.213$, $p > 0.05$). This suggests that the extent to which group membership affected motivation didn't vary by level of hearing in students.

In general, the findings indicate that hearing ability did not significantly affect students' learning motivation. The repeated-measures ANOVA also substantiated that the motivation of all the students improved from the pretest to the posttest period. There was no significant difference between the experimental group and control group students in the improvement. Also, experimental group hard of hearing students had motivation levels as high as or slightly lower than normal or borderline hearing peers, corroborating the hypothesis that hearing status was not an important variable in deciding motivation in this study.

5. Discussion

In this part home and school environments, teachers' professional competencies, effects of hearing impairment and effects of intervention on motivation to learn will be discussed below.

5.1. Home and School Environments

Not only are the talents and interests of a child impacting their desire to learn, but so are the environments in which they grow and reside, as is the case with the hearing-impaired child. In the current study, for many of the children involved, home environments were typified by extreme economic deprivation. Parents in low-income households often struggle with unemployment, limited education, and financial hardship, which can lead to stress and a sense of helplessness. This isn't about lack of care, many parents deeply want to support their children's education, but about circumstances that can overwhelm their capacity to do so effectively. As

Dodge, Pettit, and Bates (1994) and Fox, Platz, and Bentley (1995) so forcefully showed some years back, when parents are stressed or feel inadequate, they may inadvertently step back from actively facilitating learning by their child.

This reality is reaffirmed in more recent Ethiopian studies. Gebre and Tadesse (2022), for example, noted that in North Wollo, parents did try to support their children's education but were often thwarted by lack of time, unclear expectations, or not knowing how to help. Tarekegn (2023) documented in Woldia that parental participation was in general reactive, coming only in the guise of response to challenge, rather than being proactive and ongoing.

Similarly, the school environment for most children was less than ideal. Too many children in a single room, high noise levels, and a lack of visual and learning materials made it even more challenging for children with hearing disabilities to stay motivated. In their study of inclusive schools in Gondar, Yilma and Abebe (2019) noted that most teachers were not sign language trained and used gestures or written communication to communicate messages to deaf students, steps that frustrated both parties and hampered effective learning.

International research corroborates these findings yet points to promising innovations. For instance, Yadav et al. (2024) found that augmented reality (AR) captioning devices significantly improved learning among deaf and hard-of-hearing children since the majority of participants deemed the device to be useful and captivating. Similarly, El Kateb and Sagha (2023) also explored the effectiveness of gamified auditory-verbal training among children with hearing loss and also found that it not only improved listening but also increased motivation levels, particularly among those children who were already accustomed to the rehabilitation process.

Of these threats and opportunities, one message is most memorable: teachers can make a great difference. When teachers are professionally trained and compassionate, they can bridge home and school. Through approaches like Mediated Learning Experience (MLE), teachers can cater to differences in instruction, build rapport with students, and instill love of learning even in students with significant disadvantages. Beyond that, teachers can also guide and teach parents and empower them to be more confident partners in their child's learning.
Motivation does not happen in isolation. It's shaped by relationships with parents, teachers, and peers. And while poverty and institutional obstacles are certain, they are not preordained. Through appropriate support and coordination between schools and families, children with hearing impairments can develop the confidence and motivation to learn and achieve.

5.2. Teachers' Professional Competences

As detailed in the findings section, teachers' professional competences prior to MLE training were very low, especially in terms of responding to the needs of various learners. Their levels of knowledge, attitudes, and instructional skills were weak enough to facilitate meaningful and inclusive learning. However, after being

provided with MLE-based training, the teachers exhibited notable shifts in competence, commitment, and motivation.

Traditional instructors used to give learning stimuli directly and unprocessed—images, words, and sounds without instructing learners to learn from them meaningfully or critically. This would lead to surface learning and alienation (Tadesse & Tesfaye, 2019). MLE, however, brings a change of paradigm in teaching where the instructor plays the role of a mediator between the world and the learner. As Feuerstein et al. (1988) describe it, the teacher's role is to re-interpret and enrich the learning setting in explicit terms, enabling learners to make sense of stimuli and internalize cognitive processes.

Klein (1996) continues to clarify that mediation involves actively selecting, organizing, and framing experience in order to provide meaning, relevance, and context for the learner. It is interactive, dynamic, not passive transmission. In MLE, the teacher is not merely an information transmitter, but also cognitive coach who fosters independent thinking and metacognition.

This idea is connected to Vygotsky's sociocultural theory (1978), which emphasizes the importance of facilitated interaction within the learner's zone of proximal development (ZPD). Mediation is involved here, since learners are encouraged to move beyond their current abilities with structured support.

International research has confirmed that teachers of cognitively demanding, collaborative, and reflective environments have a better chance of involving learners in creativity, critical thinking, and cooperation (Costa, 2000; Shulman, 1987). The same is claimed by Ethiopian researchers. For instance, Alemayehu (2016) states that unless professional development interventions are radically transformative in terms of inquiry, reflection, and mediation, they are unable to effect sustainable change in teaching practice. Similarly, Abebe and Wondimu (2021) also found that when Ethiopian teachers were trained in student-centered, cognitively demanding approaches, both their attitude and classroom practice also became significantly better.

MLE is a purposeful and deliberate practice not accidental. Teachers must deliberately plan how to mediate learning, modifying content and dialogue to cognitive and affective needs of students. Illuminating teachers with MLE concepts in the present study served as key in catalyzing students' intrinsic motivation. Thus, learners became more engaged, self-directed, and effort-willing on learning.

MLE also translates to education equity through enabling teachers to reach out to students who could otherwise be marginalized such as special needs pupils or linguistically diverse students (UNESCO, 2020; MoE, 2022). Through mediation, teachers are facilitated to close the gap between students' lived experiences and curriculum.

5.3. Effects of Hearing Impairment

Hearing impairment does not simply alter the manner in which children hear—it alters the manner in which they participate, learn, socialize, and develop

self-awareness. In most classrooms, in which oral language is the dominant instrument of instruction and peer-to-peer communication, children with hearing loss are often faced with an overwhelming communication barrier. This barrier can leave them out of interaction socially and emotionally, evoking frustration and withdrawal.

As an AP News 2024 article noted, a Senegalese classroom now comprises deaf and hard-of-hearing children along with hearing children, despite the fact that most of them don't know sign language. Through effort and curiosity, children were able to communicate—showing the way inclusion, when planned with intention, can bridge gaps in communication and build connection (AP News, 2024). The same is true the world over, including in Ethiopia.

Tilaye (2023), within his research among the hearing-impaired pupils in Yekatit 23 Primary School in Addis Ababa, found that despite being placed in inclusive classrooms, the students felt excluded. Not having access to sign language services or modified teaching practices, inclusion was symbolic and not practical. The students were not included either socially or academically.

Basha, Engida, and Tesfaye (2024) also reported in Arba Minch Teacher Training College that communication breakdown between the hearing-impaired students and teachers was widespread. The teachers were not proficient in sign language and lacked exposure to assistive technology, hence poor performance in school and low levels of classroom participation among the hearing-impaired students.

On a grander scale, Discover Education (2024) surveyed challenges in the roll-out of Ethiopia's policy for inclusive education. Progressive though the policy is, pragmatic deficits exist—most glaringly, that freshly minted teachers all too frequently graduate without much training in sign language or in inclusive pedagogies. As a result, deaf students all too frequently fall behind and feel isolated from their classroom communities.

There are promising developments at the international level. Daya et al. (2025) write about employing virtual reality (VR) technology to enhance sign language teaching for teachers and pupils. They observe that VR-based interactive and immersive learning increases communication, comprehension, and engagement among deaf students. Another technology, Samaradivakara et al. (2025), piloted a live augmented reality (AR) captioning app specifically designed for deaf and hard-of-hearing pupils. The interface allowed for the students to follow what was being discussed in class more easily, significantly improving understanding and reducing mental fatigue.

Taken as a whole, these studies paint a clear picture: hearing loss goes far beyond the ears. When communication barriers remain unaddressed, students who have hearing loss are not only disadvantaged in their acquisition of information but are also stunted in the development of their emotional and social health. But when instructional techniques are adapted, accessible technology is provided, and peer support is available, these students thrive.

5.4. Impact of Intervention on Motivation to Learn

The present study measured the impact of an intervention developed with Mediated Learning Experience (MLE) on children's motivation to learn in terms of work orientation, confidence, and intrinsic motivation—concepts first described by Stipek (1988). Measuring motivation, we noted children's persistence time on tasks, curiosity, effort, feeling of competence, and preference for choosing learning activities independently.

Learning motivation at this stage is especially significant because early motivation will largely determine a child's later school success. To show, recent studies by Zhao et al. (2023) found that young students' intrinsic motivation could better predict their long-term participation and performance than IQ ratings. Despite this, little is known about the development of intrinsic motivation in Ethiopian children or how instruction approaches like MLE can promote it.

Improvements in motivation across time were seen in both the control group and the MLE group in this study. However, the two groups did not differ significantly. In other words, the MLE intervention was not significantly better than regular classroom instruction with regard to enhancing motivation. This result suggests that there may be influences on children's motivation greater than classroom approach.

One of the strongest influences on children is the education and socio-economic status of their parents. Studies like those discussed by Hendrawijaya (2019) and Atta & Jamil (2012) consistently show that those whose parents have higher educational levels are more self-motivated students. Similarly, Igwe (2017) shows that those from families with better socio-economic statuses are more enthusiastic and resilient in school work. This is especially relevant in Ethiopia, where home disparities can limit the impact of school-based interventions like MLE.

Apart from family background, home and school environment also matter. Research conducted by Muijs et al. (2004) and Koban (2016) stresses that good learning materials, quietness, and supportive rooms and emotionally safe classrooms significantly increase children's intrinsic motivation. Most of the Ethiopian schools lack material resources and stressful or noisy classrooms, however. According to the indication of Dindar (2017), when lessons are not linked to students' everyday lives by teachers, motivation sharply decreases.

Another reason for the same motivation in groups might be drawn from the age of the children. Young children are curious and motivated to learn by nature, especially at their initial school years. Conventional research of Harter (1992) and Stipek (1992) has concluded that children come to school with a strong sense of competence along with inner motivation. These ingrained habits dominate short-term consequences of individual teaching interventions unless those practices are applied repeatedly for extended periods.

It's important to admit that intrinsic motivation is a highly personal and psychological affair. Lin et al. (2014) assert that it's an internal force that drives students to struggle through challenges just for the fun of learning itself, not because

of rewards. Intrinsically motivated children do not need praise or rewards; curiosity and joy in learning something new propel them. Schunk (1990) affirms the same in his study, where he found that intrinsically motivated learners continue to work even when problems become difficult, retaining their resilience and autonomy.

While the difference in this study was not found to be statistically significant from the intervention, it highlighted the key impact of classroom climate, teacher-student interaction, and mediation procedures. As described by Adelman & Taylor (1990) and Boggiano & Barrett (1992), a warm and responsive classroom can exert influential psychological effects on motivation. Teachers who scaffold learning within children's Zone of Proximal Development (ZPD), as proposed by Vygotsky, support students to risk and develop with more confidence.

In the end, this study confirms that motivation is not caused by classroom occurrences. It's a multifaceted mix of life at home, community, available resources, teacher expertise, and child development level. As much as MLE has much to offer, its success is predicated upon proper support systems within and outside school.

5.5. Hearing Status and Impact of Intervention

The study found that the intervention was not causing drastic changes in motivation among hard of hearing children as well as their hearing counterparts. That is, whether one was hearing or hard of hearing, his or her pre- and post-intervention motivation levels were more or less identical. This suggests that it was not necessarily hearing ability that influenced the way children responded to the Mediated Learning Experience (MLE) intervention in learning motivation.

This finding is supported by new studies that although hearing impairment is a challenging situation for communication and learning environments, motivation is more complex and multilateral a problem not conditioned in plain sensory ability. In other words, Kumar and Sharma (2021) point out that hearing-impaired children will often face social-emotional barriers that affect motivation but are inescapably intertwined with extrinsic support such as family involvement and education rather than hearing status per se.

In an Ethiopian context, Alemayehu (2022) identifies that deaf/hard-of-hearing children have the potential to reach the same motivational and academic outcomes as their hearing counterparts if they are exposed to supporting learning environments and inclusive teaching. These learning environments, nonetheless, need to bridge sensory barriers but also socio-economic disparities and the quality of teacher mediation.

Besides, social interaction and communication also influence intrinsic motivation greatly. Taylor et al. (2020) explain that hearing-impaired children learn substantially through mediated interaction and emotional support learning environments that have the ability to minimize isolation that usually results from hearing challenges. However, if interventions are not well designed to meet these needs or other socio-environmental conditions are not addressed, motivation will not enhance substantially.

In general, the absence of substantial hearing group difference in this study implies that enhancing motivation calls for an integrated method—one that transcends hearing status to encompass quality instruction practices, support from family members, and stimulating environments for learning. According to Mengesha and Gebre (2023), instruction should be adapted to address the specific

5.7. Conclusions

The study was carried out on grade one students of two primary schools in Gullele sub-city, Addis Ababa, with a goal of determining the way learning motivation can be facilitated in young kids. Among the unavoidable conclusions is that schools play a significant function to facilitate motivation because motivated students tend to perform better in class. Whenever kids are struggling to control their own behavior or learn on their own, they lose motivation very fast if parents, peers, and above all teachers fail to provide support and encouragement.

Teachers, through means like Mediated Learning Experience (MLE), exercise a significant control in encouraging children, maintaining them motivated and emotionally stable in the process of learning. Motivation, though, is not only something that takes place in the classroom. This intervention was applied without adjustments to the children's family life or to the crowded, noisy school environment. It is likely that if the intervention also addressed these external factors, motivation would have been significantly impacted and apparent.

Interestingly, this study showed that the MLE intervention did not bring about a noticeable shift in motivation levels and that this was so among children regardless of their hearing ability. This tells us that motivation is compelled by innumerable factors aside from hearing or sensory variations. It's a complex mix of environmental, emotional, and social influences.

We also discovered that very young children are innately motivated to some extent, but that this can be developed and extended in different ways depending on their home life, socio-economic circumstances, and school support. This implies that while MLE has promise, it needs to be one part of a whole and more extensive package if a lasting impact is to be made.

Of course, there was no solution to all in this research. There are still many questions left open about what motivates young students and what forces are operating in the home and school. Features like how the curriculum is built, teachers' actions and interactions with the students, parents' participation, the family dynamics, and peers' relationships—all of these affect motivation and must be taken into account in further research.

Implications

1. Outside the Classroom: Motivation, especially for children with disabilities, extends outside classroom practices. There should be coordination among schools, communities, and families to provide emotional support, means, and safe environments.

2. Assistive Support for Hearing-Impaired Children: Although hearing ability is not the foundation of motivation, hearing-impaired children can be assisted with teaching practices that focus on meaningful communication and social integration, as specific to their individual needs.
3. Invest in Teachers: Teachers hold the key to motivating students. Continuous professional development that helps teachers build inclusive, active, and culturally responsive classrooms can enhance children's learning and motivation.
4. Improve School Resources: The majority of Ethiopian and similar contexts' schools lack adequate materials, quiet rooms, and adaptive equipment. Closing such gaps is crucial to designing spaces where all children have a chance to thrive and stay motivated.
5. Investigate Further: More research needs to be conducted to identify how motivation is constructed over time, how school and home contexts interact, and how best to mediate learning for educators. This will allow interventions that really work for diverse learners to be developed.

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