



Effectiveness of In-Service Pre-Primary Teacher Training Package on School Readiness of Children

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ABSTRACT

Indian pre-primary education system is vast and diverse. Thus, ensuring that teachers are equally competent is a challenge. The situation adversely affects the readiness of pre-primary children for formal schooling leading to low retention and high dropout rates in early primary grades. An experiment was conducted in eight pre-primary classes of Municipal Corporation of Delhi schools, eight teachers, and 176 children with the objectives to identify the gaps in the performance of teachers, to identify gaps in the level of school readiness of children and to develop an in-service pre-primary teacher training package on the school readiness of children and record its effectiveness on the performance of teachers and the level of school readiness of children. The data was collected using 'Checklist for Teacher Performance', 'School Readiness Instrument' and 'Rating Scale'. The experiment employed 'Pre-test Post-test Control Group Experimental Design'. Gaps in the performance of teachers and the level of school readiness of children were identified through a pre-test. To address gaps, a package was developed and six days of training to the experimental group teachers were given. Post-test results revealed that after training there was a 29.75% improvement in the performance of teachers. In the case of experimental group children, a gap of 38.8% in their level of school readiness on pre-test reduced to 8.8% on post-test. Comparison of mean difference from pre-test to post-test of both the groups shows effect size 0.907 with a p-value of 0.000 level of significance. Correlation analysis suggests a significant correlation between the performance of teachers and the performance of children.

Keywords: Pre-primary education; School readiness; Teacher Performance; Training Package.

INTRODUCTION

Pre-primary education is widely recognized as a key factor of 'Education for All' that helps children to first enter the school and next sustain in the education system. The prime objective is to prepare children physically, cognitively, socially and emotionally for formal schooling and thus avoid low performance and early dropout. It is been seen as a stage that improves the level of school readiness of children by nurturing positive self-image and ascertaining learning dispositions. Despite these, young children are entering schools without having mastered specific skills or little or no pre-primary experiences. According to Chandra (2017), school readiness is not a new concept in India. Realizing its impact on improving the education of young children, it is now drawing more attention. The importance of school preparedness is clearly stated in the National Education Policy (NEP) 2020 as a necessary foundation and an indispensable prerequisite for all future school and lifelong learning (MHRD, 2020). Many concrete steps have been taken towards improving school readiness competencies in children through various initiatives. However, some gaps are yet to be filled. Kaul *et al.* (2014) in a longitudinal study conducted on pre-primary centers in Assam, Rajasthan and Andhra Pradesh reported that in most of the pre-primary centres, there was a predominance of formal teaching of 3Rs (Reading, Writing and Arithmetic) and rote memorization. Less number of school readiness activities were reported in those centres. Nearly, all the teachers in Government pre-primary centres did not even understand the meaning of school readiness. Limited interaction among children and with the teacher in all the pre-primary centres was also reported. Dhingra and Sharma (2011) in a study conducted in Jammu, found complete disregard for the age, developmental needs, and capabilities of children in the pre-primary centers. In the case of the teaching-learning process low participation of children in the activities, availability of programme schedule but lack of execution and organization of activities only for the short duration were some obvious findings. This may be due to less motivation and a lack of proper training or orientation.

Studies have proven that there is a lack of training of pre-primary education functionaries, low level of training, lack of on job or refresher courses, unavailability of training centres, non-deputation of teachers for training and non-involvement of teachers in the development of the curriculum. The majority of teachers in the state of Jammu (Dhingra & Sharma, 2011), Madhya Pradesh (Dixit *et al.*, 2010), and Tripura (NIPCCD, 2011) received orientation or induction training on recruitment but job or refresher training was lacking. Centre for Early Childhood Education and Development highlighted the absence of induction training or orientation programs for teacher educators; inadequate training centres and non-involvement of teacher educators in the preparation of the curricula and training to teach the curriculum prepared by experts (CECED, 2010). In most of the states and Union Territories, teacher training and pedagogical improvement programs for pre-primary functionaries have been conducted mainly under Sarva Shiksha Abhiyan, a flagship programme of the Government of India. NIPCCD (2010) has revealed the uneven geographical distribution of teacher training centres, absence of training centres in

the North-East region and underutilization of Integrated Child Development Services (ICDS) centres due to the non-deputation of trainees at training centres.

All these key issues if not addressed properly may create a dent in the quality of pre-primary education. Realizing these imbalances in the services for the young children leading to human development Bhise and Sonawat (2016), affirmed that a qualified and properly trained pre-primary teacher is a key to success and quality in any circumstances. The United Nations Educational, Scientific and Cultural Organization suggests the organisation of comprehensive and intensive training especially for in-service pre-primary teachers that needs to be supported by regular refresher or orientation programs (UNESCO, 2010). According to Arnold *et al.* (2008) teacher's capacity particularly in the early primary grades, systemic issues with trust; communication; and understanding, language barriers, and large class sizes; overcrowding; and high teacher-child ratios impact schools' readiness for children. Chandra *et al.* (2017) have suggested that pre-primary education must be joyful and have an activity-based teaching-learning process infused with school readiness activities of extended duration and integrated assessment of children. Chandra (2016) has also pointed out that development and care of children; child-friendly, play-based and experiential teaching-learning; developmentally appropriate practices and curriculum; and use of mother tongue are the essential components of a quality pre-primary education. In this regard, how teachers are prepared for teaching is a critical indicator of the quality of pre-primary education and the way children are prepared for formal schooling. National Association for the Education of Young Children added that during training, teachers must be trained and equipped with resources as well as an understanding of child development and early education (NAEYC, 2009). Ministry of Women and Child Development has identified teacher training as one of the important quality components and recommended that teachers must know how to teach young children and develop resources to do so. They should initiate teacher-supported activities with emphasized hands-on, integrated learning to boost their school readiness (MWCD, 2013).

The preschool education in India is being catered through three different service providers viz Government, private and NGOs. They offer a variety of pre-primary teacher training packages that are easily accessible to all the teachers. Still, teachers are not properly trained and are less motivated (Chandra, 2021). It was realized that there is a requirement of a need-based, user-friendly, quick, and short-duration in-service teacher training package which may be employed to improve the performance of teachers and the school readiness level of children at any time in the pre-primary centers. With this spirit, it was decided to first identify the need of the teachers for training components by drawing out the gaps in their performance and gaps in the level of school readiness of children. Accordingly, the in-service pre-primary teacher training package on the school readiness of children was developed and tried out to understand the effectiveness of the training package. The Municipal Corporation of Delhi (MCD) schools were considered as the most appropriate schools for the present study because the pre-primary centers under these schools are funded by the central government and its teacher training component was found

negotiated. With this perspective, the present study was designed to accomplish the following objectives:

1. To identify the gaps in the performance of teachers of pre-primary classes.
2. To identify gaps in the level of school readiness of children.
3. To find out the effect of the training package on the performance of teachers and the level of school readiness of children.

METHODOLOGY

The experiment was conducted in the pre-primary centers on MCD schools of the South District of Delhi. The sample comprised of eight pre-primary classes, eight teachers and 176 children enrolled. The study had followed a survey and experimental method. The experiment employed 'Pre test Post test Control Group Experimental Design (quasi-experimental design)'. School Readiness Instrument (SRI) developed by The World Bank, India (2007) was adapted for the study to test the cognitive and language readiness of children. The investigator has developed the 'Physical-Motor and Socio-Emotional Readiness Rating Scale' having reliability of 0.95 and 'Teacher Performance Checklist.' The SRI and the Rating Scale for children covered all domains of development and the checklist for teachers covered the four aspects of their performance like conducting the activities, planning of the activities, classroom organization and management, and interaction.

Experts from the field of Child Development, ECCE, and Educational Research validated all the instruments under study. The instruments were pre-tested on 40 children and four teachers in four randomly selected pre-primary classes (other than the sample) in MCD schools. After getting written permission from the competent authorities, the study was initiated in four phases. In phase one, the performance of teachers under all four aspect of their performance (conducting the activities, planning of the activities, classroom organization and management, and interaction) and the level of school readiness of children across domains (physical-motor, socio-emotional, cognitive, and language) were assessed through pre-test to identify the gaps. To verify the requirement of the training package and determine its basic structure, a need assessment was also carried out. Phase two was dedicated to the development of a training package for addressing the identified gaps and fulfilling the need for intervention. Phase three was accounted for the implementation of the training package in the experimental group classes. Before implementation, a six days training was organized for the pre-primary teachers on the implementation of the training package. After that, feedback on training was obtained from them. In the last phase, reporting of the post-training performance of teachers under all four aspect of their performance and post-test assessment of the level of school readiness of children was done to understand the effect of the training package. Finally, the perception of teachers was documented to understand their perspective on the training package.

The data obtained were analyzed using Microsoft Excel and the statistical package of SPSS 20.0. The statistical procedures used were frequency and percentage distribution, t-test, and correlation. Eventually, the results were

tabulated; and presented graphically through linear diagrams, histograms, and bar graphs.

RESULTS AND DISCUSSION

Gaps

Gaps in the performance of Teachers.

The results informed that there were gaps in each of the aspects of all four categories in teacher performance such as conducting the activities, planning of the activities, classroom organization and management, and interaction (Figure 1). The highest range of gaps (58.3% to 4.2%) was recorded in different aspects of conducting the activities, followed by planning of the activities (58.3% to 33.3%), classroom organization and management (58.3% to 12.5%), and, interaction (45.8% to 37.5%). The aspects, which showed a gap of 50% or more needed high attention as they indicated the lowest performance of teachers in those aspects. These aspects revealed that teachers were unable to adhere to the time limit assigned for each activity, maintain the balance between active and passive play, develop the activity corners, display children's artwork, and be flexible to the need or resource-based variations. Most of them were less motivated to encourage children to ask questions, be an explorer, and be curious. They provided fewer opportunities to the children to revisit the concepts introduced, ask children about their experiences, and summarize them.

Gaps below 50% informed that some teachers barely hug, pat, sit or talk with children; and show concern for quiet, shy, or aggressive children. They demonstrated fewer concerns for the planning of activities and TLM ahead of time; display the material at the eye level of the children; provide opportunities for group and individual play; and answer appropriately to the questions asked by the children. They hardly interacted with children; kept the classroom environment participatory; resolved the conflict among children; demonstrated the activities before initiation; ensured children's involvement in the activities; appreciated children for their efforts; maintained constant eye contact and promoted sharing, cooperation, and wait for the turn.

The results of this section were in line with the results of different studies. Kaul *et al.* (2014) in their study reported that teachers gave less attention to providing TLM, activity-based teaching, and ensuring a developmentally appropriate learning environment. Most of them did not conduct developmentally appropriate activities, language development activities, motor development activities, and art or craft activities. NIPCCD (2006) also reported that the majority of the activities related to all the domains of development were rarely observed in the pre-primary centres. Dhingra and Sharma (2011) found that in Jammu, teachers planned the timetable for conducting activities but lacked execution.

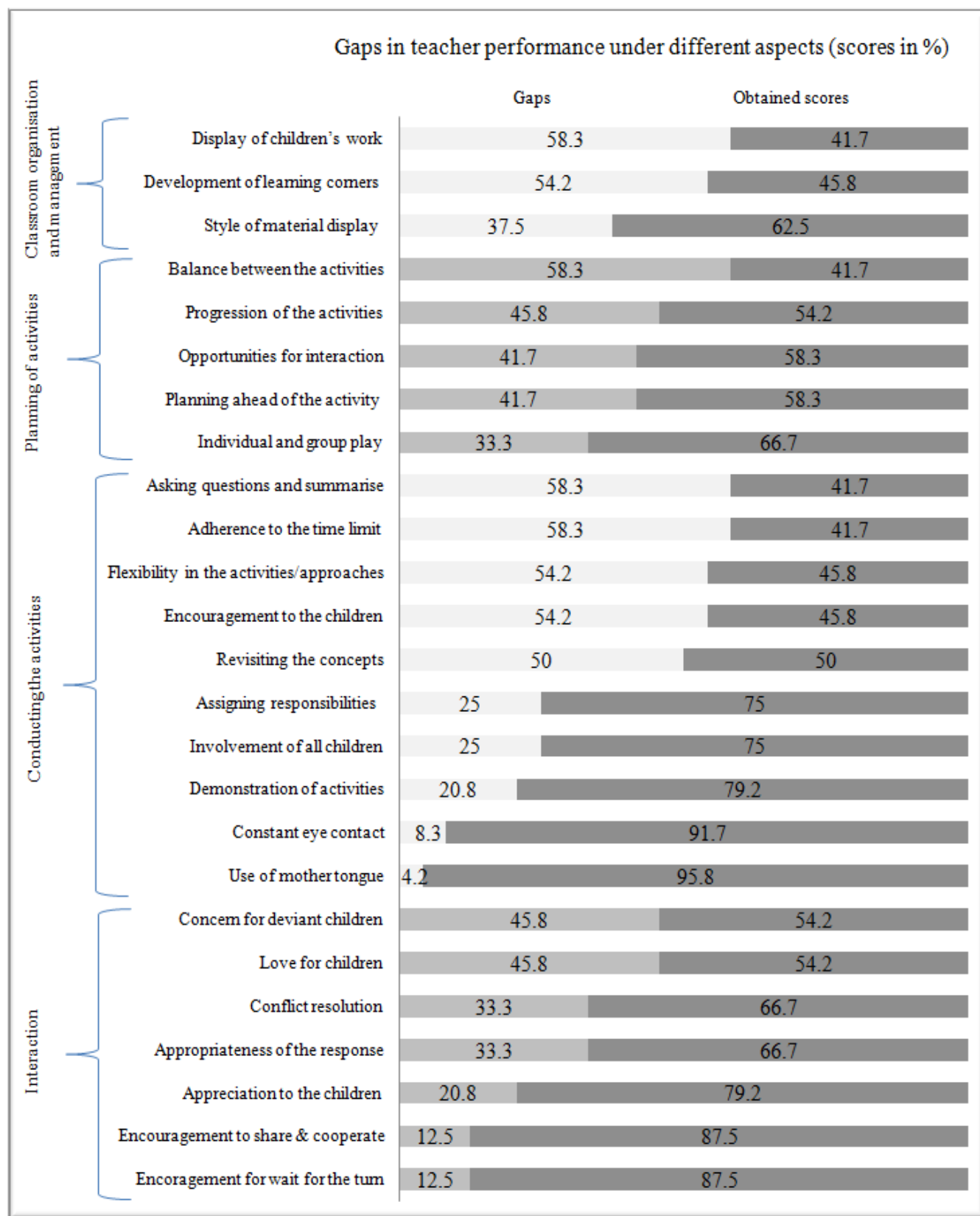


Figure 1 Gaps in teacher performance

Gaps in the level of school readiness of children

Gap analysis revealed major gaps in the level of school readiness of both experimental and control group children under different components across domains. This indicated that children were less competent in performing the activities related to various components of physical-motor, socio-emotional, cognitive and language domains of readiness. They also had an inadequate orientation to self-help skills, healthy habits, environmental care, personal care, and personal hygiene. Interestingly, both the groups had shown analogous percentages of gaps in scores in all the components of school readiness under each domain ranging from 47.9% to 30.4% in the case of experimental and 48.9% to 34.4% in the case of the control group. In addition, there was no much difference in their level in different components across domains within each group as; the children had a similar range of issues in all the domains of readiness.

The results of the present section were in harmony with the studies conducted in the past. NIPCCD (2006) informed that the majority of the pre-primary centre's activities related to the fine muscle coordination were rare. Kaul *et al.* (2014) also reported the rare conduct of art and craft activities in the states of Andhra Pradesh, Assam, and Rajasthan. In the case of socio-emotional readiness Kaul, *et al.* (2014) and NIPCCD (2006) reported the infrequent occurrence of socio-emotional development activities, especially self-expression. Kaul and Chaudhary (2017) found less stress given to hygiene and handwashing. NIPCCD in 2006 reported that the activities for cognitive and language readiness were rarely organized in pre-primary centres in the country.

In view of the above results, it could be considered that there was a need to provide holistic treatment to the children to enhance their physical-motor, socio-emotional, cognitive and language competencies through an integrated approach. . This position is in tandem with similar findings made by Nzuanke and Ajimase (2014) and Nzuanke (2014) in relation to French language learning amongst young people in Nigeria.

DEVELOPMENT OF TRAINING PACKAGE

Aiming at reducing the gaps identified in teacher performance and improving the level of school readiness of children, a comprehensive eight weeks or two months teacher-training package was developed. General principles and guidelines to improve teacher performance was included in the training package. Apart from this a set of 156 activities related to physical-motor, socio-emotional and cognitive and language readiness for children were designed considering the age, need, developmental correctness, existing experiential knowledge of children, their real-life context, and the norms of the program planning or curriculum planning.

IMPLEMENTATION OF TRAINING PACKAGE

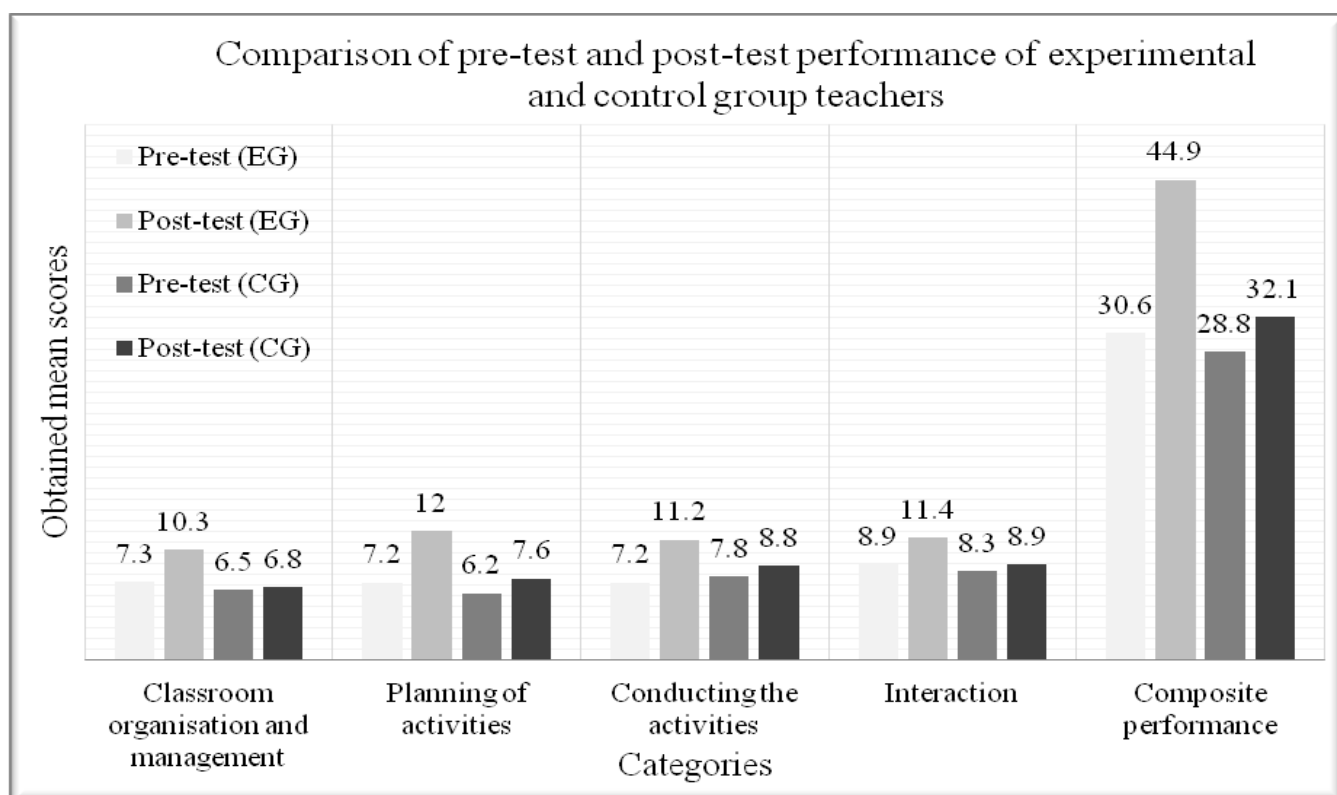
Initially, a six days training on the implementation of a training package with hands-on experience was given to the experimental group teachers. The training consisted of a brief introduction to the school readiness; demonstration, and practice over each week's activities scheduled in the training package; and sharing of experiences and problems faced during the teaching-learning process. The experimental group teachers conducted the designed activities following the principles and guidelines given for eight weeks or two months. Finally, the post-test was done opting the same process followed at pre-test. At the end of the training, the investigator took feedback from the teachers. The feedback aimed to find out the milestones achieved through the training program; and

to understand the increased level of understanding of teachers about school readiness and the process of implementation of the school readiness programme. All the teachers pointed out that the whole training was organized in Hindi and the language used was easy to understand. The six days duration of training having three hours per day time limit was convenient for them. Apart from this, the use of the mixed method of teaching with hands-on experiences, clarity of concepts, design, and opportunities to learn, etc. helped teachers understand the concept of school readiness. Overall, the training refreshed their knowledge and filled them with confidence and motivated them.

EFFECT OF THE TEACHER TRAINING PACKAGE

On The Performance of Teachers

The pre-test (before training) and post-test (after implementation of the training package) analysis of the composite performance of teachers' informed that after training, the performance of the experimental group teachers improved and also better than the performance of the control group teachers (Figure 2). The category-wise (organization or management, planning of activities, conducting the activities, and interaction) results indicated that the pre-test performance of the experimental group teachers was a little higher under all categories; except 'conducting the activities'. On post-test, the performance of the control group teachers improved under all categories but not as much as of the experimental group teachers. Hence, it was assumed that there was an effect of training on the performance of experimental group teachers and likely, the training had improved it.



Notes. *EG- Experimental Group ** CG- Control Group

Figure 2. Pre-test and post-test comparison of experimental and control group teachers

The credibility of the result was proved by similar researches conducted in other countries. A study conducted in the Kindergartens of Ghana to examine the impact of a teacher professional development program finds that the teacher training has improved professional well-being of teachers. The teachers not only incorporated the specific activities taught in the training program but also improved two dimensions of teacher-child interactions (Wolf *et al*, 2019). Similarly, a study conducted by Nzarirwehi and Atuhumuze (2019) in Uganda revealed that in-service teacher training has a significant effect on teachers, particularly on their performance, and professionalism. However, these benefits can only be realized when the training is properly planned, implemented and continually evaluated. A study conducted by Kaul *et al*. informed that training of teachers could lead to a positive shift in the overall environment of the pre-primary class, however specific curricular inputs may be required to improve children's school readiness levels (2014). Kaul and Chaudhary in their research reported that all the interventions must include the additional element of structured curriculum and professional training of teachers (2017).

On the level of school readiness of children.

The results of the comparison of the level of school readiness of experimental and control group children on pre-test and post-test indicated that after the implementation of activities the level of experimental group children significantly increased.

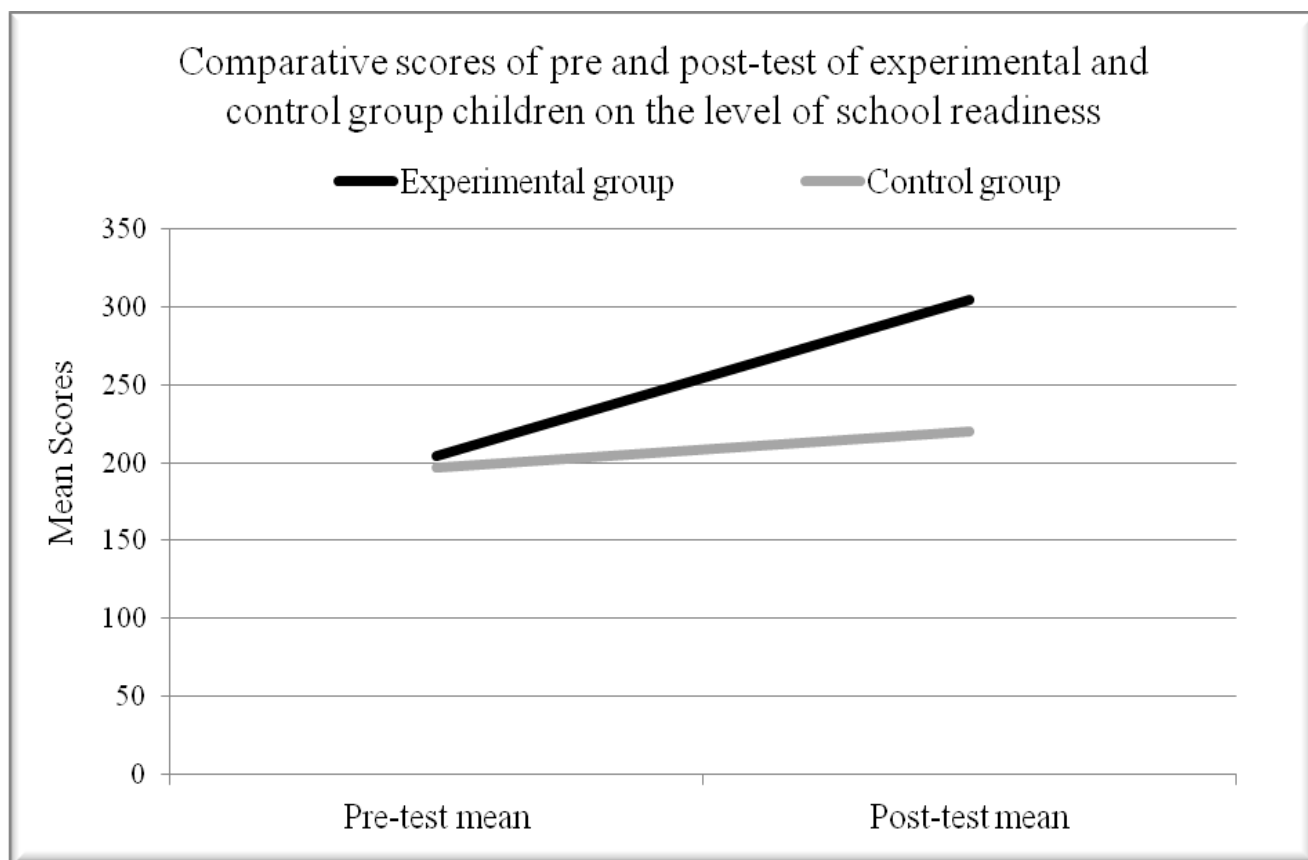


Figure 3. Comparison of scores of pre-test and post-test of experimental and control group children on the levels of school readiness

Figure 3 confirmed that there was a high difference in the mean score of the experimental group children from pre-test to post-test (100.24) as compared to the difference in the mean score of the control group children (23.29). The comparison showed a significant difference in the level of the experimental group children from the control group children with an effect size of 0.907. The analysis of the difference or the change in the level of gaps in school readiness of experimental and control group children from pre-test to post-test under different components across domains indicated that the gaps in the level of experimental group children reduced drastically, as compared to the control group children. This reflected that teachers who did not get training could not perform well thus could not improve the level of school readiness of children.

The findings are consistent with research on German preschool teachers who have attended training programme as an intervention to improve the executive functions of preschool children that is central to the school readiness, social-emotional competencies and academic achievements. The obtained results add to the evidence that training of preschool teachers may lead to significant gains in children's executive functions and especially in those starting out low (Walk *et al*, 2018). A study in Ghana finds that teacher training and coaching improved children's school readiness to some extent, including their early literacy, early numeracy, and social-emotional skills (Wolf *et al*, 2019). Similarly, a study conducted to examine the dosage effects of the Chicago School Readiness Project found that the high-dosage levels of teacher training have larger effects on children's school readiness (Zhal *et al*, 2010). The studies while supporting the findings of the present study, informed that training of teachers could lead to a positive shift in the overall environment of the pre-primary class, however specific curricular inputs may be required to improve children's school readiness levels (Kaul *et al*, 2014). Kaul and Chaudhary (2017) in their research reported that all the interventions must include the additional element of structured curriculum and professional training of teachers.

CONCLUSION

Considering the above results, the developed teacher training package had significantly improved the performance of teachers by reducing the identified gaps. It had also improved the school readiness competencies of pre-primary children, thus enhanced their level of school readiness. It is expected that the package may sustain in the MCD pre-primary classes for a long time because it is specifically meant for them, it is short duration, users friendly and ensures parity with their routine activities. Besides, it has the potential to provide a workable solution to address the issue of teacher training at a larger scale. Further, this package may be adapted or adopted by the users. This experiment also has scope for the tryout of this package at a larger scale.

The study may function as guidelines or a process for assessing the performance of teachers and identify the gaps if, any. The training package may be adapted or adopted for improving the performance of pre-primary teachers in different pre-primary education settings thus, suggest a sustainable training package to further enhance the performance of pre-primary teachers at a larger scale. This study would also build awareness around school readiness issues and would initiate a school readiness dialogue in the education system and within the community.

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