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## **Mediated Learning Experiences (MLE) for Psychosocial Functioning of Hearing and Hard of Hearing Children**

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### **Introduction**

The main purpose of this study was to investigate the effect of school-based intervention on grade one children. This study tested the hypothesis that children receiving teacher-mediated-intervention with Mediated Learning Experiences (MLE) - would make significant progress in the major variables of this study. The participants of this study comprised 200 children, 100 from each of the two schools. The two schools were purposefully selected from among government schools that enroll children with low socio-economic status (deprived), making the sample linguistically and culturally homogeneous. The instruments used for assessment include audiometric hearing test, sound level meter, Self-Concept Scale, Motivation Scale, the Burks Behavior Rating Scale, and the language and academic tests. Socioeconomic status, hearing level, school acoustic conditions and teachers' professional competence were analyzed using descriptive statistics as well as qualitatively. This article summarizes a doctoral dissertation publicly defended in August 21, 2010 at the University of Jyvaskyla, Finland. The summary includes background, methods, major findings and conclusions.

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## **Back ground**

Schools at all levels do not have assessment procedures and intervention mechanisms are not in a place. Many children with visible and invisible impairments in the regular schools may be suffering from maladjustment and developmental delays. There are few special schools and classes mostly in the capital, Addis Ababa, and in some regional towns, unlike the rural areas. Despite a substantial increase in the net enrolment rate (NER) (83.4%) children without disability; the GER of children with disabilities is still found to be less than 2% (MoE, 2009), which is an extremely daunting challenge. Special needs education is provided in 20 special schools and 162 special classes, to those children who are physically, sensory or intellectually impaired which are run by the MoE, non-governmental organizations (NGOs), and national associations of persons with disabilities.

During the last 15 years schools have flourished (more than 23,000) in all villages of Ethiopia, with very serious problems and constraints in meeting quality and equity. Some of these include low participation rates of children with special needs, a curriculum that is not adapted to the existing reality of diverse need of children, and lack of equitable access to schooling for many children with special needs. Furthermore, there is a lack of professionals in the area of special needs education who would assess and provides support to all children according to their needs and potential. Shortage of qualified teachers and inadequacy of budget have been the major problems for all groups of children with disabilities. Particularly children with mild impairments such as hard of hearing which is the focus of this study are overlooked.

According to some findings, the number of hard of hearing children in regular classrooms is unexpectedly high in Ethiopia; for example, 30% children in the primary regular school of Hawassa, Southern Ethiopia are hearing impaired (Fransua, 1998), as compared to the 20% in the USA (Shea and Bauer, 1997). A number of studies in this area indicate that the psychosocial needs of many hard of hearing children are not met at home, in

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the school, or in the community, due to their impairment and the lack of satisfactory social communication skills (Ayodele, 2000; Fransua, 1998; Levine, 1981; Meadow, 1984; Shea and Bauer, 1997). When the unique needs of these children are not met, problems pertaining to low self-concept and self-esteem, social isolation (rejection), poor motivation, behavior problems, and low academic achievement may occur (Tsfaye, 2002; Shea and Bauer, 1997). For example, as argued by Fransua (1998), a number of hard of hearing children in regular classrooms of Ethiopian schools may have the highest risk of repetitions, dropout, and psychological problems. In his study, Fransua (1998) identified that 77% of children among those repeating class were hard of hearing children. This implies that hearing impairment affect academic achievement.

Besides, family variable such as lack of awareness, socioeconomic conditions, school facilities such as teachers professional quality, classroom and school acoustics, a history of or recurrent **otitis** media, and its consequences affect the life of children with hard of hearing. Teachers in the mainstream schools often lack the knowledge and skills to identify, assess, support, and enhance the self-concept, motivational aspects, positive behavior, language skills, and better academic performance of both hearing and hard of hearing children. Ethiopian schools have no strategy to identify, assess, and support hard of hearing children with the exception of few, schools for the deaf where audiological assessment was conducted. Audiological assessment for regular school children has never taken place in schools of Ethiopia, except for Fransua's (1998) attempt with his Master's thesis, which was only a survey, and did not include any intervention. After audiometric assessment, I have not come across any research that has focused on psychosocial intervention with MLE, in the regular schools of Ethiopia.

Amongst grade one students, a significant number of children repeated classes (11%) and many dropped out of school (27.5%) before they reached grade two, for reasons unknown. However, in about five years, it appears that the dropout and repetition rates had decreased. The dropout rate

decreased to 12.4% and the repetition rate was 6.1 % at the first grade level (MoE, 2009). These could be attributed to impairment (hard of hearing), poor psychosocial functioning and lack of mediated intervention which need to be investigated and tackle their difficulties.

Since 1991, research on children with impairments in Ethiopia – undertaken by graduate and undergraduate students – has been flourishing, every year. However, many of these studies focused on special schools and special classes and are not experimental; instead, they are characterized as only types of case and survey studies. The surveys focus on the educational and social problems of hearing impaired children in deaf schools. As far as I know, no experimental study in special needs education has been ever undertaken, so far, neither in regular schools, special schools, nor special classes, in Ethiopia.

Moreover, audiometric assessment has never been conducted in regular classes, to screen, assess, and intervene in the problems of children with hearing difficulties. Furthermore, to my knowledge, there is no published study that focuses on hard of hearing children and their self-concepts, motivation, behavior, language skills and academic achievement, in Ethiopia. Few studies in developed countries have examined mainstream hard of hearing children, describing a range of aspects like hearing, speech, language, and academic performance, but ignoring facts such as social-emotional, skills and self-concepts (Brackett and Maxon, 1986; Davis Chowicz, Shpard, Selmacowicz and Gorgea, 1981; Maxon and Brackett, 1987, 1991). This data indicates that there is a serious shortage of interventional research in the regular Ethiopian schools.

Hence, the basic purpose of this study is to test the effects of school-based Mediated Learning Experiences (MLE) on the psychosocial functioning of grade one hearing children and children with hearing losses. Further, the study intended to explore and describe home and school environmental factors related to psychosocial functioning of the children. The two sampled schools are located in one of the sub-cities of Addis Ababa city

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administration. The research is based on an experimental design which focused on assessment of children's psychosocial functioning and intervention of teachers in caring, supporting, enriching, and teaching hard of hearing children, as well as hearing children, in order to facilitate comparison. The objective of this comparison is to oversee the impact of hearing impairment and school-based intervention with MLE. In this project compared to home-based intervention, schools were found to be important spaces for conducting interventions to prevent or reduce undesirable psychosocial functioning.

### **Why Intervention with MLE?**

Several theoretical approaches have been applied in the Ethiopian education system so far, with the dominant application of behavioral approach. For example, many educators have been advocating "stimulation." However, visual, auditory, or tactile exposure to the children may not sufficiently contribute for the holistic development of children. According to Klein (1996), bombarding children with such sensory stimulation cannot contribute to their development. In fact, it may hurt them and they may develop dislike and boredom in learning the approach. The behaviorists viewed development as the individual's passive responses to the environment. As commented by Dixon-Krauss (1996), behaviorists abandoned the study of consciousness completely in their attempt to explain all psychological functioning through behavioral reflexes.

For Vygotsky (1978), consciousness is created through socially mediated activity and cognitive development was due to the individual's social interaction with the environment. Hence, this study made a shift from the behaviorist view toward MLE, with a focus on the individual's development, learning, and cognition. Mediation presents a sound alternative to stimulation. Unlike direct exposure to an organized and complex stimulation, MLE matches the intention of the mediator with that of the children's response, intention, communication, needs, initiative, and preferences. It is learners' reactions that regulate the amount of "stimulation". Klein (1996, p.

5) further postulated, "Through mediation the complex world is organized for the child, channeled by a network of cultural transmission into a world in which things have meaning, importance, and relevance to future as well as past experiences." Furthermore, Klein (1996) elaborated that mediated learning, as distinct from direct learning through the senses, occurs when the environment is interpreted for the individual by teachers who understand children's needs, interests, and potential, and who make the components of that environment as well as past and future experiences, compatible with children. Mediation affects the individuals' present level of learning and may improve their opportunity to learn from future experiences.

Besides, as was described by Dixon-Krauss (1996), it is well known that Piaget's approach focuses primarily on the cognitive dimension of learning and growth, and Vygotsky's approach encompasses the social and affective dimension as well as cognitive development. As a result, Vygotsky's theory portrays the bigger picture of teaching and learning, captures the collective wisdom of thought and actions, and more closely represents reality and its complexity. Rye (2001) pointed out that MLE programs are well known to support development of self-confidence, motivation for learning, and positive social-emotional development.

This implies that, compared to other theoretical approaches such as the behaviorist approach, MLE makes a significant difference in the lives of children mediated by the teacher trained in the approach. It is well known that early intervention can have lasting and valuable effects, but unless experimented, there is no guarantee that the intervention is successful with children in various contexts. It is already reported that MLE is successful at the early childhood level, when mediated by sensitized parents, in Ethiopia (Tirussew, and Lakew, 1996), but not in the primary school for hearing and hard of hearing children when mediated by teachers. The present study intends to apply MLE in grade one regular schools, to test and find out the effects of intervention on hearing and hard of hearing children, which will be elaborated in the following section.

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## Methods

One hundred children were selected as samples from each experimental and control group, which was from two **different schools**. In order to meet these objectives and answer the basic research questions by obtaining valid and reliable findings, an experimental design complimented by qualitative data was employed. The quantitative data includes the measurements of hearing status, acoustic environment, and socioeconomic back ground of the parents of the children, language skills, self-concepts, motivation, behavior, and academic achievement. The qualitative methods include observations, individual and group interviews. Data were gathered during pre- and post-intervention times.

## Major Findings

1. The study revealed that a large number of parents (fathers and mothers) were uneducated and unemployed in both the experimental and the control groups. As a result, the income of the majority of parents was found to be low. These conditions might have influenced the family members to live a subsistence life and the sampled children to be deprived of their development.

2. The majority of sampled children in this study had an average of hearing loss in both the groups: unilateral hearing loss (56%) and bilateral borderline hearing loss (54%). Some of the children also were hard of hearing in both groups (13.5%), in the average back-ground of 54.5dB testing room, when the school testing rooms are expected to be less than 30dB. The acoustic environment of the school measured by the Sound Level Meter was between the range of 74.3 to 79.8dB in classrooms where class was taking place, and 63.1 to 67.5dB in the empty classrooms of the experimental and control group, respectively. This was the case when the classrooms in which classes are taking place are expected to be not more than 50dB. The high noise levels in the school and classrooms have contributed much for poor functional hearing loss of the children in this study.

3. During the pre-intervention assessment, the teachers' duty in the classroom did not include individual or group-based caring and intentional teaching to bring significant changes in the psychosocial functioning of the children. The teachers did little to encourage children to be engaged in various activities and to participate in their own learning. They were also insensitive to children's verbal reactions and written contributions. The teachers were not well prepared for the lesson, neglecting re-explanation, and showed little effort to instill motivation and enthusiasm in children to learn. Teachers' traditional mediated experiences did not help children to develop their competencies to the level that children learn by themselves. However, after the training, these conditions changed and the teachers significantly contributed for effectiveness of the intervention.

4. In the study, the two way ANOVA showed that the hearing level did not have an effect on the self-concept, motivation, behavior, language skill, or academic achievement. However, there was a group effect on motivation and behavior. Children in the control group had higher motivation and less behavior problems than the children in the experimental group, during the pretest. Overall, there was no interaction effect of the two factors for all the five variables of psychosocial functioning.

5. The repeated-measures ANOVA indicated that there are changes in self-concept, motivation behavior, language skills and academic achievement in all children, toward a positive direction between pretest and posttest period. However, the intervention had brought changes that were largely different from those in the control group. The intervention had major positive effects for all the psychosocial variables, except motivation, in the experimental group. Furthermore, these effects were not related to the level of hearing. Hard of hearing children benefited equally from the intervention as much as the hearing children.

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## Conclusions

Children need to be provided with special support according to their needs and potential in the regular classroom as well as in the resource rooms. The findings of this study are good indicators that, mediation of teachers' in solving day-to-day problems is vital for the well-being and desirable psychosocial functioning of the children. To do their job effectively and efficiently, teachers need the best pre-service education and continuous professional development that focuses on the study of children's needs, dynamic assessment, and mediation within the zone of proximal development of the children. These important theoretical and practical ideas are very much lacking in the present teachers' education program, as revealed by this study. The MLE intervention program of this study created opportunities for teachers to learn about inclusive education practices. The program has included how to adapt instruction and mediate learning for the development of motivation, self-concept, cognitive, linguistic, social, cultural, behavioral, academic, and physical needs of diverse learners. The intervention program prepared the teachers to meet the challenges through a sound knowledge base and development of appropriate dispositions and performances. This is a lesson that unless we give serious attention to quality teachers' education, we may not be able to change the flexible brain of children toward desirable development. If this cannot be achieved, the nation's development may go astray, and poverty would continue to rule.

Finally, this research may not have answered many questions that come to people's mind regarding the psychosocial functioning of primary school children. In fact, it is important to conduct further study on the same variables based on this study and other broad related issues, both at home and in schools.

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