BUILDING TEACHERS' CAPACITY TO ENHANCE EARLY LEARNING THROUGH PLAY BASED APPROACHES IN GHANA AND SIERRA LEONE.

PHASE 3 SCALEABILITY RESEARCH REPORT:

QUALITATIVE STUDY ON SCALING UP IN-SERVICE APPROACHES TO ENHANCE TEACHER PROFESSIONAL DEVELOPMENT IN PLAY-BASED APPROACHES IN ECE

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CHAPTER ONE
INTRODUCTION

1.1 Background

The following study is part of a larger study by Associates for Change and the Institute of Statistical Social and Economic Research at the University of Ghana supported under the KIX IDRC applied research studies in Africa. The study forms the last stage of a three year project designed to measure the impact of educational innovations in play based learning led by two key innovators in Ghana— Right to Play and Sabre Education Trust who are implementing teacher training and school based support for scaling up early learning in Ghana (see www.associatesforchange.org) . The project is also measuring the impact and effectiveness of PBL in Sierra Leone with Teach Sierra Leone. Several studies were conducted over the last three years at the teacher training and school based levels to assess the potential of these models of PBL for scale by Government---these studies were focused in Northern, Upper East, Central and Eastern regions of Ghana.

Education, particularly early childhood education, remains a significant issue of concern among educationists, governments, researchers and policymakers globally (Allen et al., 2015; González-Moreira et al., 2024; Rad et al., 2022). Children are fundamental to every aspect of sustainable development as they possess the entitlement to flourish, reach their maximum capabilities, and reside in a world that is striving to enable its citizens to reach their full potential. Also, promoting early childhood education is essential for any nation's economic development and establishment of a solid educational foundation. This is consistent with Sustainable Development Goal 4, which states that all children should have access to high-quality early childhood development, care, and pre-primary education by 2030 (UNICEF, 2018). Such access should adequately prepare children for primary school. Ensuring children have improved access to quality early childhood education enhances their physical and cognitive outcomes and subsequently improves school readiness (Donoghue et al., 2017). Another key benefit of play-based learning is its positive impact on children's mental health, providing context for stress relief, self-expression, and emotional regulation since children who spend more time playing and learning through play experience lower rates of anxiety and depression (UNICEF & Costiniu, 2023).

Several decades of research has consistently demonstrated that the early stages of childhood play a crucial role in the development of the human brain, establishing the fundamental structure and operation of the brain (Barth & Liggett-Creel, 2014; Learning Metrics Task Force, 2013). Society's recognition of children's entitlement to engage in all circumstances and determinations that affect them has grown. Promoting this practice at an early stage is strongly recommended, especially in

early childhood education environments. The activity in question is well recognised as having substantial advantages for children, adults, and the community at large (Correia et al., 2023).

Despite these prospects, numerous barriers to high-quality ECE have been consistently documented (Donoghue et al., 2017). These barriers include inadequate funding and staff education, inconsistent regulation and enforcement, inadequate financial support to ensure proper training, reasonable compensation, or career advancement opportunities for the early education workforce, budget restrictions that limits the number of children who can be served and workforce to be hired (Donoghue et al., 2017).

A more contemporary and structured system of delivering care and educational services for young children has replaced the traditional approach in the field of early childhood education (ECE) in Ghana (Ackah-Jnr et al., 2022). Ackah-Jnr et al. (2022) assert that substantial changes have occurred in early childhood education over the last two decades, prompting increased funding, support, collaboration, and interest from state stakeholders. As per Schleicher (2019), early childhood education encompasses all forms of providing care and education for children who are not yet of compulsory school age, irrespective of the setting, funding, opening hours, or programme content. UNICEF (2023) states that pre-primary education is now recognised as a crucial instrument for attaining Universal Primary Education, fairness, and the Sustainable Development Goals (SDGs). Providing high-quality early childhood education is an essential approach for any government aiming to enhance fundamental learning and educational achievements, as well as the effectiveness of education systems, especially for disadvantaged individuals. An essential principle for improving learning in early childhood is the use of participatory learning methods, such as play-based learning, as recommended in Ghana's Early Childhood Development Plan (Ministry of Education, 2004) and Sierra Leone's Integrated Early Childhood Development strategy (MBSSE, 2021). Play-based learning incorporates several aspects of children's lives, including their home, school, community, and the wider world. This enables the continuous and interrelated acquisition of knowledge and skills across many time periods and contexts (UNICEF, 2018). According to Ali, Aziz, and Majzub (2011), using play as a teaching strategy can greatly enhance a child's ability to learn language and increase their reading skills. Their research showed that the use of play as a teaching and learning strategy improves children's concentration and develops their reading skills, thereby giving them more opportunities to engage in conversations using a wide range of language. Olowe, Ojoko, and Onuegbu (2020) found that participating in water and sand play provides children with a wide range of opportunities to improve their mathematics, language, scientific, physical, social, emotional, and creative skills. Vogt et al. (2018) showed that play-based learning contributes significantly to improvements in overall learning.

The evaluation conducted by Innovation for Poverty Action (IPA) determined that Sabre Education's in-service teacher training and coaching effectively enhanced teachers' implementation of the play-based kindergarten-specific pedagogy in Ghana (Hylton-Dei, Dogbe, & Mukakalisa, 2023). Consequently, this improvement resulted in enhanced school readiness among children, particularly in the areas of early literacy, early numeracy, and social-emotional skills. In order to attain optimal educational results for children, it is imperative that curriculums undergo regular evaluations to address both national and global concerns. The implementation of Ghana's new Pre-tertiary Education Curriculum in 2017/18 marked a move from objective-based learning to standards-based learning. The primary goal of this curriculum is to develop character, instill values, and cultivate confident literate, and critically-thinking individuals. This curriculum focuses on teaching and learning methods that involve active participation, engagement, and learning through play. Ghana has successfully incorporated Kindergarten (KG) education into the official school system as a result of significant modifications in the pre-tertiary education curriculum. Play-based teaching is also emphasised in the new national teacher education curriculum framework that was developed as part of the new Pre-tertiary Education Curriculum and is being implemented in colleges of education and teacher training higher educational institutions to enhance the capacity of pre-service teachers. Presently, the pre-service training is being conducted through the Transforming Teacher Education and Learning (T-TEL) initiative, which is supported by DFID.

In 2004, the Ghana Ministry of Education developed an Early Childhood Care and Development (ECCD) policy, often known as Early Childhood Education (ECE). This policy was developed to give guidance for the delivery of care and educational services to children aged from birth to eight years old (Government of Ghana [ECCD Policy], 2004). The policy recognises the close links between care and education, as well as the interdependence of development and learning (Vandenbroeck, 2020). The Education Innovators, specifically Right to Play and the Sabre Foundation, are working with UNICEF and Ghana's Ministry of Education to create a pre-service training plan in 15 teacher training institutes. The goal of this course is to fully integrate child-centered play-based practices into the pre-service curriculum. Ghana's Ministry of Education is providing pre-service training in 15 districts directly and 45 districts indirectly through district teacher support teams as part of the 'Ghana Accountability for Learning Outcomes Project' (GALOP), which is funded by The World Bank.

Most importantly 2023 marks the half-way point to the deadline set for achieving the 2030 Agenda for sustainable development. As the global community mobilises to bring education on track, there is a need for accelerating the scale-up of proven solutions and innovations in education to reach the most marginalized children (United Nations International Children Emergencies Fund (UNICEF),

2023). There is therefore, the need for contextual evidence to inform play-based learning intervention and initiatives and improve efforts towards achieving the sustainable development goals, particularly on education.

1.2 Objectives

To comprehensively evaluate the effectiveness of the Teacher Professional Development (TPD) package in improving teaching practices, learner outcomes, and program implementation across participating schools and districts.

The study's objectives are stated below.

1. To assess the level of engagement and fidelity of implementation of the Teacher Professional Development (TPD) package among teachers in participating schools.
2. To evaluate the extent to which headteachers are providing support and monitoring to ensure fidelity and effectiveness during the implementation of the TPD trainings in their schools.
3. To measure the impact of the TPD trainings on learners' engagement, behaviour, and academic performance in play-based learning environments.
4. To evaluate the role of the District Education Office (DEO) in supporting the scaling up and effective implementation of the TPD trainings across multiple districts.

1.3 Research Questions

The project research questions were:

1. How engaged are teachers in the implementation of the TPD package, and to what extent are they adhering to its guidelines in participating schools?

2. How effectively are headteachers supporting and monitoring the implementation of the TPD trainings to ensure fidelity and effectiveness in their schools?

3. What is the impact of the TPD trainings on learners' engagement, behaviour, and academic performance in play-based learning environments?

4. How is the District Education Office (DEO) supporting the scaling up and effective implementation of the TPD trainings across multiple districts?

1.4 Relevance of the Study

The study is pertinent because it investigated participation and faithfulness in the delivery of in-service education and training packages for basic school instructors. The emphasis was on the

teachers' grasp of PBL, how they construct and use TLRs in their classrooms, and how effective the trainings were in enhancing pedagogy. Through this, the study has provided insights that can improve teaching practices and student engagement. The study also emphasized the importance of parent and community involvement in education, advocating for better communication and collaboration between schools and communities.

In addition, the study supports existing policies and programmes on Early Childhood Care and Education (ECCE) by providing evidence on PBL's benefits and challenges. It highlights the need for continuous professional development for teachers and policy interventions to address resource scarcity and teacher workload. The study offers recommendations for enhancing ECCE programmes, such as regular updates to teaching content, ongoing training, and partnerships with educational stakeholders.

Furthermore, the study has significant implications for Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education) and SDG 3 (Good Health and Well-being). By improving early childhood education quality through effective PBL strategies, the study supports the goal of inclusive and equitable quality education for all. It emphasizes teacher development and community involvement, aligning with SDG 4 targets. The study also supports SDG 3 by promoting the mental and emotional well-being of young learners. Its findings can inform policies aimed at achieving these SDGs, contributing to sustainable development.

1.5 Structure of the Report

The research report is organised into four primary chapters: introduction, methodology, findings, and conclusions and suggestions. The first chapter explains the overview of the project and includes objectives, research questions, the significance of the study, and a summary of the report's structure. The second chapter presents the methodology which discusses the project's design and techniques, as well as data administration and analysis, ethical considerations, and study constraints. The third chapter focuses on demographic features and provides thorough insights into a variety of topic areas. Furthermore, the chapter discusses the financial consequences of adopting play-based learning, as well as the involvement and dedication of family and community members. The final chapter concludes with reflections and recommendations for important parties as well as future research on the subject.

CHAPTER TWO

METHODOLOGY

2.1 Research Design

The study design adopts a mixed-method research approach which allowed both the qualitative and quantitative data. Within this broader research tradition, both qualitative and quantitative data were collected concurrently across four education districts. Using the mixed methods design in education research of this nature strengthens study findings, offer superior contextualization and explanation of results while addressing the weaknesses inherent single research methods (Warfa, 2016). This design while enhancing in-depth analysis of the program outcomes, also facilitated the comparison data (Castro et al., 2010).

2.2 Study Context

The study was closely designed by the Early Childhood Education Division at the Ghana Education Service (GES). The two regions of focus were Volta and Central Region. In Volta Region, specifically the Southern part, Right to Play is active and has been delivering two modalities for scaling up the Play based methodology tool kit at scale. Right to Play has adopted two approaches; One approach is through the delivery of teacher training the district education office and the other is through their own team training and delivering their approach to Teacher Professional Development (TPD). In the Central region, the areas of focus were Gomoa Central and Gomoa Fetteh where Sabre Education has been active over the last few years in scaling up the ECE play based tool kit. Both NGO's have been working closely with the District Education office in the delivery of these TPD programmes for scaling.

2.3 Sampling Procedure

The target population for the study consisted of officials from Ghana Education Service at the selected districts and headteachers as well as teachers from the selected basic schools. A stratified purposive sampling technique (Nyimbili & Nyimbili, 2024; Palinkas et al., 2015) was used to select districts in which Right to Play (RTP) and Sabre Education have previously or currently operated in during the last 3 to 4 years in the Central and Volta Regions, and districts that received trainings from either of these organizations. These regions were used since most interventions for scaling up PBL for Sabre and Right to Play have been implemented in these areas. Subsequently, intervention status (i.e., intervention and non-intervention districts) was used as basis for stratification of the districts used

for the study. Intervention districts comprised districts that received training from these program implementors while the other district with no direct history of training from these implementors were designated as non-intervention districts. Four (4) districts comprising two intervention and two non-intervention districts were selected from both regions. Hence in each region, one intervention district and one non-intervention district were selected. Thus, Gomoa Central and South Tongu Districts were selected from the Central and Volta Regions as intervention districts (see Table 1) while Gomoa East and North Tongu Districts were selected as non-intervention districts from both regions. Maximum variations were ensured in the selection of stakeholders for the interviews.

From the two intervention districts, nine (9) headteachers, and 18 early grade teachers from nine (9) basic schools were selected at the school level. At the district level for the same districts, two (2) Assistant Director (AD) Supervisors from Ghana Education Service, and two (2) ECE Coordinators were chosen for the study. For non-intervention districts, four (4) Headteachers, and seven (7) early grade teachers were selected from four (4) basic schools at the school level, while two (2) AD Supervisors and 2 ECE Coordinators were chosen at the district level. Nine (9) checklists and two (2) checklists were conducted in intervention districts and non-intervention districts respectively. These differences in the number of schools selected from the intervention and non-intervention districts was informed the study's focus on the efficacy and fidelity of the PBL programme post-implementation. Relying on different ECCE actors ensured heterogeneity and representativeness, enhanced the documentation of unique and diverse variations in perspectives, and facilitated the identification of important shared patterns that cut across cases concerning the implementation of the Teacher Professional Development (TPD) package (Benoot et al., 2016; Palinkas et al., 2015).

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Table 1: Intervention and Non-Intervention Districts

S/N	Region	District	Target Schools	Status
1	Central	Gomoa Central	Aboso Benso D/A Basic ()	Intervention
			Achiase Methodist Model Basic School	
			Akwamkrom SDA Basic	
		Gomoa East	Awobrew Methodist Basic	Non-intervention
			Fetteh D/A Primry school/KG	
			Fetteh Church of Christ DA Basic School	
		South Tongu	Sokpoe D/A Basic B	Intervention
			Dabala Junction D/A Basic	
			Akalove D/A Basic	

2	Volta		Sokagope D/A Basic B	
			Dzebetato DA Basic School	
		North Tongu	Bator RC Primary school	
			Mepe Holy Christ In Global DA Basic	Non-Intervention

2.4 Instrumentations and Data Collection

Semi-structured interview guide was employed as the main data collection instruments for this study. The development and design of the semi-structured interview guide was adapted and modified based on the Varkey instruments. Thus, six (6) main themes were guided the design of the interview guide: *theme 1* (Factors that motivate teacher retention or attrition at the ECE level); *theme 2* (How TPD embraces and support ECE teachers' progression, development, and pedagogic efficacy); *theme 3* (Implementation of PBL in-service trainings, TLRs for training, and methodology provisions in the curriculum); *theme 4* (Outcomes of the Scale-up of PBL in Ghana (training and support at the school); *theme 5* (Cost nature of providing PBL (training and TLMs) and *theme 6* (Family and community engagement). The purpose for adapting the Varkey instruments was to facilitate the accommodation of play-based activities. Further data collection was conducted using a checklist developed for the study. The school checklist collected data on the facilities available and the conditions of the school to give an idea the context in which the play-based learning occurs. The checklist included information such as the condition of indoor and outdoor school environment, classroom furniture, school buildings, toilet facilities among others. It also provided information on the number of EC teachers in the school and their various qualifications.

Semi-structured interviews were conducted at two (2) main levels including the District Education Directorate, and the Basic School levels. Research assistants (RAs) with extensive experience in conducting educational research, particularly, early childhood education, were recruited and engaged to collect the data from the specified districts. These comprised 11 RAs (9 females, 2 males) from the Ministry of Education, higher education institutions (University of Cape Coast, University of Education, Winneba), programme implementors (Sabre and Right to Play) and Associates for Change (AfC). These RAs received adequate training on the data collection instruments and the purpose of the study, after which data collection commenced in the respective districts.

Qualitative semi-structured interviews were conducted with district education officials comprising Assistant Directors Supervision, and the Early Childhood Education Coordinators with the aid of semi-structured interview guides. At the basic school level, three (3) main data collection instruments were developed and used. These included the interview guides for early grade headteachers and early grade teachers respectively as well as the school checklist.

At the beginning of each interview, written and verbal consents were obtained from ECCE actors selected. At the district directorate level, interviews semi-structured face-to-face interviews were conducted with the Assistant Director–Supervision, the ECE Coordinator, and/or DTO. While early childhood educators and headteachers of schools were engaged in face-to-face interviews at the basic school level. Prior to field work, a formal letter was sent to the Ghana Education Service (GES) Headquarters in Accra seeking permission to conduct the study in the selected districts. The letters were subsequently sent to District Directors of the GES in each of the study districts, ensuring that the research team had the authorisation required to conduct data collection within the specified areas. Moreover, before interviews were done, community entry processes were initiated by the research team with assistance from ECE Coordinators, and the Coordinators of Sabre and Right to Play, to seek permission from the District Education Directorates. Through these processes, the presence of the research team and the purpose of the study was communicated with the directorates and heads of schools to ensure unhindered access to data collection. In all, data collection was concurrently done which lasted for a period of one (1) week.

As a result of a strike action taken by teachers at the Basic school level, the observation of lessons and the guide for conducting post-lesson interviews at ECE schools were not materialised. In addition, due to the strike, the contacts with early grade pupils were not particularly fruitful. Therefore, the data analysis and presentation did not include observations of lessons or early grade learners.

2.5 Data Management and Analysis

The collected data were cleaned, coded, and processed in accordance with the guiding research objectives. Deductive and inductive approaches guided by Braun and Clarke's thematic analytical technique was used to analyse the data gathered (Braun & Clarke, 2023). Guiding research questions were used as initial codes to organize the data. Three (3) researchers with extensive experience in qualitative research and early childhood education independently conducted multiple rounds of reading the data to inductively identify ideas (codes). Similar and related codes were grouped to developed themes. Since the coding and thematic analyses were independently done, the three researchers met to discuss and agree on the themes identified. Finally, the themes identified were described and illustrated through narrations and direct quotations.

2.6 Research Ethics

The study was conducted in line with Helsinki's declaration involving human research subjects (Goodyear et al., 2007). Therefore, the principles of anonymity and confidentiality, and voluntary

participation were ascribed to. Ethics approval was sought and granted by the University of Ghana's Ethical Board. Informed consent was ensured in several ways. First, letters were sent to the GES headquarters and, District Education Directorates in the study districts to inform them of the purpose of the study and to seek approval to use the schools in the districts for the study. Secondly, prior to data collection, written and verbal consents were sought from early childhood educators and actors selected for the study. All consent statements provided comprehensive information that enabled the respondent to make an informed decision regarding their participation in the evaluation activity. Also, participation was solely voluntary since interviewees were informed of their rights to withdraw from the study if it poses any harm to them, without any coercion or harm to their profession as early childhood educators. However, questions asked did not pose any harm since questions were assessed for cultural suitability. Data on the personal traceable identities of selected early childhood educators and actors were not collected during interviews. During data analysis and presentation, descriptors without the actual names of interviewees were used, and the Global Policy on Safeguarding Children and Young People was adhered to.

2.7 Field Problems/Study Limitations

The study had a disruption in the data collecting procedures due to a strike action initiated by teachers at the Basic School level in Ghana. After the strike ended, the schools started their end of term exams. As a result, the research teams were unable to carry out lesson observations, conduct post-lesson observation interactions with ECE teachers, and have focus group discussions with early grade learners. Access to this information would have provide more insight into the implementation of play-based learning in the basic schools.

CHAPTER THREE

FINDINGS

3.0 Introduction

This section presents the findings based on the themes (objectives) for the data collection. The section first presents the demographic information according to the key categories for the data collection before delving into the qualitative findings from the four districts: Gomoa Central, Gomoa East, South Tongu and North Tongu. The intervention districts were Gomoa Central and South Tongu and the Non-intervention Districts were Gomoa East and North Tongu. The findings highlight the contrast between intervention and non-intervention districts.

3.1 Demographic Characteristics

3.1.1 Sample Districts (including intervention(s) received)

The section presents demographic information on the four districts involved in the study: Two intervention districts (Gomoa Central and South Tongu) and two non-intervention districts (Gomoa East and North Tongu), however, the demographic findings are presented according the Regions to capture the characteristics of both the intervention and non-interventions schools. The findings revealed that all interventions received in all districts were done in-person or face-to-face. Furthermore, the majority of the classroom environments in the intervention schools were more print-richer, with low-cost supplies, than the classrooms in the non-intervention districts.

Participating Districts in the Central Region

The Gomoa Central district, the intervention district in the Central Region, received play-based learning (PBL) intervention from Sabre and technology integration in teaching from Blue Sky World (BSW) in collaboration with the District Education Office. This was in addition to the nation-wide training that all teachers received prior to the implementation of the standards-based curriculum. Respondents also stated that the kindergarten (KG) teachers received a one-day instruction on Jolly phonics from the ECE coordinator. The two interventions (Sabre's PBL and BSW's technology integration in teaching) approaches included termly training for teachers and education office administrators, who then trained their colleagues through professional learning community (PLC) sessions. However, the duration of the trainings varied accordingly: while Sabre used five days, three

days, and one day for play-based learning trainings for all KG teachers in Term One, Term Two, and Term Three, respectively, BSW had two days of technology integration in teaching trainings for selected ECE teachers in the First and Second Terms, and one day for the Third Term.

The findings additionally revealed that Sabre and BSW provided teaching and learning resources (TLRs) to Gomoa Central's schools to help them implement play-based teaching and learning. BSW in addition, provided laptop and desktop computers, as well as accessories, to the ECE schools that underwent their trainings. This indicates that not all of the schools in the Gomoa Central area received the BSW technology integration training and computers.

A further finding revealed that the intervention district's ECE classrooms were print-rich with low-cost items (mostly teacher-made classroom displays), with some classes incorporating age-appropriate accessible learning centres. However, due to theft concerns, most instructors have not hanged all of their classroom displays, which are kept in the headteacher's office.

The findings for Gomoa East, the non-intervention district, showed that no non-governmental organisation (NGO) had provided direct training on play-based instruction or technology integration in teaching. However, the ECE Coordinator had received five days of Sabre training on the National KG INSET, after which she organised a three-day self-funded training for ECE teachers, which she co-facilitated with the Regional and Gomoa Central ECE coordinators, both Sabre Master trainers. An excerpt from the Gomoa East ECE coordinator on the NGO intervention in her district:

> *There are no interventions in my district. I attended 5-day workshop in December 2023, organised by Regional ECE coordinator in collaboration with Sabre. Sabre organized the training on the National KG INSET. On 26, 27, 29th February 2024, I organised a workshop for teachers in my district on the training I had from Sabre. I invited Gomoa Central and Regional ECE coordinators to facilitate the training.*(ECE Coordinator, Non-intervention district, Gomoa East)

Aside from that, ECE teachers in this district have benefited from other government-funded interventions. Furthermore, respondents stated that they practise play-based teaching and learning in their classrooms mostly through their own efforts using internet resources. It was discovered that the non-intervention ECE classes had a print-rich learning environment but not as structured and inviting as that of the intervention ECE classrooms.

Despite the findings above, both intervention and non-intervention districts benefited substantially from USAID's trainings on the implementation of the standards-based curriculum, the Ghana Accountability for Learning Outcomes Project (GALOP), and that of Learning.

Participating Districts in the Volta Region

The results of the study conducted in South Tongu, the area where the interventions took place, showed that teachers in the district had training on USAID Learning, early childhood education (ECE) policy, and play-based teaching provided by Right to Play (RTP), GALOP, and JICA. The study revealed that certain educators proactively acquired knowledge and implemented the usage of Jolly phonics as a supplementary tool in their play-based learning (PBL) instructional approach. The on-going operation of Right to Play revealed that it is the main NGO offering play-based education in the district. In addition, the study showed that the duration of ECE teacher trainings varied from two to seven days, with the latter referring to USAID Learning workshops. The training of ECE instructors in the district usually takes around 3 to 5 days for RtP.

On the other hand, the findings of North Tongu, the district where no intervention took place, indicated that no NGO offered direct teaching on PBL or the incorporation of technology in the classroom. ECE teachers have said that during the past five years, they have indirectly profited from government interventions, specifically those implemented by GALOP, and in certain schools, from the USAID Learning programme a few years ago. In addition, ECE educators expressed difficulties in independently instructing sizable classes.

3.1.2   AD Supervisors

The demographic characteristics of the Assistant Directors for Supervision (AD Supervisors) in the districts indicated that only three AD supervisors participated, specifically from Gomoa Central, Gomoa East, and South Tongu, instead of the expected four. The trio consisted of two females and one male all of whom possess a master's degree in education administration and management. Each of the AD supervisors has an extensive amount of experience in the teaching profession, with 27, 30, and 29 years respectively. Nevertheless, the AD supervisor in Gomoa East has only been in this post for duration of 6 months while her colleagues in the Gomoa Central and South Tongu have accumulated approximately 5 years and 3 years of experience respectively.

3.2.3 ECE Coordinators

The demographic analysis of the ECE coordinators indicated that out of the four participants (Gomoa Central, Gomoa East, South Tongu and North Tongu); three were women, while only the coordinator from North Tongu was a man. According to the analysis, both ECE coordinators from the intervention and non-intervention districts in the Central Region possess a master's degree in education administration and management. Nevertheless, the ECE coordinator in the North Tongu, non-intervention district, of the Volta Region possesses a B.Ed. degree in Early Childhood Education. Conversely, there was a lack of information regarding the credentials of the ECE coordinator in the South Tongu, (intervention district). In addition, it was discovered that in South Tongu, the Early

Childhood Education (ECE) Coordinator had recently retired and a replacement had not yet been done. On the other hand, the researchers engaged with the DTO in her stead. The ECE coordinators in Gomoa Central and East have a combined teaching experience of 55 years. The coordinator in Gomoa Central has been teaching for 25 years and has served as an ECE coordinator for 6 years while the coordinator in Gomoa East has been in the teaching field for 30 years and has served as an ECE coordinator for 5 years. Nevertheless, the data collected from districts in the Volta Region, specifically South and North Tongu, did not provide any information about Early Childhood Education (ECE) coordinators as the task of overseeing ECE issues delegated to the District Training Officer (DTO) instead.

3.1.3   Headteachers

The findings on the participating headteachers revealed that six were female and five were male. Gomoa Central had three female headteachers and one male, whereas Gomoa East, the non-intervention district, had two male headteachers. In the intervention district of South Tongu, three of the headteachers were female, with just one being male, whereas the non-intervention district's single headteacher was a male. Regarding the participants' academic qualifications, it emerged that all of the respondents had a B.Ed., with one possessing a master's degree in education administration and management. Two of the six intervention district headteachers have a B.Ed. in Early Childhood Education, two have a B.Ed. in Basic Education, and the other two have a Masters and a B.Ed. in Ghanaian language, respectively. In the non-intervention districts, two headteachers have a B.Ed. in Basic Education, while the remaining three have B.Ed. in Agricultural Science, Social Studies, and Technology, respectively. This suggested that none of the non-intervention districts' headteachers had an early childhood education background.

3.1.4   ECE Teachers

The results revealed a higher proportion of female teachers in the lower grade levels compared to males. The study indicated that among the twenty-five ECE teachers that took part, only five were males, while the remaining were females, in both the intervention and non-intervention districts. Out of the nineteen teachers that participated in the intervention districts, sixteen were females and three were males. In the non-intervention districts, two out of the six participating ECE instructors were males.

The results of the study showed that the majority of the ECE teachers who took part in the research had a Bachelor of Education (B.Ed.) degree in Basic Education. This was true for both the districts where the intervention was implemented and those where it was not. The results revealed that among the nineteen teachers from the intervention districts, ten possess a background in Basic Education (8 with a Bachelor of Education degree and 2 with a Diploma in Education), whereas just five

participants have a background in early childhood education. Out of the five, only two possess a B.Ed. in Early Childhood Education (ECE), while the remaining three hold a Diploma in ECE. An interesting discovery from the findings was that one of the two participants with a Bachelor of Education degree in Early Childhood Education was a male and another male was among the three participants with a Diploma in Early Childhood Education.

Three additional participants from the intervention districts hold Bachelor's degrees in Clothing and Textiles, Agricultural Science, and Psychology and Foundations of Education, respectively. Only one of the participants possessed a Teachers' Certificate A. Among the Non-Intervention districts, just one out of the six teachers possess a Bachelor of Education degree in Early Childhood Education. There were two teachers who hold a Bachelor of Education degree in Basic Education, and one participant who has a Diploma in Basic Education. The remaining two participants have B.Ed. in other areas such as Catering.

Regarding the number of year's participants had been in the teaching profession, it was discovered that both the intervention and non-intervention districts included participants with experience ranging from 2 to 28 years and 5 to 28 years, respectively. The results also indicated that the duration of teaching experience in the ECE level among participants in the intervention schools varied from 1 to 16 years, with some individuals teaching in their current class for 16 years. In contrast, those in the non-intervention schools had a minimum of 1 year and a maximum of 9 years of teaching experience at the ECE level. The data revealed that the participants' teaching experience in their current class ranged from a minimum of 1 year to a maximum of 9 years. An intriguing discovery from the findings was that a male instructor at one of the intervention schools has accumulated 8 years of experience teaching at the early childhood education level. This notwithstanding, there was evidence of inadequacy of male instructors at the kindergarten level.

3.1.5   Conditions of Selected Schools Including Infrastructure

The infrastructure situations of selected schools are illustrated figures 1–3 below. Most of the school buildings in both intervention and non-intervention districts exhibited signs of ageing, including deteriorating roofs and dilapidated windows and doors. Also, some schools depended on makeshift buildings constructed from roofing sheets (see figure 1).

Figure 1: Classrooms in deplorable state. Findings shown in Figure 2 revealed that besides the school building being in a poor and deteriorating state, several classrooms were faced the problem of insufficient furniture. This resulted in the children using bench-like furniture as makeshift tables and chairs, while others resorted to using dual desks.

Figure 2: Furniture situation in some of the KG classrooms of the participating schools

Although school buildings and classroom facilities were found to be in a poor state, further evidence portrayed in figure 3 indicated that most of the chosen institutions possessed expansive and well-maintained grounds.

Figure 3: Maintained compounds in some participating schools

Only one school in an intervention district had recently built a facility with state-of-the-art amenities specifically designed for kindergarten students. The majority of ECE classes, particularly the KG classrooms, in both intervention and non-intervention districts had learning environments with printed materials and/or classroom displays. However, some classrooms had not display all their materials due to concerns of theft. Table 1 presents the facilities situations in selected schools from the intervention and non-intervention districts. Facilities in the selected schools were generally considered to be inadequate (36, 43.4%). Analysis based on intervention status analysis revealed that the problem of inadequate facilities was comparatively greater for schools within the intervention districts (27, 49.1%) when compared to schools within the non-intervention district (9, 32.1%). Schools in the intervention districts for example, had inadequate furniture (8, 29.6%), seating spaces (4, 22.2%) and sanitary facilities including urinal (18.5%) and toilets (4, 14.8%). While schools in the non-intervention had inadequate furniture (3, 33.3%) and seating spaces (33.3%).

The inadequacy of furniture and other facilities is a challenge to both the intervention and the non-intervention districts. The findings reveal that: 27 nonintervention and 9 intervention schools stated that facilities were inadequate. The high number associated with the enough ventilation response was mainly from the classrooms without windows and doors. The observations found that most of ECE classrooms in the participating schools are developmentally inappropriate for teaching and learning of young learners, especially, for the implementation of the PBL.

Table 2: Facility status in intervention and non-intervention schools

Facilities in schools	Intervention status						Total
	Intervention			Non-intervention			
	Adequate	Inadequate	None	Adequate	Inadequate	None	
Computers		3(11.1)	4(40.0)	-	–	4(50.0)	11(13.3)
Enough ventilation	7(38.9)	1(3.7)	-	4(36.4)		–	12(14.5)
Furniture	-	8(29.6)	-	1(9.1)	3(33.3)	-	12(14.5)
Seating spaces	4(22.2)	4(14.8)	-	1(9.1)	3(33.3)	-	12(14.5)
Staff common room	1(5.6)	2(7.4)	5(50.0)	1(9.1)	-	3(37.5)	12(14.5)
Toilets	4(22.2)	4(14.8)	-	2(18.2)	2(22.2)	-	12(14.5)
Urinal	2(11.1)	5(18.5)	1(10.0)	2(18.2)	1(11.1)	1(12.5)	12(14.5)
Total	**18 (100.0)**	**27 (100.0)**	**10 (100.0)**	**11 (100.0)**	**9 (100.0)**	**8 (100.0)**	**83 (100.0)***

Source: Field data, 2023   Percentage scores are presented in parenthesis   *Multiple response

3.2 Teacher Retention and Attrition

This study determined teacher retention and attrition rates in both the intervention and non-intervention districts. That is, the extent to which teachers remain in or exit their early grade level professions. Teacher retention was measured as the number of years taught within the district.

Results in Table 2 showed that more than half of the teachers in the district that have taught at the early grade levels for (17, 68%) had taught in the intervention and non-intervention districts for at least 5 years. This was estimated from the total number of 25 teachers interviewed. This result suggests that there is high ECE teacher retention rates within the districts. Of this proportion, further analysis according to intervention status revealed that 13(76.5%) of these teachers were in the intervention districts compared to early grade level teachers within the non-intervention districts 4 (23%). The implication is that ECE teacher retention is comparatively high for intervention districts than non-intervention districts.

Table 3: Number of years as ECE teacher

Years as ECE teacher	Intervention status		Total
	Intervention	Non-intervention	
1-4 years	6(75.0)	2(25.0)	8(100.0)
5-10 years	7(63.6)	4(36.4)	11(100.0)
More than 10 years	6(100.0)	-	6(100.0)

Source: Field data, 2023   Percentage scores are presented in parenthesis

Consistent with the findings in Table 3, it was ECE teacher retention in both the intervention and non-intervention districts was high since few teachers leave the district. This was disclosed by an AD Supervisor within the intervention who described teacher attrition in his district as very low; with a minimal rate of attrition. This is what one of the AD Supervisors reported on this finding:

> *The attrition rate here [in my district] is very low but when teachers leave, it is due to transfers and one other teacher is on retirements, those are the only teachers that cause attrition to the best of my knowledge…* (AD Supervision, Intervention district, South Tongu)

The low rate of ECE teacher attrition was re-echoed by teachers in intervention districts:

> *…Only one teacher has left in the past year.* (Teacher, Intervention School, Gomoa Central)

> *We do not have any [teachers leaving]. It's been 5 years and none of the in-service ECE teachers have left.* (Teacher, Intervention School, South Tongu)

3.2.1 Factors that Motivate Teacher Retention or Attrition at the Early Grade Level

The study further determined the factors that informs the high ECE teacher retention found as shown in Table 4. Three main motivators/factors were highlighted to influence ECE teacher retention rates in both the intervention districts and non-intervention districts. These comprised capacity building (17, 47.2%), CPD points (11, 30.6%) and study leave (10, 27.8%). These motivators were greater for intervention districts: 12(70.6%), 8(72.9%) and 6(60.0) respectively. On the other hand, these motivators were established to be low within the non-intervention districts: 5(29.4%), 8(27.3%) and 4(40.4%) respectively.

Table 4: Initiatives and support systems for teacher retention

Motivators/factors	Intervention status		Total*
	Intervention	Non-Intervention	
Awards	4(80.0)	1(20.0)	5(13.9)
Capacity building	12(70.6)	5(29.4)	17(47.2)
Continuous Professional Development (CPD) points	8(72.9)	3(27.3)	11(30.6)
Good working environment (headteacher and school)	2(100.0)	-	2(5.6)
Love for kids	-	1(100.0)	1(2.8)
Monitoring by the district education	1(100.0)	-	1(2.8)
PLC	1(100.0)	-	1(2.8)
Scholarship	1(100.0)	-	1(2.8)
Study leave	6(60.0)	4(40.4)	10(27.8)
None	8(88.9)	1(11.1)	9(25.0)

Evidence from the qualitative interviews further indicated that the school environment is another important instigator of ECE teacher retention. Accordingly, participants noted that having a conductive school environment where there exist cordial interactions among teachers and the headteacher was crucial for teacher retention. One of them shared this saying:

> *The school environment is conducive for teachers and there is a cordial relationship among the headteacher and teachers...* (Teacher, Intervention School, Gomoa Central)

3.2.2 Reasons for ECE Teacher Attrition

Additionally, the study explored the reasons that underscores the attrition rates in both the intervention and non-intervention districts. Numerous reasons were found to explain why some of the ECE teachers leave their teaching professions. These are discussed in thematic areas below.

Misconceptions and stigma

A major reason accounting for ECE teacher attrition was misconceptions, and stigma. Participants during their interviews emphasised that early childhood educators are generally labelled and perceived by others including their colleague educators at the upper levels, as those with low intellects or less knowledgeable and are poor academic achievers. Consequently, being re-assigned to the kindergarten level for example, is considered as a demotion. This perceived and felt stigma were thus revealed to discourage continuous engagement as ECE teachers. Some participants stated:

> *People look down on ECE teachers even our own colleagues in the upper levels...* (Teacher, Gomoa Central, Intervention District)

> *There is a myth that the programme is for people who are not knowledgeable. Colleague teachers look down on their KG teachers. When a teacher is re-assigned to KG, they see it as a demotion. But it is time they understand that the ECE level is the bedrock of education.* (Headteacher, Gomoa Central, Intervention District)

> *The general perception is that Early Childhood teaching is for low academic achievers.* (Headteacher, Gomoa East, Non-intervention District)

These stigma and misconceptions, in the voice of a teacher within one on the non-intervention districts results in the lack of respect for teachers at the early childhood levels:

> *There are misconceptions that people who teach at this level are not intelligent. As a result, the ECE profession is not respected…* (Teacher, Gomoa East, Non-intervention District)

This further becomes the basis for teachers to leave the ECE profession to pursue their teaching careers at the upper levels where there is much respect and, less or no misconceptions and stigma. A teacher shared:

> *There is the misconception that it's unqualified teachers who teach lower grade; they don't want to get dirty; and most teachers want to be in the upper classes.* (Teacher, South Tongu, Intervention District)

Others also shared that there is the conception that professions at the early childhood levels are mainly designated for females:

> *Most of us, the males, think it [ECE profession] is a job for females…* (Teacher, Non-intervention School, Gomoa East)

Perceived workloads

The significant workloads associated with being an early childhood education were also found to reinforce teacher attrition. Participants described the ECE profession as stressful due to the increased workload. According to them, children at the early childhood levels are characterised by constant disturbances, complains, and fighting that makes it difficult to care for and handle them. These exposes the ECE teacher to more workload and subsequently making the profession stressful. The characteristics of children at the early childhood level that makes it difficult to handle them are espoused by a headteacher and a teacher in the intervention and non-intervention districts. These were shared as follows:

> *…They think there is too much work at the ECE.* (Teacher, Gomoa Central, Intervention District)

> *…The work [ECE teacher] is also stressful.* (Teacher, Gomoa East, Non-intervention District)

> *Working in lower primary, the work is stressful…* (Teacher, Gomoa Central, Intervention District)

> *Teaching at the ECE level involves a lot of stress and there is also so much pressure on them…* (Headteacher, Gomoa Central, Intervention District)

This is reinforced by one of the teachers who had this to say:

> *…Also, controlling kids at that age is difficult.* (Teacher, North Tongu, Intervention District)

A headteacher added that, at their age, children disturb, always complain and engage in fighting among themselves, making it difficult to care for them when the teacher is not patient. Therefore, increased enrolment increases the workload and makes it too demanding for the teachers:

> *Because the kids can disturb, they are always complaining and fighting among themselves and so if you are not patient, it is difficult to handle them… The enrolment*

of ECE is normally high so the workload is usually demanding and too much for teachers. (Headteacher, Non-intervention School, North Tongu)

Consequently, some of the teachers at the ECE leave since they lack the commitment to address and deal with the stress associated with ECE profession including addressing the dirt these children make, and talking all day:

> *They leave because the work is very stressful and others and require lots of work and commitment…* (Teacher, North Tongu, Intervention District)

> *They may not like to be with kids and get dirty. Most teachers may want to be at the higher level so that they don't have to deal with the stress of talking all day long.* (Headteacher, Intervention School, South Tongu)

Language barriers

The difficulty associated with the ECE profession is further underscored by the challenges relating to the language of instruction used at the ECE level within the districts. For example, it was disclosed that some teachers are not familiar with the local languages of the indigenes and this contributes to the difficulty associated with teaching at the ECE level, thereby facilitating their attrition:

> *…Also, some teachers are not familiar with the local language, so it makes teaching in ECE difficult for them.* (Teacher, Gomoa Central, Intervention District)

Poor working conditions

It was found that working conditions were crucial to the decision of ECE teachers to exit. Poor working conditions according to participants included absence of support or classroom assistants, poor salaries, allowances, and teacher involvement. According to a headteacher in one of the non-intervention districts explained that children create mess and there is the need for attendants to assists in cleaning such mess. However, such attendants are not available to ECE teachers. This was revealed as:

> *…Some leave because there are no attendants to assist in cleaning the mess of the kids*. (Headteacher, Non-intervention School, North Tongu)

ECE teachers were also noted to leave because the job is demotivating. This is because participants asserted that the ECE occupation is characterised by low income, and poor salaries. While teachers at this level are not involved in school activities. Thus, making the profession unappealing. This was shared as follows:

> *The job itself is not motivating. When you see how a professional teacher is being treated in terms of poor salary, allowances, teaching involvement... It does not motivate others to pursue ECE.* (Headteacher, Non-intervention School, Gomoa East)

The important role of work-related benefits in explaining teacher attrition was re-echoed by another teacher. Compared to ECE teachers, individuals who teach at the secondary school or university levels enjoy greater work-related benefits including rent and duty allowances. This makes ECE-related occupations less attractive to teachers, resulting in teacher attrition. Here is a participant's response to this statement:

> *…There are also a lot of benefits associated with teaching at the SHS and University levels. They receive rent allowance and duty allowance. These benefits are not enjoyed by teachers at the ECE level.* (Teacher, Non-intervention School, Gomoa East)

Unavailability of work-related materials

Another reason related to working condition is the absence of teaching learning resources and other work-related materials. Besides, the stress and limited support associated with being an ECE educator is further exacerbated by the absence of the required teaching and learning materials to implement the curriculum. This was highlighted by a headteacher in one of the intervention districts as:

> *… Also, the materials [teaching and learning] needed to implement the curriculum are unavailable, this makes the work tedious.* (Headteacher, Gomoa Central, Intervention District)

Distance to schools

A few of the participants disclosed that the schools are located far from the towns. As a result, these teachers have to travel for longer distance to the schools where they teach. Such distances according to a teacher from one of the intervention districts, could be the reason for the exit of ECE teachers. He revealed:

> *Over here the distance is far, and the school is not closer to the town so if anyone wants to leave, it will be because of that…* (Teacher, Intervention School, South Tongu)

Continuous professional development

According to participants, ECE teacher attrition is also accounted for by the need for continuous professional development. Teachers therefore leave to further their education as indicated in one of the intervention districts:

> *...if anyone wants to leave, it will be because of he or she is going to further the education.* (Teacher, Intervention School, South Tongu)

3.1.6 Strategies to Encourage Enrolment in ECE Programmes for Upcoming Teachers

The participants expressed that providing infrastructures is important to encouraging individuals with the aspiration to become ECE teachers. These infrastructures include teaching and learning materials or resources (TLM/Rs), providing technological and assistive devices such as audio-visual tools, and ensuring easily accessible classrooms, to make their work easy. These were revealed as:

> *Teaching at lower grade needs lots of TLRs e.g. Audio Visuals and a lot of schools do not have it. So, if the school have them, it will encourage them to come to school.* (Headteacher, Intervention School, Gomoa Central)

> *...They [ECE] also need to be provided with appropriate TLMs including technological devices to make their work easy.* (Teacher, Intervention School, Gomoa Central)

> *There should be good infrastructure (easily accessible classroom). Enough TLMs, when all these are available, they would want to teach in ECE.* (Headteacher, Non-intervention School, Gomoa East)
> *...They also need proper infrastructure (hygienic classroom block).* (Headteacher, Non-intervention School, Gomoa East)

Besides providing teaching and learning materials and ensuring a more easily accessible classrooms, teacher motivation was considered important. Participants suggested that ECE teacher sould be motivated through the provision of rewards, allowances and scholarships to ECE teachers to facilitate their professional development were suggested. These key measures were advanced by participants as follows:

> *...And there should be allowance for ECE teachers..*(Headteacher, Non-intervention School, North Tongu)

> *They need to be motivated with allowance...* (Teacher, Intervention School, Gomoa Central)

> *I think if KG teachers are provided some kinds of packages at the end of every year or term, then it is likely to influence more to enrol. Example of motivation could include financial support.* (Headteacher, Intervention School, South Tongu)

> *... Granting teachers scholarships to further study will benefit us. Also, the provision of rewards to motivate teachers to have interest in the field.* (Teacher, Non-intervention School, North Tongu)

Scholarships should be given to teachers with a desire to pursue ECE. The teachers should be given incentives or allowances because teaching at lower grades is not easy. (Headteacher, Intervention School, Gomoa Central)

The need to motivate ECE teacher according to a headteacher was because of the enormous workload:

The workload is too much for them, so they need motivation in terms of money and appropriate TLMs… (Headteacher, Non-intervention School, Gomoa East)

Moreover, some participants argued that at the ECE level, teachers need to be provided with assistants to help care for the children, and legal backing that specifies the need for two teachers with divided labour of teaching and other responsibilities. Thus, while one of the teachers is teaching, the other teacher attends to other needs of the children. This was disclosed by a participant:

…There is a need for attendants to assist. (Headteacher, Non-intervention School, North Tongu)

…Also, a law should be mad that specifies that two teachers should handle the class so that when one is teaching the other is either marking or attending to other things (ECE Teacher, Non-intervention district, North Tongu).

Also, effective public awareness campaigns about ECE programmes to encourage others, was indicated as another effective method to promote ECE teacher enrolment. This public education needs to ocus on explaining the course requirements, and the importance of pursuing ECE programmes. :

Increasing public education efforts to raise awareness about the significance of Early Childhood Education (ECE) will generate greater enthusiasm among individuals. (Teacher, Intervention School Gomoa Central)

There must be exposure of the courses at the college level. Also, encouragement for the course must be made high and requirements should be explained well for those yet to enrol. (Headteacher, Intervention School, South Tongu)

Educate people on the need for taking up ECE programmes because it forms the foundation for education. (Headteacher, Non-intervention School, Gomoa East)

Such public awareness and education on ECE need to commence at the senior high school level:

... there must be education at the SHS level about this programme. (Teacher, Non-intervention School, North Tongu)

Regarding the need to attendants or additional teacher to support the primary class teacher, this is what a participant had to say:

They should provide special incentives packages for us and also make a law for two teachers to handle the class so that when one is teaching the other is either marking or attending to other things (ECE Teacher, Non-intervention district, North Tongu).

Participants were of the opinion that implementing these tactics effectively will lead to increased enrolment in ECE programmes, which are now seeing a slow decline.

3.3 How TPD (in-service) Embraces and Support ECE Teachers' Progression and Development and Pedagogic Efficacy in the Classroom

The study also focused on how the TPD embrace and support the progression and development of pedagogy efficacy in the classroom. This section focuses on the professional development activities for early childhood education (ECE) teachers, aiming to enhance their growth and development as well as their effectiveness in teaching.

3.1.7   Available TPD Opportunities

Available TPD opportunities were identified as presented in Table 5.

The quantitative findings indicated that teachers in both the intervention and non-intervention districts had benefited from government-funded Teacher Professional Development (TPD) programmes, as well as self-funded National Teaching Council (NTC) professional development workshops. The interventions encompassed training in a Standards-based curriculum, Jolly phonics, Early Childhood Education (ECE) policy, and the Learning programme. Nevertheless, teachers in the intervention districts have received a greater amount of Teacher Professional Developments compared to those in the non-intervention districts. The interventions received exclusively in the intervention districts were Sabre Education PBL and Blue Sky World (BSW) in the Gomoa Central district, and Games to educate in the South Tongu area.

Table 5: Professional Development Opportunities for ECE Teachers

Impact of training on teaching methods	Intervention	Non-intervention	Total
PBL by Sabre	10(27.8)	1(2.8)	11(30.6)
PBL by RTP	1(2.8)	1(2.8)	2(5.6)
Standard based curriculum	10(27.8)	2(5.6)	12(33.3)
ECE Policy	7(19.4)	3(8.3)	10(27.8)
Learning program	9(25.0)	5(13.9)	14(38.9)
Jolly Phonic	9(25.0)	4(11.1)	13(36.1)
BSW	2(5.6)	-	2(5.6)
EQUA	1(2.8)	-	1(2.8)
Games to teach	1(2.8)	-	1(2.8)
JICA	-	1(2.8)	1(2.8)
BTL	1(2.8)	-	1(2.8)
Integrated approach	1(2.8)	-	1(2.8)
UDL	1(2.8)	1(2.8)	1(2.8)
FCE training	3(8.3)	-	3(8.3)

	Intervention	Non-intervention	Total
NALAP	2(5.6)	-	2(5.6)

Percentage scores are presented in parenthesis

Furthermore, it has was revealed that, alongside the PBL initiative, BSW is also implementing a pilot programme for integrating technology at specific schools in the Gomoa Central district. Quotations from participants:

> *Only Sabre has been in the district. BSW is doing a piloting with nine (9) schools. Their approach is similar to Sabre's, but they have added ICT to the play-based instruction.* (ECE Coordinator, Intervention District, Gomoa Central)

> *We have Right to Play here, but Sabre only supported during our training ... but not after the training as Right to Play is doing till now.* (ECE Coordinator, Intervention School, South Tongu)

The findings indicated that nearly all individuals in the districts without intervention did not receive direct intervention training from the NGOs. Instead, they received training via a representative, typically the ECE Coordinator, who acted as a trainer for other individuals.

> *District officers undergo training at the Regional Office. At the beginning of the term, they take headteachers through a-2-day training.... They follow up to monitor us.* (Headteacher, Non-intervention School, Gomoa East)

> *There are no interventions in my district. I attended 5-day workshop in December 2023, organised by the Regional ECE Coordinator in collaboration with Sabre. ... I organised a workshop for teachers in my district on the training I had from Sabre. I invited Gomoa Central and Regional ECE coordinators to facilitate the training.* (ECE Coordinator, Gomoa East, Non-intervention District)

3.1.8 Effectiveness of the TPDs

Respondents' feedback on the effectiveness of the TPDs was extremely positive. The majority of participants in both intervention and non-intervention districts gave very positive ratings to the amount to which the professional development programmes have improved their grasp of pedagogical theories and approaches to early childhood education, with high and moderate ratings following closely behind. Nevertheless, a respondent from a district that did not get the intervention judged the effectiveness of the Learning programme as being of low value. The findings are displayed in Table 6.

Table 6: Effectiveness of the TPDs

	Intervention	Non-intervention	Total

TPD Enhanced understanding of pedagogical theories and approaches	Moderate	High	Very high	Low	High	Very high	
PBL by RTP	1(2.8)	2(5.6)	4(11.1)	-	2(5.6)	-	9(25.0)
PBL by Sabre	-	1(2.8)	3(8.3)	-	-	-	4(11.1)
Standard-based curriculum	2(5.6)	2(5.6)	6(16.7)	-	1(2.8)	1(2.8)	12(33.3)
ECE Policy	1(2.8)	-	6(16.7)	-	2(5.6)	1(2.8)	10(27.8)
Learning program	1(2.8)	3(8.3)	5(13.9)	1(2.8)	3(8.3)	1(2.8)	13(36.1)
Jolly Phonic	2(5.6)	1(2.8)	6(16.7)	-	2(5.6)	2(5.6)	13(36.1)
BSW	-	-	2(5.6)	-	-	-	2(5.6)
EQUA	-	1(2.8)	-	-	-	-	1(2.8)
Games to teach	-	-	1(2.8)	-	-	-	1(2.8)
JICA	-	-	-	-	1(2.8)	-	1(2.8)
BTL	-	-	1(2.8)	-	-	-	1(2.8)
Integrated approach	-	-	1(2.8)	-	-	-	1(2.8)
UDL	-	-	1(2.8)	-	-	1(2.8)	2(5.6)
FCE training	-	1(2.8)	2(5.6)	-	-	-	3(8.3)
NALAP	-	-	2(5.6)	-	-	-	2(5.6)

Source: Field data, 2023   Percentage scores are presented in parenthesis

The qualitative findings were in line with the quantitative results as almost all the participants commended the TPDs especially, participants from the intervention districts who have received the PBL in addition. They asserted that the TPDs have enhanced their pedagogical practices and their knowledge on play-based teaching at the ECE level. Excerpts from participants in support of this finding:

> *It has helped us a lot especially with the learner plan. We also do PLCs at the school level to adhere ideas.* (Teacher, Intervention School, South Tongu)

> *... It has made our teaching more hands-on than talking, ... it has reduced the teacher talk. We also share TLRs and ideas a lot.* (Teacher, Gomoa Central, Intervention District)

> *Through the workshop we are taught all the methods and resources we need to implement PBL.* (Teacher, Intervention School, Gomoa Central)

> *It helps us to be confident in delivering our lesson, learners also get involve and interactive during lessons and that makes them smart and active.* (Teacher, Intervention School, South Tongu)

The findings also showed that attending TPD trainings has equipped participants with abilities in preparing teaching and learning resources (TLRs), which are then shared through PLC sessions. It

was discovered that teachers who completed this programme impart the concepts and practices to their colleagues at their PLC meetings.

> *As I said early on, I wasn't a college trained ECE teacher but it is through these workshops that have given me the knowledge and skills I'm using now. It has made me able to prepare appropriate TLRs you see in this class.* (Teacher, Intervention School, Gomoa Central)

> *We network during our trainings and we reach out to each other for assistance. We also have a district level WhatsApp platform where we share ideas and also do PLC.* (Teacher, Intervention School, South Tongu)

> *Professional development programs address our needs and challenges by filling us in on content and practical demonstrations. What is left is how to implement these effectively in our various schools, we just don't have the resources for the young learners.* (Teacher, Non-intervention School, Gomoa East)

With respect to changes in teaching methods that have resulted from the TPDs, the findings showed that teachers in the intervention districts have improved in student-centred approach to teaching and in differentiated instruction. This was very low in the non-intervention districts in that while 25 participants in the intervention districts indicating that their teaching have become more student-centred, just 9 from the non-intervention claimed to possess this ability. A similar fraction was evident in the case of differentiated teaching where 10 participants from the intervention indicated the possession of the ability as against 3 in the non-intervention districts. Table 6 presents the quantitative details of these findings. The table unequivocally illustrates that participants in the intervention districts have significantly enhanced teaching approaches in comparison to their counterparts in the non-intervention districts.

Table 7: Changes in the Teaching Methods Due to TPD

Changes in the teaching methods due to TPD	Intervention	Non-intervention	Total
Differentiation of instruction	10(27.8)	3(8.3)	13(36.1)
More student-centred approach	25(69.4)	9(25.0)	34(94.4)
Use of Play based approaches	2(5.6)	2(5.6)	4(11.1)
Increased use of technology	6(16.7)	1(2.8)	7(19.4)
Use of teaching learning materials prepared by teachers before class	1(2.8)	-	1(2.8)
Develop love for them	-	1(2.8)	1(2.8)
Performance of kids class control	1(2.8)	-	1(2.8)
More inclusive classroom environment	1(2.8)	-	1(2.8)

Source: Field data, 2023   Percentage scores are presented in parenthesis

Additionally, head teachers interviews revealed that PLC (Professional Learning Community) served as the primary platform for participants to tackle the difficulties related to the implementation of PBL in their schools. Moreover, PLC also offered them chances for peer-mentoring and coaching.

On the question on how leadership monitor the implementation of the knowledge and skills learnt from TPDs teachers attend, it was discovered that headteachers from both the intervention and non-intervention districts mostly use observation of teachers' lessons delivery (11, 100%) and coaching and mentoring (9, 81.8%). Some headteachers also indicated that they used review and comments on vetted lesson plans (7, 63.6%). The next preferred approach used was asking teachers to share what they learnt at the TPD trainings with their colleagues during PLC meetings. The least used approaches were monitoring activities of teachers and having a post lesson observation meeting. The quantitative findings on the table below clearly present the responses of participants. See Table 8.

Table 8: Ways of monitoring implementation of TPD

Ways of monitoring implementation of TPD	Intervention	Non-intervention	Total
Monitor activities of teachers	1(9.1)	-	1(9.1)
Asking them to share during PLCs with other teachers	4(36.4)	2(18.2)	6(54.5)
Coaching and mentoring of teaching staff	6(54.5)	3(27.3)	9(81.8)
Observation in classroom	8(72.7)	3(27.3)	11(100.0)
post observation meeting	1(9.1)	-	1(9.1)
Review and comments on their lesson plans	5(45.5)	2(18.2)	7(63.6)

Source: Field data, 2023   Percentage scores are presented in parenthesis

3.1.9   Strategies for Improving and Sustaining TPD Programmes

Regarding the strategies that could be put in place to improve and sustain TPD programmes, the prominent suggestions participants in both the intervention and non-intervention districts gave were the *inclusion of virtual trainings* and *funded TPD*. Participants claimed that these two channels could make TPD accessible to all the target teachers. They explained that the inclusion of the virtual workshops could allow every teacher to take part of such trainings at the comfort of their homes or wherever they find themselves. This means that virtual workshops could make TPDs accessible to ECE teachers irrespective of their location. Also, participants reported that funded TPD would motivate all teachers, including those who may not be financially sound, to take part in TPDs.

With regard to strategies that could be used to sustain TPD programmes, participants indicated supervision and coaching, provision of financial support and attraction of CPD points for the attendance of such programmes. The findings indicated that effective supervision and coaching are the key pointers that could ensure proper implementation of TPDs. In addition to getting CPD points

when one attends TPD, participants suggested that adequate provision of financial support to schools is another key channel for effective implementation. They indicated that this would empower schools to acquire the needed materials and equipment for the appropriate and proper implementation of the strategies and new skills learnt at the TPD workshops.

3.5 Implementation of the Play-Based In-service training, TLRs for training, and Methodology Provisions in the Curriculum

This report presents the comprehensive results of both quantitative and qualitative research on the successful application of play-based learning in-service training. It also examines the teaching and learning materials related with this training, as well as the difficulties encountered by early childhood education (ECE) instructors while implementing the play-based learning pedagogy. Additionally, it provides insights into the level of support from leaders and identifies areas that need change in order to ensure the successful implementation of PBL.

3.5.1 Implementation of PBL

On the question of how often teachers incorporate strategies learnt at PBL oriented workshops into their daily teaching, the findings showed that most of the participants always integrate strategies learnt at PBL workshops into their daily teaching. When asked why they always incorporate strategies learnt into their daily teaching, participants, especially those from Gomoa Central, asserted that it was due to the regular monitoring done by the ECE coordinator. A respondent had this to say: *The ECE coordinator visits a lot so we are urged to practice what we learn at the workshops.* The quantitative results provided on Table 8 buttressed the qualitative findings presented above.

The results in Table 8, confirm the qualitative observation that nearly all participants in the intervention districts consistently apply the tactics learned at workshops in their daily teaching, while two participants from non-intervention districts made the same choice. One participant from the intervention district reported frequently integrates the skills learned at workshops into her everyday class delivery. Additionally, two participants from intervention and non-interventions districts that reported that they sometimes incorporate tactics learned at the TPD programmes or when they deem it necessary.

Table 9: Number of Times Teachers Integrate PBL Strategies in their Practices

Number of times	Intervention	Non-intervention	Total
Always	23(63.9)	7(19.4)	30(83.3)
Often	1(2.8)	-	1(2.8)
Sometimes	2(5.6)	2(5.6)	4(11.1)
Total	26(72.2)	9(25.0)	35(97.2)

Source: Headteacher & Teacher

Regarding the impact of PBL attendance on teachers' ability to include technology in their teaching, it was discovered that participants from the intervention districts, particularly in the Gomoa Central district, are more skilful in this sense than their counterparts in the non-intervention districts. Some of the participants from Gomoa Central said that they were able to integrate technology into their ECE teaching as a result of the training provided by BSW. The findings showed that more participants in the interventions districts reported moderate (9) to extensive skills (13) in ICT integration in lesson as result of TPDs attendance than those from the non-intervention districts on the same vein (3 and 2 respectively). Only five participants from the intervention districts indicated minimal skill on technology use in teaching as against three in the non-intervention districts. The quantitative results on Table 10 clearly display this finding.

Table 10: Extent to which TPD address integration of ICT

ICT integration	Intervention	Non-intervention	Total
Minimally	5(13.9)	3(8.3)	8(22.2)
Moderately	9(25.0)	3(8.3)	12(33.3)
Extensively	13(36.1)	2(5.6)	15(41.7)
Total	27(75.0)	8(22.2)	35(97.2)

Source: Field data, 2023   Percentage scores are presented in parenthesis

The study found that providing classroom materials/TLRs and refresher trainings are essential forms of assistance for the implementation of the PBL TPDs. The data was subjected to quantitative analysis and the findings were shown in Table 11.

The table reveals that majority of participants from both the intervention and non-intervention districts consider the provision of teaching-learning materials and refresher trainings, also known as TPDs, as crucial elements for successfully implementing play-based pedagogy in Ghanaian ECE classrooms. A total of 43 (119.4%) and 22(61.1%) respondents (from the school level) from both intervention and non-intervention districts expressed the belief that the provision of Teacher Learning Resources (TLRs) and refresher training sessions respectively are crucial factors for the successful

implementation of PBL. Colleague and administrative support were recommended as the next effective means to ensure the successful and efficient implementation of the PBL. Additional recommendations provided by participants included provision of specific incentives for ECE teachers and enhancement of infrastructure, such as creating larger classrooms to accommodate learning centres. The suggestion with the lowest priority, according to the participants, was obtaining financial assistance and support from the school management committee (SMC).

Table 11: Resources Needed for Effective Implementation of PBL In-service Trainings

Resources	Intervention	Non-intervention	Total
Classroom materials/supplies including ICT tools	33(91.7)	10(27.8)	43(119.4)
Financial support	-	2(5.6)	2(5.6)
Special motivation for ECE teachers	2(5.6)	1(2.8)	3(8.3)
Support from colleagues/administration	12(33.3)	2(5.6)	14(38.9)
support from SMC/District	2(5.6)	-	2(5.6)
Additional training sessions/Refresher training	17(47.2)	5(13.9)	22(61.1)
Outdoor and Indoor resources/games	1(2.8)	2(5.6)	3(8.3)
infrastructure (e.g. spacious classrooms, learning centres	3(8.3)	2(5.6)	5(13.9)
School feeding	1(2.8)	-	1(2.8)

Source: Field data, 2023   Percentage scores are presented in parenthesis

3.5.2 Challenges to implementation of PBL

The findings revealed that insufficient TLRs, time limitations, excessive workload, and inadequate teachers were the primary obstacles to the successful execution of PBL pedagogy. Both participants from intervention and non-intervention districts expressed that there were issues with inadequate teaching and learning resources, which hinder their ability to effectively implement the intended play-based pedagogy. Several participants argued that the little resources currently accessible are not long-lasting, and that the majority of the TLRs currently being used cannot last for an entire academic year. Here are a few quotes from the participants:

> *Mainly a problem of limited resources, Teachers are ready to teach and implement what has been learnt but there are no supportive resources.* (Teacher, Non-intervention School, Gomoa East)

> *There is a need for more classrooms TLRs and technology devices for teachers to effectively implement the knowledge they acquire from these trainings.* (Headteacher, Non-intervention School, North Tongu)

> *We should be supported with quality TLRs so it can last long because some of the current ones do not last, they can't go beyond ... not even before the term ends and preparation is not easy. Getting a safer place to keep the items e.g. lockers, cupboards etc. to secure the TLRs.* (Teacher, Intervention District, Gomoa Central)

> *We lack teaching and learning materials, so it is sometimes difficult to implement some of the knowledge we have acquired from the workshops we attend.* (Teacher, Intervention School, South Tongu)

> *Resources are limited because we must vary the lessons, so it calls for new materials which will require finances. Some of the resource could be less costly.* (Headteacher, Intervention School, Gomoa Central)

These examples demonstrate the necessity for teachers to have sufficient and long-lasting Teaching and Learning Resources (TLRs) in order to effectively deliver lessons. Materials with an extended lifespan would improve the efficient delivery of lessons. Nonetheless, many ECE coordinators from the intervention districts pointed out that the proper implementation of the PBL is hindered by problems such as overcrowded classrooms, substandard infrastructure, and insufficient furniture. These challenges were clearly observed and documented in the data. Additionally, they noted that the absence of secure storage facilities for the TLMs posed a difficulty, primarily because of the prevalence of theft incidents in the vicinity. Their statements were as follows:

> *Some kindergarten classes have more than 50 students. Some classrooms have low walls, without doors or windows, which makes it challenging for teachers to hang their Teaching and Learning Resources (TLRs). Some schools lack adequate furniture for children and instead employ benches and multiple desks.* (ECE Coordinator, Intervention District, Gomoa Central)

> *A significant obstacle is the inability of teachers to carry out their tasks due to the absence of Teaching and Learning Resources (TLRS) at their disposal. Another issue pertains to finance. Inadequate logistics hinders the provision of monitoring help. Once again, we are not achieving the desired outcome due to the fact that some recently posted SISOs possess limited or no understanding of the programme.* (ECE Coordinator, Intervention District, South Tongu)

Regarding the issue of time limitation in implementing the PBL, the results showed that participants in the intervention districts require sufficient time to carry out the PBL due to its complexities. They stated that they require sufficient time to implement the knowledge they have acquired during PBL TPDs in their lesson delivery. The limited time allotted for teaching specific topics hinders their ability to attain desired outcomes. Quotations from participants that validate this discovery:

> *Time is a problem. For instance, a topic which I used 30 minutes to teach if I include the new strategies, I can use 60 minutes for that same topic.* (Teacher, Intervention School, Gomoa Central)

> *... Also, there is time constraint when it comes to effective implementation of the various activities.* (Teacher, Intervention School, Gomoa Central)

> *Time is a factor, looking at the time the curriculum has allocated for each task even when they have not completed the activity they have to wrap up.* (Headteacher, Intervention School, Gomoa Central)

In contrast, the results indicated that participants from the districts without intervention had a knowledge gap in certain topics they were supposed to teach. As a result, they had to spend more

time delivering these topics, which hindered their capacity to effectively execute the PBL approach. This suggests that the districts that received intervention expressed concerns about not having enough time to effectively implement PBL in the classrooms due to the various related activities. On the other hand, the districts that did not receive intervention expressed concerns about lacking sufficient knowledge on certain topics in the standards-based curriculum. A few participants from the non-intervention districts mentioned that they occasionally omit new topics. Here are selected quotes from the participants:

> *Some of the topics are time consuming so implementation is not often done. Some topics are difficult to understand so we don't implement them.* (Teacher, Non-intervention School, Gomoa East)

> *We are not familiar with some of the activities in the curriculum. The time for implementation is inadequate, sometimes we don't have the materials required for the implementation.* (Teacher, Non-intervention School, North Tongu)

A significant issue that arose as a first discovery was the inadequate educators to manage the early childhood education classes, particularly in the kindergarten classrooms in both the intervention and non-intervention districts. It was discovered that having only one instructor in a classroom makes it exceedingly difficult to execute PBL since one person cannot effectively respond to learners who are engaged in several activities simultaneously or during transitions. The severity of the situation increases when the class includes a substantial number of students. The following are the statements made by the participants regarding this discovery:

> *It is sometimes difficult when you have only one teacher to the class especially when it is time for changing turn ....* (Teacher, Intervention District, Gomoa Central)

> *We need more teachers and classrooms so that the stress on us here in Mepe reduces and also more materials to help us implement what we learn from the training.* (Teacher, Non-intervention School, North Tongu)

> *Too many children in one classroom with only one teacher to take care of them....* (Teacher, Non-intervention School, North Tongu)

> *It is time consuming because teachers spend the entire day to teach, so they only prepare material after closing. The implementation is more stressful especially if it is only one teacher, yet still teachers go about their duties.* (Headteacher, Intervention School, Gomoa Central)

As previously mentioned, the results showed that the demanding workload related to the adoption of the standards-based curriculum, combined with the various tasks involved in using PBL pedagogy, poses a significant obstacle to the successful implementation. Participants claimed that the standards-based curriculum necessitates a significant amount of work throughout the day, which hampers the successful application of PBL pedagogy. A headteacher expressed the following statement:

It is tedious especially when they start they are not finding time to eat. Because when they break one session they have to prepare for the other. Also, some of the materials require money which makes it difficult to use. Classroom environments are not attractive, they need painting. (Headteacher, Intervention School, Gomoa Central)

A participant from one of the intervention districts provided a summary of the findings on the problems mentioned above.

Sometimes lack of time for implementations, Class size in terms of enrolment, Limited resources and support, Insecure environment or classroom, no storage area or room to keep resources as moving them up and down becomes very tedious. (Teacher, Intervention District, Gomoa Central)

3.5.3 Strategies to addressing PBL implementation challenges

The findings indicated many essential measures to address the identified difficulties, including the provision of TLRs, frequent training, enhanced infrastructure, and an increase in the number of instructors in Early Childhood Education (ECE) classrooms. Respondents from both the districts where the intervention was implemented and those where it was not implemented expressed that receiving suitable Teaching and Learning Materials (TLMs) will enhance the successful execution of the programme. The participants in both the intervention and non-intervention groups shared their ideas in the following manner:

There should be better provision of materials, there should also be monitoring to ensure the teachers are using the TLMs and implementing what they have learnt. (Teacher, Intervention School, Gomoa Central)

Provision of TLMS for ECE teachers is important. Also, is providing financial motivation and better work conditions for ECE teachers. (Teacher, Non-intervention District Gomoa East)

Because some of the materials are not available improvising becomes difficult for me and find it difficult constructing them by myself. But I have decided to do better. (Teacher, Non-intervention School, North Tongu)

Furthermore, individuals from both the districts that were provided with the intervention and those that were not, recognised that improved infrastructure might help overcome the barriers to the effective implementation of PBL. Below are excerpts from participants.

We will need more classrooms and space because the number of learners is huge so we need expansion to create free atmosphere of learning and incorporating play-based teaching. (Teacher, Intervention School, South Tongu)

...infrastructure needs to be provided and we also need furniture as well. Funds for monitoring are needed and, we need to get workshops organized and lastly adequate

number of teaching and learning materials. (AD Supervisor, Intervention District, South Tongu)

There should be modern infrastructure (classrooms, tables and chairs should be available and appropriate sanitation facilities provided, technology devices or materials should be provided. (Headteacher, Non-intervention School, Gomoa East)

Moreover, participants indicated that consistent training is crucial for the successful execution of PBL. They claimed that regular training will enable them to stay updated on current trends in knowledge and skills related to PBL methodology, as they tend to become out-dated over time. Here is a participant's statement regarding this matter:

The fact that I attended the training in about 2 years ago, has resulted in me forgetting most of the things needed to be introduced in the class is one of the areas I need to improve upon so I can bring all information as required by the curriculum. (Teacher, Intervention School, South Tongu)

Furthermore, participants recommended augmenting the number of teachers in early childhood education classrooms as a means of mitigating the heavy workload.

They should provide more teachers so that pressure is reduced on us or they provide more classrooms for us. (Teacher, Non-intervention School, North Tongu)

... KG classrooms should have not less than 2 teachers and adequate TLRs. (Teacher, Intervention School, Gomoa Central)

They should provide more teachers so that the pressure is reduced on us or they provide more classrooms for us. (Teacher, Non-intervention School, North Tongu)

3.5.4   Support for improving PBL implementation

In terms of enhancing support for the implementation of PBL, it was discovered that ECE coordinators and headteachers help through coaching and mentoring, as well as arranging workshops to enhance teachers' skills in both the intervention and non-intervention districts. Both the headteachers and teachers' answers confirmed this fact. Participants said that they derive benefits from workshops that their local district offices and headteachers occasionally arrange to facilitate the implementation of PBL. In addition, leadership offers teachers logistical and material help. The following are selected quotations from the headteachers:

They provide some training workshops at the district level for teachers and heads once in a while. The SMC is quite active with support from families for the construction (re-construction) of parts of KG. (Headteacher, Intervention School, South Tongu)

They organize workshops and while they are away, we assign other teachers to take over. During workshops, we work together. I also encourage and motivate them when we see them performing. When the capitation delays, we use the little money in the school (IGF) to buy the materials they need. (Headteacher, Intervention School, Gomoa Central)

We pay for teachers transport and encourage them to attend workshops and we also provide some of the TLRs. (Headteacher, Non-intervention School, North Tongu)

It is essential because sometimes they don't have money for the training so supports from the administration with help them gain some knowledge and skills. (Headteacher, Non-intervention School, Gomoa East)

The teachers confirmed this by saying:

The headteacher does coaching and monitoring and he corrects us afterwards. He also buys things we need in the class such as glue and cello tapes. (Teacher, Intervention School, South Tongu)

Our headteacher is supportive. We have the opportunity for regular relevant workshops which enhance our teaching and learning process. All the workshops/PDs are very beneficial and as I said, I wasn't a trained ECE but through these PDs, I have gained the expertise so I can effectively teach at the KG. (Teacher, Intervention School, Gomoa Central)

They try as much as possible to support us, especially with materials for implementation but financial constraint is the issue. (Teacher, Non-intervention School, North Tongu)

As regards the methods to expand PBL activities in the separate districts, the investigation uncovered that all schools in the Gomoa Central have received training on PBL from Sabre. The responders at the district level expressed strong confidence and support for expanding the PBL to other districts. They also expressed their willingness to aid with the training. However, they noted that they will still require additional training to update their skills. The AD Supervision and ECE Coordinator provided the following responses:

All the schools are using the Sabre play-based approaches. For other districts they must embrace it we will invite the schools who are not on it to train them. We will look for support to train them. (AD Supervisor, Intervention District, Gomoa Central)

For us, all our schools have been trained so we will just need refresher courses. We will share our expertise and resources with our neighbouring districts. We have even started with some officials in other districts. (ECE Coordinator, Intervention District, Gomoa Central)

On the other hand, the respondents from the intervention district had a lower degree of confidence compared to the former group. They required a training approach that starts at the district level and cascades down to the classroom for the scaling up activities. The following statement was made by the ECE coordinator regarding this matter:

> *We need to start with officers, then headteachers, and finally the teachers and we believe that will help us expand this in the district; Cascading from officers to head to teachers to learners.* (ECE Coordinator, Intervention District, South Tongu)

However, despite the limited benefits experienced by the non-intervention districts from the PBL approach, they expressed support for its expansion and are actively working towards implementing it within their districts. The AD supervisor from Gomoa East expressed the following:

> *I have decided to organize circuit workshop on play-based learning starting from next academic year. They will help expand the coverage of PBL within the district.* (AD Supervisor, Non-intervention District, Gomoa East)

Both the intervention and non-intervention districts demonstrate their endorsement of expanding the implementation of the PBL in their respective districts.

The study found that headteachers and district administrators had a strong understanding of the effectiveness of PBL in helping teachers. Participants from both the intervention and non-intervention districts reported that teachers' attendance of PBL trainings have had a significant impact on their teaching outcomes and their perception of early childhood education. According to the headteachers and responses at the district level, ECE instructors' lesson delivery has evolved to be more interactive, focused on the child's needs, and captivating. The following were their claims:

> *Makes lesson hands-on, interesting and very engaging. In assessing children, teachers look at specific skills unlike the pen and paper. Makes learners understand concepts better. Because of the play-based, teachers have stop shouting.* (ECE Coordinator, Intervention District, Gomoa Central)

> *It helps the use of more child-centred approaches which makes presentation or the delivery very easy.* (ECE Coordinator, Non-intervention District, Gomoa East)

> *For those who have received the training know that each day class is to start with play of which helps them to engage leaners. On the other hand, those who have not had the training are doing directly opposite of what the curriculum request.* (ECE Coordinator, Intervention District, South Tongu)

> *Teachers were not ready to go to ECE class, but now because of the interventions the class have been active and engaging. Formally, it was lecturing but now everything is programmed, registrations, outside play, break, table top activities, learning centres,*

phonics story time. There was no money for TLR but with SABRE, they have the TLRs for all the topics. (Headteacher, Intervention School, Gomoa Central)

Furthermore, participants emphasised that the implementation of PBL has a beneficial effect on students' academic achievements. The discovery unveiled several beneficial effects of PBL, including the reduction of learning stress among students, the promotion of independent learning, the enhancement of conceptual knowledge, and the improvement of enrolment and attendance rates.

> *Through the play, children don't stress in learning. It is more practical, have materials to manipulate and activities are broken into smaller tasks which facilitates comprehension. Children are not seeing learning as a task. Children are able to learn on their own without us. It has improved enrolment and attendance.* (ECE Coordinator, Intervention District, Gomoa Central)

> *It helps children to own the lesson and understand the concepts being taught. They get to achieve more attendance.* (ECE Coordinator, Non-intervention District, Gomoa East)

> *Since it is learner-centred, there is not much stress on teachers again and lessons are always lively. TLMs are not adequate.* (ECE Coordinator, Non-intervention District, North Tongu)

> *... It has improved attendance because there are a lot of activities through playing so the children like it.* (Headteacher, Intervention District, Gomoa Central)

3.6 Outcomes of the Scale-up of PBL in Ghana-training and support at the school

This section presents findings on the outcomes of implementing the PBL on a larger scale in Ghana. More precisely, how the content of professional development programmes affect early childhood education outcomes, and the efficiency of different training methods used for Teacher Professional Development (TPD) programmes are shown in this section.

3.6.1 Capacity Building for Implementation of PBL

Capacity building is an on-going process aimed at enhancing the knowledge and skills of teachers and headteachers in delivering lessons. Public school teachers have had this process formalised through the implementation of professional development programmes by the National Teaching Council. The study revealed that play-based TPD programmes enhanced the capacity of educators including teaches, headteachers, and district supervisors. For instance, within the intervention districts, the coordinators of ECE stated that the training programmes had enhanced their

understanding of PBL and subsequently equipped them with the requisite knowledge to effectively provide assistance to headteachers and teachers when they go for monitoring activities within their districts. This was disclosed by ECE coordinators in intervention districts:

> *It has upgraded our knowledge on play-based teaching and learning and we are able to provide useful feedback to teachers and headteachers. I know because now when we go for monitoring and something is not going well, we are able to give the needed assistance.* (ECE Coordinator, Intervention District, Gomoa Central)

> *It provides useful feedback to teachers and headteachers. I know because now when we go for monitoring and something is not going well, we are able to give the needed assistance.* (ECE Coordinator, Intervention District, Gomoa Central)

The narrative in the non-intervention districts follows a comparable pattern. Participants suggested that the training sessions improved their understanding of the PBL pedagogy, and new approaches to addressing challenges identified in the schools. As well as the relevance of activities the children engage in. And eventually helping in transferring the acquired knowledge to teachers. These were were articulated as follows:

> *I have realized that there were a lot of activities children used to do at home that have now been integrated into the curriculum, so I now see those activities as relevant.* (AD Supervisor, Non-intervention District, Gomoa East)

> *Oh, it adds up to my knowledge; The time some of us completed school is quite a long time so they are really helping me to know these new ways of addressing challenges in the schools.* (ECE Coordinator, Non-intervention District, North Tongu)

> *It enabled me to understand the PB pedagogy concept, so I was able to impact it on the teachers.* (ECE Coordinator, Non-intervention District, Gomoa East)

In support of the above evidence, respondents reported that TPDs have improved their knowledge and skills (34, 97.1%). Particularly in intervention schools. Thus, TPDs had great influence on on the capacity of educators to developlearner and age-appropriate materials. See Table 12 below.

Table 12: Influence of TPD on the development of child appropriate materials

Extent of improvement	Intervention	Non-intervention	Total
Not improved	0(0.0)	1(2.8)	1(2.8)
Improved	9(25.0)	4(11.1)	13(36.1)
Greatly improved	17(47.2)	4(11.1)	21(58.3)
Total	26(72.2)	9(25.0)	35(97.2)

Source: Field data, 2023   Percentage scores are presented in parenthesis

This shows that majority of head teachers in both intervention and non-intervention schools concurred that Teacher Professional Development (TPD) programmes had significantly enhanced their capacity to designing age-appropriate learning experiences for young children.

Again, the study examined strategies used to measure the ECE learning outcomes of TPDs as presented in Table 13. Results indicated that observations and assessments were the commonly employed method assessing learning outcomes in both intervention and non-intervention districts (32, 88.9%). The next preferred approach included learners' feedback and engagement (22, 66.1%) and standardised test scores (16, 44.4%). It was discovered that participants in the intervention districts tend to use the approaches indicated above more than their counterparts in the non-intervention districts.

Conversely, a respondent from a non-intervention district reported the use of positive parental feedback as a way of measuring the impact of the TPD on learners' learning outcomes. This indicates that the least approach employed in assessing the impact of TPD on learners' learning outcomes was positive parental feedback. These results are displayed in Table 13 below.

Table 13: Ways of measuring impact on learning outcome

Measurement strategies	Intervention	Non-intervention	Total
Observations and assessments	23(63.9)	9(25.0)	32(88.9)
Positive parental feedback	0(0.0)	1(2.8)	1(2.8)
Standardized test scores	13(36.1)	3(8.3)	16(44.4)
Student feedback and engagement	17(47.2)	5(13.9)	22(61.1)

Source: Field data, 2023   Percentage scores are presented in parenthesis

The responses suggest multiple responses from those interviewed. Most participants further concurred that they are able to engage in collaborative efforts and establish professional connections with their colleagues when they participate in training workshops and conferences at local or regional levels. It was discovered that participants in the intervention districts had more avenues for collaboration and networking than their counterparts at the non-intervention districts. Participants claimed that PD programmes enabled them get closer to their leadership from their Education office as well as provide them opportunities to learn from peers and share ideas (Peer mentoring and coaching) which facilitate knowledge sharing and collaboration. Excerpts from participants from the intervention districts:

> *The local and regional workshops we attend enable us to have interaction and connection with officers at the Education office.* (Teacher, Gomoa Central, Intervention District)

> *It helps us with benefits such as resource persons. This is seen in a way that each teacher is able to assist other colleagues making us have peer coaches or mentors through training and workshops.* (Teacher, South Tongu, Intervention District)

Through the workshop programmes, we discuss some areas of difficulty with our colleague teachers. We are sometimes put in groups during workshops. It has helped us a lot especially with the learner plan... (Teacher, South Tongu, Intervention District)

The quantitative results on Table 14 corroborated the qualitative findings provided above. Peer mentoring or coaching programmes (30, 83.3%), online communities and forums (29, 80.6%), local or regional conferences and workshops (including need assessment and ECE workshops (11, 30.6%) and provision of emotional support and camaraderie (12, 33.3%) were avenues for collaboration and networking in intervention and non-intervention districts.

Table 14: Opportunities for collaboration and networking gained by participants from PD attendance

Opportunities	Intervention	Non-intervention	Total
Peer mentoring or coaching programmes	22(61.1)	8(22.2)	30(83.3)
Local or regional conferences and workshops (including need assessment and ECE workshops)	6(16.7)	5(13.9)	11(30.6)
Online communities and forums	25(69.4)	4(11.1)	29(80.6)
PLC cluster based	3(8.3)	-	3(8.3)
PLC General	1(2.8)	-	1(2.8)
Provide emotional support and camaraderie	9(25.0)	3(8.3)	12(33.3)
No collaborative learning	-	1(2.8)	1(2.8)

Source: Field data, 2023   Percentage scores are presented in parenthesis

Teachers affirmed that TPD workshops and seminars had significantly influenced their teaching methods in early childhood education. They provided the following justifications to back their claim:

During workshops, we learn new things from colleagues from other schools. (ECE Teacher, intervention school, South Tongu)

Workshops provide us room to hear more information about the curriculum while the hands-on training also equips us for field work. The coaching from officials puts us on the right path. (ECE Teacher, intervention school, South Tongu)

Because its face to face and we are able to ask further questions and get explanations. (ECE Teacher, intervention school, South Tongu).

When you hear something, you can forget, but when you touch or experiment it sticks. I recall most of the content of the training because of the hands-on activities involved. (ECE Teacher, intervention school, Gomoa Central)

> *I was not a college trained ECE teacher but it is through these workshops that have given me the knowledge and skills I am using now. It has made me able to prepare appropriate TLRs you see in this class.* (ECE Teacher, intervention school, Gomoa Central)

Teachers from non-intervention schools reported that they typically acquire the necessary methods and resources for early childhood education teaching and learning through workshops and seminars.

Concerning the long-term effects of TPD on quality of education, participants reported that participation in regular TPDs enhances the overall quality and results of the ECE programme in Ghana. They indicated that their enhanced practices in turn improve children's enrolment and interest in school. The points they raised as the long-term effects on PBL TPDs on quality education included:

Benefits for Educators:

1. Increased confidence in teaching methods and curriculum.
2. Enhanced understanding of ECE learners and play-based.
3. Deeper knowledge, creativity, and stronger leadership.
4. Greater job satisfaction through competence and diverse teaching methods.
5. Reduced workload through active student participation.
6. Increased collaboration and networking with other teachers.
7. Motivated educators who stay in the field of ECE

Benefits for Learners:

1. Boosted confidence and critical thinking.
2. Strong educational foundation for future success (i.e., good outcomes for next class).
3. Increased engagement and active participation in lessons.
4. Improved student retention.
5. Happy and fulfilled teachers who inspire student success

To summarise, a teacher participant from a school involved in an intervention programme in Gomoa Central shared that:

> *The trainings have equipped us to teach effectively at the ECE level. These days, leaners learn on their own without being told what to do. For instance, when they come back early from break, you see them learning with the things around the classroom.* (Teacher, Intervention school, Gomoa Central)

This statement provides confirmation that TPD trainings have resulted in enhanced learner interest and self-motivation to use the PBL in the classroom. This can ultimately result in improved learning outcomes in the long run.

3.6.2 Pedagogic Uptake of Classroom Teachers

Pedagogical practices encompass the methods and techniques adopted by teachers in the classroom to facilitate effective instruction. Teachers develop and enhance their pedagogical skills through on-going work with learners and participation in professional development programmes that introduce them to current trends in pedagogy. Capacity building workshops provided hands-on training, and mentorship, and helped to coach teachers. These were the most effective TPD components that shaped ECE teachers' practices in their pedagogies. This follows that hands-on oriented TPDs were the most effective TPDs. This finding was projected by participants in the intervention districts. Participants had these to say in support of this finding.

> *Workshops provides us the room to hear more information about the curriculum while hand on training equip us more even on the field of work and the coaching brings official to put us on the right path.* (Teacher, intervention school, South Tongu)

> *With the workshops, it helps me get new ideas and method and the in class coaching too helps me know my strength and weakness. the last term practical workshop on TRLs gave me on experiences on how to use certain TRLs.* (Teacher, intervention school, South Tongu)

> *On hands-on training activities, new content and methodology are learnt and also refresh our minds on previous content or knowledge. With coaching headteacher gives support to teachers in the classroom.* (Teacher, intervention school, Gomoa Central)

> *We had workshop that trained us on how to prepare sentences strips and other TLMs it has equipped and enhance our skills on teacher made TLRs.* (Teacher, intervention school, South Tongu)

In addition, the study found that ECE instructors perceived the Professional Learning Communities (PLCs) to be highly beneficial in all schools, regardless of whether interventions were implemented. The PLCs enhanced their abilities to deliver lessons and provide a more learner-centred approach. Here are selected quotes from the respondents:

> *The PLC has really helped us. We do it at the school every Wednesday and then once or twice our cluster of schools given by the district.* (Teacher, intervention school, Gomoa Central)

> *Initially I had no idea of the appropriate practices for the ECE but now when I am doing anything I can know if I am using the appropriate practice.* (Teacher, intervention school, Gomoa East)

However, the findings discovered that most participants from both the intervention and non-intervention districts did not exhibit adequate understanding of reflective practice and it associated

strategies. Participants mostly used PLC meetings at avenues for reflective activities. The very few who reported the use of journaling as reflective practice source could not show evidence as they said they do not have a specific book for jotting down their reflections. This follows that ECE teachers need orientations or workshops on strategies for reflection activities.

> *We make use of PLC where they meet often to discuss strengths and weaknesses and how to improve on them. PLCs are used for reflective practices learning* (Teacher, South Tongu, Intervention District).

Regarding how participants addressed the needs and challenges of the diversity of learners they are met with, the quantitative results indicated that the head teachers from both intervention and non-intervention districts reported that teachers mostly used differentiation instructional techniques (7, 63.6%), and inclusive instructional practices (6, 54.5%). Some also used culturally responsive practices to address the diversity nature of the learners they teach. This is shown in Table 15.

Table 15: Addressing needs and challenges of diverse learners

Strategies	Intervention	Non-intervention	Total
Inclusive classroom practices	5(45.5)	1(9.1)	6(54.5)
Differentiated instruction techniques	5(45.5)	2(18.2)	7(63.6)
Culturally responsive teaching strategies	2(18.2)	1(9.1)	3(27.3)

Source: Field data, 2023   Percentage scores are presented in parenthesis

The qualitative findings of teacher participants corroborated the above results. Teachers from both the intervention and non-intervention districts expressed a heightened understanding and use differentiated instruction and inclusion in their response. They stated that they, especially participants from the intervention districts, have undergone training in inclusive teaching, which has provided them with expertise in managing students with diverse needs and incorporating appropriate activities into their courses. By adopting this approach, all children are included in the teaching and learning activities as well as learners with special educational needs (SEN) are not segregated from their peers. Teachers also considered the origins and cultures of the learners in the class during instruction. Below are quotations from participants on these findings.

> *We are taught to get all learners involved in our lessons and play activities. For instance, I have a learner with speech impairment in my class and what I do is to echo what she tries to say for the others to understand and I advise the others not to laugh at her because that is how she talks.* (Female ECE teacher, Intervention District, South Tongu)

> *It has excelled because I can see the results, and the progress is evident. Students who were once shy are now confident.* (AD Supervisor, Intervention District, South Tongu)

Other teachers in intervention schools reported that they employed group learning strategies. Also, parents of SEN children are consulted to provide information on their children They asserted that these accommodations are made to effectively support the learning needs of students who require remedial assistance:

> *We do so by grouping learners for different tasks. Those learners with work challenges are given extra time to complete them.* (Teacher, Intervention District, Gomoa Central)

> *We admit them and have a special needs coordinator who regularly visits the school. We spend special time with children who need special care, and invite the parents and get more information about the kids so they know what to do. We also look at the classroom arrangement.* (Teacher, Intervention District, Gomoa Central)

Notwithstanding these commendable initiatives, two teachers from non-intervention schools showed a complete lack of understanding of inclusive practices regarding teaching:

> *My only concern now is what to do with the special need student in my class. I try to attend to her in a different way even after addressing the whole class differently.* (Teacher, Non-intervention District, North Tongu)

> *We just try to do many things so that they will all learn something.* (Teacher, Non-intervention School, North Tongu)

These statements suggest that teachers in non-intervention schools needs training and capacity building on SEN children and how to ensure an inclusive learning environment.

On the question of additional measures to strengthen the accessibility and effectiveness of TPD for ECE teachers, evidence from both the intervention and non-intervention districts indicated that there should be increased funding for programme development and implementation (54.5%). Besides, there is the need to expand online and virtual learning opportunities (4, 36.4%), and tailoring programs to address specific needs and interest (4, 36.4%) were also emphasised as major additional measures. Unlike increased funding for programme development and implementation that were indicated in both intervention and non-intervention areas, the remaining measures were predominantly cited in intervention districts. Least of these measures comprised provision of resources for teaching and learning, parental engagement communication avenue through festival , regular check-ups and making available needed equipment. Table 15 displays headteacher participants responses on this issue indicating multiple responses.

Table 16: Additional measures to enhance TPDs

Measures	Intervention	Non-intervention	Total

Expansion of online and virtual learning opportunities	3(27.3)	1(9.1)	4(36.4)
Increased funding for programme development and implementation	3(27.3)	3(27.3)	6(54.5)
Parental engagement communication avenue through festival	1(9.1)	-	1(9.1)
Provision of resources for teaching and learning.	1(9.1)	-	1(9.1)
Tailoring programs to address specific needs and interest	3(27.3)	1(9.1)	4(36.4)
There should be regular check-ups	1(9.1)	-	1(9.1)
We need the equipment to use	1(9.1)	-	1(9.1)

Source: Field data, 2023   Percentage scores are presented in parenthesis

Teachers interviewed also voiced their endorsement for further workshops and the expansion of online training courses to ensure they stay updated on creative methods of delivering lessons utilising play-based techniques. Furthermore, they made a request for an on-going supply of financial aid in order to acquire components that are presently inaccessible. This will eliminate the necessity for teachers to utilise their personal finances to acquire Teaching and Learning materials (TLRs), while also supplying essential materials for students with exceptional needs. In addition, teacher participants from both districts, requested for the provision of hand-outs, applications, and videos to augment the PBL teaching and learning processes. They further expressed a desire for incentives to be provided to ECE teachers who undertake an excessive workload. Additionally, they suggest broadening the number of trainees to encompass all ECE teachers, rather than granting just a fraction of them, usually only KG teachers, especially in the Gomoa Central district teachers, access to PBL TPDs for them to cascade the knowledge and skills learnt.

3.6.3 Quality and Effectiveness of Training and Support

On-going TPDs were established to have beneficial effects on the quality of early childhood education programmes. Participants noted that the workshops help them to engage in peer interactions either via face-to-face interactions and/or technology-mediated interactions including phone calls, and WhatsApp. These interactions help to share ideas and insights as well as challenges faced to help in the implementation of the knowledge acquired. Additionally, other teacher stated that they visited schools that needed the services. These were explained below:

> *Through SMCs and PLCs, there are also times when we visit one another one-on-one to interact and share ideas on how to better implement what we learn at workshops.* (Teacher, Intervention School, South Tongu)

> *Through PLC meetings, when our KG coordinator organizes workshops, they give us the opportunity to share our achievements and challenges, sometimes through the KG WhatsApp platform*. (Teacher, Intervention School, Gomoa Central)

Through face-to-face meetings or phone calls, we are able to share insights and discuss challenges and ways to solve them. Others also visit the school in need of services. (Headteacher, Intervention School, South Tongu)

We have a WhatsApp platform and a PLC platform to share ideas and classes. We are a cluster so we go to other schools for assistance. (Headteacher, Intervention District, Gomoa Central)

In contrast, participants from non-intervention schools proposed that the trainings should be financed and that TLRs should be provided after the training.

According to the results presented in Table 17, teacher-student interaction mainly affected communication and language development (23, 63.9%). Other aspects cited included academic engagement and motivation (21, 58.3%) and at least, social emotional development and relationships (18, 50.0%). Thse were mostly identified among schools in the intervention districts.

Table 17: Impact on teacher-student interaction derived from of quality training and support

Teacher interaction impact	Intervention	Non-intervention	Total
Communication and language development	17(47.2)	6(16.7)	23(63.9)
Social emotional development and relationships	14(38.9)	4(11.1)	18(50.0)
Academic engagement and motivation	17(47.2)	4(11.1)	21(58.3)

Source: Field data, 2023   Percentage scores are presented in parenthesis

In sum, all the heads and teachers reached a consensus that on-going TPDs have beneficial effect on the quality of early childhood education programmes. They hold the belief that this leads to enhanced student performance and achievement, and improved classroom control and interactions in the future.

3.6.4 Strategies for TPD Programmes to addressing changing needs and demands in ECE

On the strategies that could be adopted to use TPD to address the changing needs and demands in the ECE landscape, the study suggested regular update on content and provision of resources as the most important strategy in both intervention and non-intervention areas. They were of the view that regularly updating content and resources (23, 63.9%), providing ongoing training and support (18, 50.0%) and collaborating with educational stakeholders (12, 33.3%) were major strategies to address the changing needs and demands in ECE. These results imply that to be able to address the changing

needs and demands in ECE, there should be regular update of context and resources, provision of continuous training and support and collaboration among educational stakeholders.

Table 18: Strategies for TPD addressing changing needs and demands in ECE

Strategies	Intervention	Non-intervention	Total
Collaborating with educational stakeholders	9(25.0)	3(8.3)	12(33.3)
Providing ongoing training and support	13(36.1)	5(13.9)	18(50.0)
Regularly updating content and resources	17(47.2)	6(16.7)	23(63.9)
PLC is used to refresh ourselves	2(5.6)	1(2.8)	3(8.3)

Source: Field data, 2023   Percentage scores are presented in parenthesis

3.6.5 Impact on Student Learning Outcomes and Classroom Environment

Several participants held the view that the effects of the training extended beyond just the headteachers and teachers at the school level. Students who are recipients of the PBL pedagogy were also impacted.   Participants emphasised that the PBL training improved the academic outcomes/achievements of pupils. These include noticeable improvement in the reading and numeracy proficiency of the young learners. A participant expressed:

> *Unlike the previous times, now some learners' handwriting is better, some can read simple words, they can identify numbers, and can equate quantities to numbers.*
> (ECE Coordinator, Intervention District, Gomoa Central)

Most participants reported enhanced interactional abilities of learners. Some learners who had challenges in this aspect experienced more positive relationships with their peers and teachers and showed signs of enhanced self-esteem and assurance. The following are the statements made by the participants regarding this matter:

> *It has improved learners' interpersonal relationship in terms of bonding with teachers.*
> (ECE Coordinator, Intervention District, Gomoa Central)

> *It has excelled because I can see the results and the progress is evident. Students who were once shy are now confident [to interact].* (AD Supervisor, Intervention District, South Tongu)

> *There is no more timidity and dullness in class...* (ECE Coordinator, Non-intervention District, North Tongu)

Some respondents indicated that the training and implementation of PBL had a substantial impact on learner enrolment. According to reports, the adoption of the PBL pedagogy has led to a higher level

of enthusiasm among learners, resulting in greater enrolment and attendance. The following are selected responses from the respondents:

> *... Also, enrolment has increased since the learners attached to the play nature of delivering lessons.* (ECE Coordinator, Non-intervention District, North Tongu)

> *Learners are happy to come to school and parents can attest to the fact that learners are eager to go to school, so there is increased enrolment.* (ECE Coordinator, Intervention District, Gomoa Central)

Moreover, some participants noted improvements in classroom settings which they attributed to the training. They stated that certain classroom settings had become more resourceful in printed materials and had a lively ambiance. The following quotes highlight the perspectives of participants who emphasised the influence on classroom settings:

> *You see a lot of print materials posted on the walls in the classroom with different learning centres which shows the positive impact.* (AD Supervisor, Non-intervention District, Gomoa East)

> *The classrooms are print-rich, have learning centres, mobiles and they are at the reach of learner. There is rich communication as well. Classrooms are well organized; children are put in groups.* (ECE Coordinator, Intervention District, Gomoa Central)

> *The classroom environment is now beautiful and very stimulating for the children. They get to learn just by seeing things that have been pasted on walls.* (ECE Coordinator, Non-intervention District, Gomoa East)

Although the training sessions seemed advantageous, ECE coordinators from non-intervention areas expressed worries regarding the unexpected repercussions of the training programmes. Teachers' implementation of PBL may be hindered by the workload they face. They specifically stated that they faced difficulties in adjusting to the new teaching method because they believed it required too much time and was too complicated.

> *The teachers complain that the play-based approaches are tedious and time-consuming.*
> (ECE Coordinator, Non-intervention District, Gomoa East)

> *At the school level in the beginning, it was getting on the nerves of some teachers especially those that are introverts and not open to changing attitudes.*
> (ECE Coordinator, Non-intervention, District North Tongu)

3.7 Training Costs of PBL (Training Costs and TLMs)

This theme looked at the expenses related to acquiring training in PBL methodologies. Training programmes incur expenses such as transportation charges to the training venue, meals,

accommodation, and training materials during and after the programme. Typically, individuals who participate in training programmes are required to either pay for it themselves or secure sponsorship.

3.7.1 Teacher Capacity Training in Low-cost and No-cost Pedagogies

The findings on this subhead revealed that participants from both the intervention and non-intervention districts reported using a variety of low-cost resources such as manila cards/ cardboard, puzzles, poster colours, pieces of fabric, toy dolls, markers, papers, cellophane tape, drinking straws, plastic bottles, bottle covers, glue, tape, cartons, pencils, empty cartons, erasers, crayons, and A4 sheets. These materials were obtained from their immediate environment. Hence, it was discovered that teachers made up for the funding constraints by resorting to no-cost or free improvises resources that can be obtained from their local surroundings. These are then recycled into play-based materials for teaching and learning. Materials that were not easily available through this strategy were secured through the personal funds of teachers. These were shared by participants during their interviews:

> *We go around and collect materials that are in the environment which we can use in the class. Sometimes I tell the students to go look for such things as well.* (ECE Teacher, Intervention School, Gomoa Central)

> *I cut cardboards into shapes, I colour them and we use them to teach colours and shapes, some write numbers, and also for group works we use different materials.* (ECE Teacher, Intervention School, South Tongu)

> *Sometimes we the teachers pick them up from gatherings. For instance, we pick bottle tops and if they are not enough we ask the learners bring some from homes which their parents help them with for example straws, milk tins.* (ECE Teacher, Intervention School, South Tongu)

> *We collect items such as bottle tops and other things from the environment the ones we can get easily. For the ones we don't get which are not very expensive I buy with my money.* (ECE Teacher, Intervention School, Gomoa Central)

The findings also indicated teachers share and loan their TLRs among themselves. That is, when a colleague needs TLR that is available in another classroom, they borrow and use for the lesson after which it is returned to the owner. They reported that, this practice has eased their TLR burden a little. They distribute these among themselves during instructional periods.

Furthermore, participants reported that the school sometimes received TLRs from NGOs and funds support from various sources for TLRs. These sources of funding include the School Management Committee and Parent Association, who collect levies independently. A quote from one ECE coordinator to support this finding:

NGOs and district assemblies do support with funding for early learning training programmes to help with scaling up early learning activities. (ECE Coordinator, Gomoa East, Non-intervention District)

Additionally, some schools use their internally generated funds (IGF) and receives a capitation grant from the government to support the acquisition of the low-cost TLRs.

3.7.2 Funding Sources of Training and Materials for Implementation

This section determined the funding sources for training and material for implementation. Diverse funding sources were established in this study. However, NGOs disclosed by participants constituted major funding sources. These private funders include NGOs such as Sabre, GALOP, RtP, and VISO International. Funds covered books, monitoring and evaluation, among others. This was confirmed in the responses of participants:

The schools are already on Sabre projects. The resources are with the district and can be used or shared way. (AD Supervisor, Intervention District, Gomoa Central)

... No, Sabre sponsors everything. (ECE Coordinator, Intervention district, Gomoa Central)

We receive books from JICA and also GALOP aids us in a way. (AD Supervisor, Intervention District, South Tongu)

Another participant highlighted that some of the NGOs provide funds for monitoring and training:

Right to play and GALOP give us funding for monitoring and training. (AD Supervisor, Intervention district, South Tongu)

This was corroborated by their counterparts in the non-intervention districts:

GALOP offers monetary assistance for teachers in beneficiary schools. They also provide yearly financial management training for headteachers and assistants in those schools. RTP provides quarterly monetary fund, and so does Visio International. (ECE Coordinator, Non-intervention district, North Tongu)

The training I had was funded by the NGO (Sabre)... (ECE Coordinator, Non-intervention District, Gomoa East)

JICA, RTP, and Visio International are available. (ECE Coordinator, Non-intervention, District North Tongu)

Self-funding was used to complement aids received from NGOs. For example, a participant explained that while Sabre, an NGO funded her training, other expenses related to the training were catered for using personal funds. Teachers who took part in training programmes organised by the district had to pay for the expenses out of their own pockets:

...but the training for the teachers in my district was self-funded, so they paid with their money to be trained. Each person paid GHC 60.00 for the 3-day training. This money was taken to cater for the training materials and transportation for the

facilitators and water for the participants. (ECE Coordinator, Non-intervention District, Gomoa East)

I buy with my own money. I buy things like markers glue, glitters… (ECE Teacher, Intervention School, Gomoa Central)

It was further explained that in situations where the costs are enormous and could not be self-funded, financial assistance is sought from the heads of the schools. This helps to cater for the extra cost. This was clarified as:

If the cost is not so huge I buy them myself and if it goes beyond me the headmaster comes in. (ECE Teacher, Intervention School, South Tongu)

If what RtP gives us is not enough we inform the head to get it for us. (ECE Teacher, Intervention School, South Tongu)

While in some situations, the heads take the initiative to purchase all the needed TLMs that enhance play-based learning.

The headteacher supports us with funds to buy materials. She sometimes also buys the things herself. Examples are commercially made TLMs such as shapes and parts of the body. (ECE Teacher, Intervention School, Gomoa Central)

Conversely, a participant in the Gomoa East district, explained that the GALOP programme is overwhelmed by their own programmes and the enrolment of the districts on their programme, making it impossible to support the play-based learning:. The respondent's sentiment was captured below:

Now the districts are on the GALOP programme so I don't think they can support it because they also have their programmes. The respondent recognised that the district assemblies cannot be relied on since it is mostly difficult getting funds from the. And this has resulted in resource constraints: … *Also, you cannot rely on the district assemblies because getting money from them is difficult so there are no resources available.* (AD Supervisor, Non-intervention, District Gomoa East)

Resource centres - so that schools can walk in and be provided with teaching and learning materials. Training of teachers to develop their TLMs. Especially as KG, classrooms are not given to KG. So, good and appropriate structures for KG with appropriate furniture. (ECE Coordinator, Non-intervention District, North Tongu)

Table 18 presents the quantitative results on the nature of sponsorship of TPD in the ECE landscape. The results showed that ECE TPD programmes were mainly sponsored by NGOs (23, 63.9%) followed by government (18, 50.0%), through self-funding (12, 33.3%) and NTC service providers (10, 27.8%). Particularly in intervention districts. NGOs according to the results, provide major funds to support ECE TPD programmes. This is consistent with the qualitative findings.

Table 19: Sponsors of ECE TPD programmes

Sponsors	Intervention	Non-intervention	Total
BSW	2(5.6)	0(0.0)	2(5.6)
Government	14(38.9)	4(11.1)	18(50.0)
Sabre	1(2.8)	0(0.0)	1(2.8)
USAID	1(2.8)	1(2.8)	2(5.6)
Donors	1(2.8)	1(2.8)	2(5.6)
NTC service providers	9(25.0)	1(2.8)	10(27.8)
RTP	2(5.6)	1(2.8)	3(8.3)
Self	9(25.0)	3(8.3)	12(33.3)
NGOs	20(55.6)	3(8.3)	23(63.9)

3.7.3 Strategies and Innovativeness to Improve Effectiveness of Use of TLRs in PBL

Strategies used to improve the effective use of TLRs in play-based learning were explored. Innovative practices included use of remedial lessons, creative arts-based approaches, phonics, dramatization of lessons and simulation of real-life socioeconomic and educational environments. These were explained.

Predominantly, teachers used approaches informed by creative approaches, to teach children at the early childhood level. Teachers used available materials to create play-based lessons create collage of item such ascups, number dot wheel, balls, telephone number boxes among other. These were described by participants below:

> *I created the magic words with added value such as different colours, shapes and cutting. I have used materials around to create collage of items like cups, and leaves with the children.* (Teacher, Intervention School, Gomoa Central)

> *We created the number dot wheel, telephone number box, alphabet, and number material crates.* (Teacher, Intervention School, South Tongu)

> *I have been creating little balls from old papers. Learning corners with play items accessible to all the children and creating reading materials.* (Teacher, Intervention School, Gomoa Central)

Creatively, another teacher explained that lessons were dramatized in situations where necessary. This was complemented with the teacher being much involved in the lessons:

> *What I have adapted is to add or adding dramatization to lessons that requires it and also involving myself.* (Teacher, Intervention School, South Tongu)

Remedial classes were also used as another important strategy to enhance learning. This strategy was specifically introduced to remedy the learning deficits of children who could not understand previous lessons prior to subsequent lessons. A teacher said:

I introduce extra remedial lessons for those who did not understand the lesson to ensure they get it before the next lesson begins. (Teacher, Intervention School, South Tongu)

Interestingly, another teacher indicated that various real-life occupational, social and educational settings were simulated in early learning classroom. In doing so, market, pharmacy, shopping centre scenes as well as library and palace scenes were created to facilitate play-based learning:

I have created many learning centres in the classroom such as a market scene, drugstore, and shopping centre. If there is more space I would create a King's palace and a library. (Teacher, Intervention School, Gomoa Central)

Moreover, jolly phonic songs that involved a blend of words and sounds were used in teaching the children. The use of this strategy also involved composing new songs, introducing blending slot and blend-up clock. For a teacher in one of the intervention districts, this is what was shared:

For sounds and blending of words, when I ask them to write the number 5, I give them a hint by saying, 'from the eye down to buttocks'. Then they know the number I mean. I have composed new songs. I also use jolly phonics songs to help teach sounds numbers. (Teacher, Intervention School, South Tongu)

This strategy was re-echoed by another teacher who narrated that in addition to displays on walls and mobiles, he has added printouts on phonics instructions:

I have added some print out on phonics instructions to the display on the walls and mobiles. I have also introduced the ' blend-up clock' and 'blending slot' to the teaching of phonics. (Teacher, Intervention School, Gomoa Central)

A headteacher from an intervention school indicated that she has witnessed the proactive behaviour exhibited by pupils during lessons and converts these into initiatives that would be beneficial to them. Participants also claimed that providing sand for recreational purposes in the classroom, decorating the classroom walls with child-friendly drawings, constructing a protective barrier around the kindergarten area, and creating charts that prominently displayed the date, day, and phonics sounds for the week within the classroom were good ways of improving the proper implementation of the PBL and effective use of the TLRs. Some also reported that additional classroom norms provide valuable guidance for appropriate behaviour within the school setting.

These were not so much seen in the non-intervention schools, except for teachers who strictly follow the play-based approach and autonomously created their own lesson plans. These participants, though few, consistently employs innovation and flexibility in their everyday activities.

3.8 Family and Community Engagement

This theme focuses on family and community involvement in educational activities of the schools. More precisely, it uncovers the ways in which individual families and the community as a whole contribute to play-based learning in schools, aiming to enhance learning outcomes for students in both intervention and non-intervention communities.

3.8.1. Family and Community Involvement in PBL Implementation

Early childhood educators and headteachers sed several strategies to engage parents and ensure their active involvement in supporting their children's education. Structured school programmes at the school level provide occasions for parents and school staff to convene and engage with each other throughout the academic period. It was discovered that schools use programmes such as Parent Association (PA) meetings, School Performance Appraisal Meetings (SPAM), Open Days, School Management Committee (SMC) meetings, and Kindergarten graduation programmes to attract and engage family and community to be involved in the school's affairs. Community-level strategies include social events at community centers, festivals and through house visits. These mechanisms were used to actively ensure parents and community support and inclusion.

Parent-Association Meetings/SPAMs/SMCs

The primary method reported by participants was contacting parents to arrange meetings. Headteachers from both schools that received intervention and schools that did not receive intervention reported that parents generally reacted positively to attending these meetings. Nevertheless, there were still a few parents who did not acknowledge or reply to any type of invitation. During such sessions, topics of discussion revolve around the concerns and requirements of the students. Parents are urged to purchase and provide the necessary supplies for their children's education, and to ensure that their children attend school consistently. Nonetheless, respondents expressed a constraint in employing this method due to the prohibition of Teachers from participating in Parent meetings. Both Headteachers and Teachers requested that teachers should be allowed to participate in these sessions as they did previously. This quote summarised what participants said about this

> *The PTA meeting that has been cancelled should be reinstated because that is where we engage parents more.* (Headteacher, Intervention School, Gomoa Central)

A headteacher participant mentioned that they have a sensitization project for females' education through KOICA, in which they involve communities in educational activities. In addition to Parent-Teacher Associations (PAs), Headteachers also arrange School Performance Appraisal Meetings (SPAMs) to inform parents about the academic progress of their children. Headteachers stated that

during School Management Committee meetings, committee members are assigned the responsibility of actively involving parents in the community on behalf of the school.

It was also discovered that Early Childhood Teachers and Headteachers successfully gained community support for Play Based Learning through KG week celebrations, open days, and KG graduation activities. Participants asserted that during the open days, parents or family members are invited to visit the school and observe the academic progress and play-based abilities of their children. Therefore, kindergarten graduation ceremonies, speech and prize-giving days held at the end of the academic year, is used to portray the students' readiness to progress to the primary phase of education. Survey participants reported that during KG Graduation ceremonies, learners' creations are shown for parents and the community to admire the knowledge and skills the children have acquired. The learners also showcase their skills through the execution of several tasks. This helps tehe parents and community members to appreciate the kindergarten concept. They reported:

> *We use the general assembly meetings and the schools' speech and prize-giving day to engage the parents, so that they could watch their learners [perform various creative tasks] to encourage them.* (AD Supervisor, Intervention District, South Tongu)

> *We have KG-specific PA, which has given us the platforms to educate them. KG Graduation is also helping the parent-school relationship. Parents/communities have understood the KG concepts…* (ECE Coordinator, Intervention District, Gomoa Central)

> *Because the KG has separate PA meetings with parents, our weeks' celebrations are attended by parents. There should be a day with the school event where parents can come to see the works of their wards; they see what their children are doing.*
> (AD Supervisor, Intervention District, Gomoa Central)

Indistricts where no intervention was implemented, district officials recognised the potential of PA and SMC meetings as a successful approach for engaging families and communities. They promoted the utilisation of this approach to raise awareness among family and community members about ECE and PBL. Quotes to buttress this finding:

> *SMCs who are the mouthpiece of parents, mobilize families, and these are commonly engaged through the SMCs.* (ECE Coordinator, Non-intervention District, North Tongu)

> *Organizing PA meetings…There could also be other community engagement programme where the community can be educated on ECE and play-based learning*
> (ECE Coordinator, Non-intervention District, Gomoa East)

In doing so, cultural diversity within families is employed as an additional approach to promote family participation. Thus, culturally responsive teaching strategies are used to convey to families, the teacher's objective of promoting cultural inclusiveness within the school environment. This strategy was described by respondents:

> *Teachers have been trained on this by Sabre so implement culturally responsive practices in the lesson delivery and display of the TLRs in the classroom. We also show this through our interaction with them.*
> (ECE Coordinator, Intervention District, Gomoa Central)

> *We used to have African Heritage Day where we dress in various costumes. Those in the north put on dresses and also have dances like Apatampa, it is done a week before 6th March.* (AD Supervisor, Intervention District, Gomoa Central)

> *At the professional level, there are no exclusions for anyone when it comes to diverse cultural backgrounds.* (AD Supervisor, Intervention District, South Tongu)

In addition, some headteachers indicated that they have established a WhatsApp channel for parents. They utilise this platform to maintain active communication with parents, thereby demonstrating their concern for the well-being of the children. In addition to regular telephone calls and home visits, the learners' progress is consistently communicated to parents at home. Respondents observed that this fosters a positive relationship between parents and teachers, enabling teachers to readily engage with specific parents whose children are experiencing learning challenges at school.

Community-Level Engagement

At the community-level, community centres in communities that serve various social purposes were used by headteachers and teachers who have access to this facility to actively involve parents in educational activities during social occasions at community centres.. They accomplish this by disseminating information about school matters to parents at the community centres. An advantage of this approach is that it effectively engages not only parents but also community members who do not have children attending the schools. Expanding the target population enhances the likelihood of obtaining support for the institution. Through community-level engagement, both intervention and non-intervention schools acknowledged receiving regular assistance from philanthropists and business entities in the form of educational resources, construction materials for school buildings, sports equipment, and financial contributions. Some respondents revealed that organizing general assembly meetings with parents and community members has effectively promoted family and community engagement within their districts. Although this approach has been effective, the availability of some family and community members to participate in such meetings has been a challenge to this strategy because of their economic activities. Excerpt to support this:

The approach has been that the General Assemblies to educate them, but it is difficult to even get them together due to occupational issues.
(ECE Coordinator, Intervention District, South Tongu)

It came out that celebration of festivals is one of the annual activities organised in the communities. Festivals are meticulously organised occasions that highlight local customs, and traditions, and often feature prominent individuals from the community who are invited to partake in the festivities. As per the headteacher's perspective, festivals serve as channels of communication through which they inform parents and the community about the significance of early childhood education. In South Tongu, a headteacher seized the occasion of a recent festival to make an appeal and collect funds, which were subsequently utilised to construct a facility dedicated for the kindergarten within her school.

3.8.2 Support from Families, PTA/SMCs and Communities in PBL and ECE

Participants shared more details about the assistance they received from various stakeholders comprising families, communities and PTA/SCMs. In intervention and non-intervention districts, it was reported that parents joined forces to contribute financially towards helping the school fight burglary issues. Such funds were used to renovate specific areas in the KG class. Sanitary facilities abandoned, chairs for ECE, and financial support for inter-school activities by the PTA and SMC were also highlighted. This contributes to ensuring the school is a safe haven the children to learn. The staff regarded this as a highly encouraging gesture from the parents. Quotes in support of this:

Parents gave us money to rebuild portions of the KG after we had a break-in. Very supportive.
(Headteacher, Intervention School, South Tongu)

The PTA meets once a term and SMC twice a term. They repaired some of the classroom doors. Renovated the abandoned toilet facility and they support financially for inter-schools. They bought some chairs for the ECE.
(Headteacher, Non-intervention School, North Tongu)

Results depicted that School Managament Committees contributes to the provision of teaching and learning materials including play-based teaching and learning materials, and renovations of school facilities physically and financially for early childhood education:

. The SMCS provide teaching and learning materials and even paying some voluntary educators. (AD Supervisor, Intervention District, South Tongu)

The PTA meets once a term and SMC twice a term. They repaired some of the classroom doors. Renovated the abandoned toilet facility and they support financially for inter-schools. They bought some chairs for the ECE. (Headteacher, Non-intervention School, North Tongu)

in additiona to SMCs, families frequently helped in the form of tangible learning materials (TLMs) to support the execution of PBL activities. This is due to the fact that some parents facilitated play-based activities in schools through the material supports they provide and contribute as resource persons. Participants shared

> *Sometimes parents help their kids provide some TLMs. It is parents who dress their wards to display their culture to be displayed.* (ECE Coordinator, Non-intervention District, North Tongu)

> *As for bringing to school their used things like milk cans among others, they are good at that. They also serve as resources persons.* (ECE Coordinator, Intervention District, Gomoa Central)

However, a limited number of parents within the district offered such assistance:

> *...Some also provide the materials needed to implement some play-based activities but it's very few of them.* (ECE Coordinator, Non-intervention District, Gomoa East)

Besides, a participant from a district where no intervention was implemented mentioned that parents take on supervisory responsibilities at home to ensure that their children continue to study. These supportive acts are depicted below:

> *Some of the parents supervise their children at home to ensure they are implementing what they have been taught….*
> (ECE Coordinator, Non-intervention District, Gomoa East)

A district Official revealed how they received information on the PBL experiences at home. While some mentioned that they gathered feedback from during PA meetings, others obtained their information through teachers when they go for monitoring.

> *I ask the teachers about the changes they have seen after engaging the families. This is normally oral then I get the feedback I need.*
> (AD Supervisor, Non-intervention District, Gomoa East)

Gendered dynamics were identified in terms of the parental involvement. In both intervention and non-intervention districts, mothers compared to fathers were more involved in and show concern for their children's education. Also, relatives with whom the children live, have also been found to show greater concern and involvement with their education in some instances. These are narrated below::

> *If we are to compare, the mothers are more involved than fathers over here in Mepe...*
> (Teacher, Non-intervention School, North Tongu)

> *The mothers are the most active ones as they show so much concern when it comes to their children than the fathers.* (Teacher, Intervention School, South Tongu)

> *I will say the mothers and relatives with when the learners are staying with because not all of them are with their parents so their relatives are active here in this*

community but the participation of fathers is minimal. (Teacher, Intervention School, South Tongu)

A ratio of 1:20 (5 men and 100 women) was quantitatively used to describe the dense participation of women in the education of their children compared to their male counterparts:

> *The mothers of course, you will see 100 women 5 men.* (Headteacher, Intervention School, South Tongu)

Another participant added that the poor participation of some parents was because of the perception that school development is the principal role of the government. This he indicated as:

> *[If we are to compare, the mothers are more involved than fathers over here in Mepe.]…Some parents see the development of the school as the duty of the government.* (Teacher, Non-intervention School, North Tongu)

3.8.3 Strategies for Enhancing and Sustaining Community Involvement and Support in ECE and PBL

This sub-theme encompassed strategies that could be used to enhance and sustain community interest and support for ECE and PBL. The suggested approaches are as outlined below.

Ensuring Respect Exists Between School and Community for Good Collaboration

Regarding this sub-theme, one strategy that was prominently highlighted was harnessing mutual respect between school and community for good collaboration. Participants reported that this practice fosters continuous and beneficial interaction that leads to productive collaboration with parents. In order to enhance and sustain this, respondents suggested that the school should exhibit the highest level of regard for the families and communities in its environs. They claimed that these personnel must comprehend the importance of their function inside the institution therefore, teachers need to engage community members by incorporating local settings into their lessons, as detailed by an ECE Coordinator:

> *Teachers engage community members when treating strands (topics) like my local community, etc. where teachers take the learners to the community. Examples of these are the market areas and the palace.* (ECE Coordinator, Intervention District, Gomoa Central)

Community Engagement through Organized Events

In addition, the use of community engagement through organized events was suggested to be one of the best strategies to enhance and sustain community engagement. Both intervention and non-intervention districts commonly involve community members through organised events, which is a significant recurring element. These activities provide opportunities for students to link their learning experiences with their local surroundings, demonstrating their abilities and incorporating community

resources into their education. In districts where there is no intervention, such as Gomoa East, community durbars have always played a crucial role in showcasing the skills of students and engaging parents and community members. According to the ECE coordinator:

> *Through organizing programmes such as community durbars, the children can show their talents. The parents and community members could also be involved in the activities.* (ECE Coordinator, Non-intervention District, Gomoa East)

However, this endeavour encountered obstacles as a result of disruptions caused by the COVID-19 pandemic, thus emphasising the vulnerability of such endeavours in unfavourable circumstances. The AD Supervisor from the same district pondered upon previous achievements, expressing:

> *Through community durbars, it's been a while since 2019. We used to organize a programme named KG week during that week we organize community durbars where the children exhibit their talent but since the Covid period we have not done it again activities.* (AD Supervisor, Non-intervention District, Gomoa East)

Continuous Sensitization and Education of Parents on Expectations

Participants also suggested that continuous sensitization and education of parents on the need for their children to be educated and the associated community-level benefits. This according to participants could be achived using the media and faith-based institutions because they could positively affect the attitude of the community due to their trust in these institutions. The following excerpts from participants support this:

> *There is a need to educate parents and communities on the importance of getting a child educated and the benefits they as a community to enjoy.* (Headteacher, Intervention School, South Tongu)

> *We can employ the use of media as well as faith-based institutions since the community believes in these and it can influence their attitude positively.* (Headteacher, Non-intervention School, Gomoa East)

Conducting Home Visits and Follow-ups

Home visits and follow-ups by teachers also came up as a viable strategy to involve communities and gain their support for ECE and play-based learning Participants argued that such visits should occasionally be conducted to check on the learners and/or have a follow-up discussion with parents and families within the school community, on what was done in school. Intervention schools advised teachers to monitor the attendance of students who are not present at school. it was thus recommended that teachers create a roster of parents' contact information and utilise it as a reference for subsequent communication.

> *There should be regular check-up on parents and family. The schools should have contact of the parents so we call them regularly. So, the teachers should be ready to follow up on the children who are absent from school in their homes.* (Headteacher, Intervention School, Gomoa Central)

Appealing for Support for the School

Participants indicated that they solicit assistance from diverse stakeholders including traditional and community leaders and NGOs. This aid could be offered in the form of monetary assets or physical commodities. Excerpts from participants:

> *Sometimes when the schools do not have some of the items for certain activities such as sports, the school writes to the community chiefs and NGOs for support…(AD Supervisor, Intervention District, Gomoa Central)*

An ECE coordinator in this study revealed that one of the NGO offer direct support to ECE teachers and schools within the community:

> *Dorgbetor Foundation provides support to schools in the community, for ECE teachers and gives them direct support activities. (ECE Coordinator, Intervention District, South Tungu)*

Using Intermediaries

A headteacher in one of the intervention schools noted that Assembly members within the communities could act as mediators and work along with NGOs to help provide infrastructure for the school. This is possible because Assembly persons are local political representatives whose duties include advocating for the interests of the local communities and obtaining help in various forms for them. According to a headteacher, schools can engage communities and family members to support learners' education by:

> *They provide pupils with text books. Visiting schools to check on their wards; Talking to teachers to find out how they are doing. Supervise wards during their homework. The Assemblyman can engage NGOs to support infrastructure of school.(Headteacher, Intervention School, South Tongu)*

Recognition and Award Schemes

Some participants from the intervention schools suggested that there is the need for parents and community members who show commitment to their children's education and actively participate in school affairs to be appreciated at PTA meetings, KG week celebrations, and other gatherings. This is believed to have the latent benefit of encouraging more parents to support ECE and play-based learning.. These excerpts support this assertion:

> *Appreciate parents' involvement and effort during PTA meeting and KG week to encourage more parents. (ECE Coordinator, Gomoa Central, Intervention District)*

Parents need to be appreciated, if possible, at gatherings. (Headteacher, Intervention School, Gomoa Central)

Effectiveness of PTA/SMC in Schools for ECE Development

Both intervention and non-intervention schools offered diverse responses about the effectiveness of the Parent Association (PA) and School Management Committee (SMC) in their respective schools. The extent of community members' engagement in school operations can be measured by the success of PAs and School Management Committees (SMC). PA is an association of parents, exclusively made up of parents, while SMC is a committee comprising designated school staff and influential community people. Evaluations of effectiveness ranged from ineffectual to exceedingly effective. Most participants from intervention districts noted that PA meetings were regularly planned and beneficial, as there is a strong connection between the SMC and the PAs of the schools. Overall, the PAs happens to be more efficient than SMCs. The effectiveness of both PA and SMC was ascribed to the extent of engagement during meetings.

It is effective because about 80% attend meetings when they are called. (Intervention school, South Tongu)

Some participants stated that they do not have a parent organisation since the government had instructed schools to discontinue Parent-Teacher Associations. This notwithstanding, it is important to note that two schools which do not have the intervention, indicated that Parent Association and School Management Committee meetings happen once and twice per term, respectively. Both programmes were remarkably successful because of the substantial degree of parental involvement in their children's early childhood education.

Respondents assessed the effectiveness of both PA and SMCs by evaluating the assistance they received from either of them. A participant from non-intervention schools stated that they received aid in the form of fixing damaged classroom doors, refurbishing a restroom facility, acquiring chairs for early childhood education, and receiving financial backing for an inter-school programme. This assertion is substantiated by some participants in intervention school who had received assistance from the PA and SMC in the form of procured water tank, furniture, and custom-made clothing for the students at its graduation ceremony.

To sum up, the strategies employed by ECE educators to engage the community and foster support for PBL in ECE, as well as the methods used to sustain these practices, were found to be similar between the schools that received intervention and those that did not. However, it was noted that the schools implementing the intervention had a higher number of opportunities to engage parents and

the community. The non-intervention schools placed a higher importance on school-level meetings and supported the reinstatement of the previous Parent-Teacher Association (PTA) system.

Participants admitted that they still encounter difficulties in the process of teaching and learning as a result of inadequate work resources. There is a lack of availability of textbooks, exercise books, and play items, and parents do not buy them for their children. In schools, the KG class is manned by a single teacher instead of two, and there is a dearth of incentives for the teachers.

Hence, it is advisable to allocate extra teachers to ECE classroom, especially the KGs, in order to promote effective implementation of the PBL pedagogy. Moreover, it is imperative to have enhanced assistance and frequent visits from district officers.

CHAPTER FOUR

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

4.0 Introduction

The chapter summarises the findings of the study. Conclusion was drawn based on the findings. Recommendations for policy, practice and further research, particularly policies within early childhood education.

4.1 Summary of findings

This study investigated teacher retention in ECE programs, comparing intervention districts with a specific program (Play-based Learning, PBL) to non-intervention districts. The major findings are presented below:

4.1.1 Teacher retention, attrition and influencing factors

Teacher retention rates were identified to be high. Both intervention and non-intervention districts showed high ECE teacher retention rates. Over half of the teachers had been teaching in the ECE grades for more than 5 years. Intervention districts had a slightly higher percentage of teachers with long-term retention (>5 years) compared to non-intervention districts.

Evidence on factors that influence ECE teacher retention and attrition were explored. For ECE teacher retention in both intervention and non-intervention districts, similar factors were established. But to a lesser extent among non-intervention districts. These factors included the presence of capacity building programs, opportunities to earn CPD points, study leave opportunities, conducive school environment with positive relationships.

While ECE teacher attrition rates were explained by major factors of misconceptions and stigma related to ECE profession, perceived workload, poor working conditions, language barriers, and the need to continuously develop oneself. For misconception and stigma, ECE teachers perceived as having lower intellect or being less knowledgeable and being reassigned to ECE is seen as a demotion by some teachers and colleagues. Secondly, there is increased workload due to characteristics of young children, requiring constant attention needed subsequently leading to a stressful environment. For language barriers, teaching ECE if unfamiliar with the local language was a major factor for attrition. Poor working conditions reflected a lack of support (e.g., no classroom assistants), low salaries and allowances, limited involvement in school activities, absence of necessary teaching and learning materials, long distances to schools and the need to pursue further education were also found.

Moreover, the study focused on revealing strategies to encourage enrolment in ECE programs. Numerous factors were revealed according to the study's results. These comprised improved working conditions, highlighting key strategies such as providing teaching and learning materials, offering allowances and scholarships, and assigning assistant teachers; and increased motivation which included awards and recognition programs. Besides these factors, publication awareness and education campaigns highlighting the importance of ECE programs and educating potential teachers about career opportunities.

4.1.2 TPD (in-service) and, progression and development opportunities and Pedagogic Efficacy of ECE teachers

The results showed that both intervention and non-intervention districts received TPD opportunities, including government-funded programs and self-funded workshops. Intervention districts received a wider range of TPDs, including PBL (Project-Based Learning) initiatives by Sabre and Blue-Sky World (BSW). While non-intervention districts received training indirectly through representatives trained at the regional level. Also, feedback from the study showed that TPD was very effective (positive). Since ECE teachers reported the following benefits: improved understanding of pedagogical theories and approaches, particularly in intervention districts; enhanced pedagogical practices, particularly play-based teaching, in intervention districts; gained skills in preparing teaching resources and shared them through Professional Learning Communities (PLCs); and further showed significant improvement in student-centred and differentiated instruction compared to non-intervention districts.

However, difficulty implementing PBL due to lack of resources was reported in some cases. This was addressed through PLC meetings, peer support (WhatsApp) and visitations to schools were used as primary platforms for addressing implementation challenges. Again, headteachers primarily used classroom observation and coaching/mentoring to monitor teachers' use of TPD knowledge. Virtual training, funded TPDs, effective supervision, coaching, and financial support for schools were seen as crucial for improving and sustaining TPDs programs.

4.1.3 Implementation of the Play-Based In-service training, TLRs for training, and Methodology Provisions in the Curriculum

In terms of the implementation and impact of play-based in-service training, teachers who participated in PBL workshops reported integrating the learned strategies into their daily teaching more frequently than those who did not. Intervention districts (those that received PBL training)

showed a higher percentage of teachers using technology in their lessons compared to non-intervention districts.

Insufficient teaching and learning resources (TLRs) were the primary obstacle for both intervention and non-intervention districts. These resources were not durable or long-lasting. Intervention districts encountered challenges of overcrowded classrooms, inadequate infrastructure, and lack of secure storage for TLRs. Time constraints due to complex PBL activities and a lack of knowledge on some curriculum topics in non-intervention districts hindered effective implementation. Moreover, an insufficient number of teachers, particularly in kindergartens, made it difficult to manage play-based activities effectively. While the demanding workload associated with the standards-based curriculum, combined with PBL tasks, was another barrier. However, providing adequate and durable TLRs, improved infrastructure, including more classrooms and proper furniture, consistent training and refresher programs to keep teachers updated on PBL methodologies, and increasing the number of ECE teachers per classroom, were viable strategies suggested to address the challenges and improve PBL implementation.

It was found that ECE coordinators and headteachers in both districts provided support through coaching, mentoring, and workshops to enhance teachers' PBL skills. For instance, headteachers offered logistical and material support whenever possible. In the intervention districts, confidence was expressed in expanding PBL training to other districts and offered to share expertise and resources. Non-intervention districts also showed interest in implementing PBL and planned to organize workshops. In all, both intervention and non-intervention districts acknowledged a positive impact of PBL training on teachers' approaches to early childhood education. Teachers' lesson delivery became more interactive, child-centered, and engaging. Importantly, PBL had positive effects on students' learning, including reduced stress, improved conceptual understanding, and increased enrollment and attendance.

4.1.4 Outcomes of the Scale-up of PBL in Ghana-training and support at the school

Additionally, the study determined the outcomes of scaling up at two levels, that is, at the educator level and learner level. Educator level outcomes included increased capacity, improved pedagogical practices, collaboration and networking and increased confidence. Thus, TPD programs enhanced teachers' knowledge and skills in using PBL methods for delivering lessons because are able to design age-appropriate learning experiences and integrate play activities into the curriculum; and a shift towards more hands-on, learner-centered approaches after participating in workshops and trainings, due to practical experiences, coaching, and mentorship acquired. In terms of collaboration and networking, TPD programs provided opportunities for teachers to connect with colleagues, share

best practices, and receive support through online forums, workshops, and Professional Learning Communities (PLCs). And further engendering greater confidence in their teaching abilities and deeper understanding of ECE principles.

Enhanced learning outcomes improved socioemotional development, increased enrolment and attendance and enhanced classroom environment. According to the results, there were improvements in the following aspects: students' academic performance, particularly in reading, numeracy, and communication skills; confidence, peer interactions and willingness to participate in class activities; and student enthusiasm, leading to greater enrolment and attendance. Classrooms became more stimulating and resource-rich, with learning centers and printed materials readily available for students. However, teachers shared concerns regarding workload, time commitment required for PBL implementation, and limited reflective practice, and emphasised the importance of continuous training and updated resources to address evolving needs in ECE, and collaboration among educational stakeholders as key strategies to ensure effective TPD programs.

4.1.5 Cost Nature of Providing PBL (Training Costs and TLMs)

The study identified several funding sources and methods for acquiring materials for ECE programs, with a focus on training and play-based learning (PBL) resources. The primary source of funding was NGOs, with organizations like Sabre, GALOP, RTP, and VISO International providing financial support for training, monitoring & evaluation, and sometimes materials. Government funding, though to a lesser extent than NGOs, played a role. This was complemented with internally generated funds (IGF) schools and, self-funding where teachers reported using their own money to cover training expenses or purchase additional materials when needed.

To access TLM/Rs for play-based teaching and learning, low or no-cost materials readily available materials from their environment like cardboard, fabric scraps, bottle caps, etc., were used by teachers to create play-based learning materials. Teachers shared and borrowed materials among themselves to address shortages. Moreover, School Management Committee and Parent Teacher Association sometimes raised funds to support the acquisition of teaching and learning resource. However, there were problems of limited government support because over-reliance on NGOs raised concerns about program sustainability if NGO support waned. Again, some NGOs were overwhelmed by the number of schools seeking support. And there were insufficient resources with teachers having to use personal funds or rely on the initiative of the headteacher to acquire some materials and limited support in non-intervention districts.

4.1.6 Family and Community Engagement

Furthermore, the study brought to light that the schools used various strategies to involve families and communities, including Parent Association (PA) meetings, School Performance Appraisal Meetings (SPAMs), open days, School Management Committee (SMC) meetings, social events, festivals, and home visits. Some schools utilised WhatsApp groups for regular communication with parents. Both intervention and non-intervention schools use similar strategies for family and community engagement. Schools with intervention programs had more opportunities for parent and community involvement. Whereas non-intervention schools emphasized school-level meetings and advocated for the return of PTAs. Also, culturally responsive teaching strategies were used to ensure inclusivity and better family-school relationships. In ensuring family and community engagement, challenges were faced and these comprised low attendance by some parents at meetings due to work commitments, limited participation by fathers compared to mothers in their children's education and, perception among some parents that school development is the government's responsibility. As well, resource limitations like lack of textbooks, limited teachers, and absence of incentives for teachers were identified as challenges.

Teachers in this study recommended the use of the following strategies to enhance collaboration: schools showing respect for families and communities by incorporating local settings into lessons and involving community members as resource persons; organize events like community durbars where students showcase their learning and parents participate in activities; and educating parents on the importance of ECE and PBL through media and faith-based institutions. Other strategies include seeking support from traditional leaders, NGOs, and Assembly members for infrastructure and resources; conducting regular home visits to check on students and discuss their progress with families and, appreciating parents and community members who actively participate in school affairs. Concerning the effectiveness of Parent Associations (PA)and School Management Committees (SMCs), the successes varied between schools. Regular meetings and high participation are key factors in their effectiveness. Some schools reported receiving significant support from PAs and SMCs in the form of financial aid, materials, and infrastructure improvements.

4.2 Conclusions

The study evaluated the effectiveness of the Teacher Professional Development (TPD) package in improving teaching practices, learner outcomes, and program implementation across participating schools and districts. Teachers and learners in the intervention districts had more exposure to PBL through NGOs like Sabre Education. It is concluded that teachers and their students benefited through improved pedagogical skills and student engagement, and enhanced academic (numeracy and literacy

skills) and non-academic outcomes (such as confidence, creativity and improved peer interactions) due to PBL. Thus, PBL was seen as beneficial for improving student learning, engagement, and enrollment. Despite the effectiveness of PBL, teachers at the ECE level still face challenges due to a lack of resources like textbooks, infrastructure deficits, limited support for rural schools, increased workloads, inadequate remuneration and misconceptions/stigma among others. Overall, the study suggests that while PBL is a promising approach, addressing teacher workload, resource scarcity, and teacher support is crucial for successful implementation and scaling.

4.3 Recommendations

Government needs to improve working conditions of early childhood educators. In doing so, there is the need to provide adequate teaching and learning materials, offer competitive salaries and allowances, assign assistant teachers, and ensure a conducive school environment.

Also, there should be investments in professional development at the ECE level. In collaboration with NGOs, government through the Ministry of Education and the Ghana Education Service as well as relevant Early Childhood Education Agencies in Ghana could offer high-quality, well-funded TPD opportunities focused on ECE best practices, like PBL methods. This should include training on curriculum integration, resource creation, and effective classroom management for PBL activities.
In light of the numerous bottlenecks identified, the government needs to support PBL implementation. Efforts in this area should focus on addressing challenges faced by schools implementing PBL, including but not limited to overcrowded classrooms, lack of resources, and time constraints. This could involve providing additional teachers, durable learning materials, and ongoing support through coaching and professional learning communities.

At the family and community levels, various co-created interventions aimed at strengthening public education and engagement needs to be designed and implemented. With the support and inclusion of all relevant stakeholders, particularly parents and community members. The public education should focus on encouraging parents and community members to collaborate with schools to enhance early childhood education. As well, strategies could include culturally responsive teaching, and educating parents on the importance of ECE and PBL.

Most importantly, funding was identified as a major constraint to early childhood education. Hence, it is important to ensure that there is sustainable funding. To do this, relevant stakeholders need to be engaged and consulted to explore alternative viable funding models involving increased government support, school fundraising initiatives, and public-private partnerships. Policymakers through these recommendations can create a more supportive environment for ECE teachers, leading to increased ECE teacher and student retention and ultimately benefiting the quality of early childhood education programs.

Policymakers through these recommendations can create a more supportive environment for ECE teachers, leading to increased ECE teacher and student retention and ultimately benefiting the quality of early childhood education programs.

The recommendations were made based on the findings, according to the following categories:

4.2.1 Government/Policy makers

- The play-based pedagogy has proven to be efficacious therefore the government and relevant policy makers should support the scaling in all the schools.
- There is the need for the government and relevant policy makers in early childhood education to allocate sufficient resources for its implementation.
- Prioritising the renovation and expansion of infrastructure in schools is crucial for ensuring the effective implementation of PBL.
- Sufficient educators should be assigned to early childhood education classrooms to enhance the successful implementation of various activities related to play-based teaching methods. Therefore, it is imperative that ECE classes be staffed with a minimum of two teachers.

4.2.2 District Education Officials (DTO/ECE Coordinators, AD Supervisions)

- Training on PBLs has built the capacities of ECE teachers. Therefore, trainings and refresher workshops should be organised for all teachers in all ECE level of education.
- Scale-up a platform exclusively dedicated to TLRs, providing universal access to all teachers.
- There should be regular and enhanced monitoring activities to schools.

4.2.3 Headteachers and Teachers

- There should be regular lesson observations with post-observation discussion to enhance teachers' knowledge and skills on the PBL

- There should be on-going support provided in the form of acquiring Teacher Learning Resources and sponsoring Early Childhood Education teachers' attendance at Teacher Professional Development events.
- Teachers should participate in PLC meetings to motivate their colleagues and exchange information about recent developments in the field, to facilitate the effective implementation of PLC meetings.
- Teachers should establish connections and utilise available resources to increase the implementation of PBL and improve students' learning outcomes.

4.2.4 Family and Community
- There is a strong interest of parents in the educational wellbeing of their wards. Schools and districts should therefore engage in community driven structures to build on these interests.
- Teachers have purposed to develop TLMs in their lesson delivery. There should be effective monitoring processes at the schools, to ensure these TLMs are well secured.
- Regular visits to the school should be conducted to allow parents and/or guardians to become acquainted with the school's activities and enhance their children's confidence.
- There should be community watchdog committees (where necessary) to offer protection for the schools' properties.

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Annexes

Annex 1: Research Instruments

INSTRUMENT 6

INSTRUMENT 6: INTERVIEW GUIDE FOR EARLY GRADE HEADTEACHERS (KG1-P2) (Final reviewed) D3

(**Note:** This interview should be conducted with Head teachers who oversee the primary level)

INTRODUCTION

Hello, my name is _____, and I am conducting this interview on behalf of Associates for Change (AfC), which is collaborating with the Institute of Statistical Social and Economic Research (ISSER) to conduct a study entitled "**Building Headteachers' Capacity to Enhance Early Learning -through Child Focused and Play Based Approaches in Ghana and Sierra Leone**". This will help us to develop a set of concrete policy recommendations and suggest areas for improvement in order to effectively implement play-based learning at the early childhood education level.

The information you provide will be treated with strict confidentiality and will not be shared with any third party. You have the right to withdraw your participation at any time during the interview. If you choose to participate, this will take about an hour, and we appreciate your cooperation.

Do you want me to continue with the interview? [   ] Yes   [   ] No, if no. thank the potential respondents and end the interview.

PART I: BACKGROUND DETAILS

Name of headteacher: _____

Name of school: _____

District: _____

Region: _____

Gender of headteacher: Male [   ] Female [   ]

Highest academic qualification: _____

Professional qualification: _____

Number of years as a headteacher: _____

Number of years teaching at the early childhood level: _____

Number of years as headteacher in current school: _____

Telephone no. of headteacher _____

Name of interviewer: _____

Date: _____

Questions for headteachers:

Introduction (Context)

1. What are some of the interventions you have engaged yourself in the district? (probe for other districts) on going and completed. Eg

☐Jolly phonic   ☐Standard base   ☐ECE policy

☐FCE Training   ☐UDL   ☐Other specify _____

2. What was the mode (online or face to face) of the training? etc

☐Online   ☐Hybrid

☐Face to Face   ☐Other specify

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   a. Probe duration and methods _____

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3. which organisations offered the training? Give names per the inset

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THEME 1: Factors that motivate teacher retention or attrition at the early grade level

4. Do you have trained ECE teachers in you school?

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    a. if yes, how many and if no why?

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5. How many of the ECE teachers have left the school in the past one year?

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6. From your perspective, what do you believe are the main reasons for the above? (probe the reasons ECE teachers leave their positions in other schools?

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7. What factors do you believe motivate ECE teachers to remain in their positions?

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8. Can you provide examples of initiatives or support systems that have successfully motivated ECE teachers retention? Intrinsic or extrinsic support
    A. Scholarships
    a. Awards
    b. Study leave
    c. Capacity building
    d. CPD points
    e. Tax exemption
    f. Increment of salary
    g. Responsibility allowances for KG teachers
    h. House and loan allowances
    i. Other specify……….

9. Why are upcoming teachers not pursuing ECE program?

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10. In your opinion what strategies or incentives could be implemented to encourage more teachers to enrol?

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11. How do you as headteacher motivate your ECE teachers to retain them?

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12. Do you consider qualification in assigning teachers to their specific teaching areas/roles? For example ECE teachers at the KG level.

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THEME 2 How TPD (inservice) embraces and support ECE teachers progression, development and pedagogic efficacy in the classroom

13. How has the participation of your teachers' professional development programs influenced the teaching methods in early childhood education (tick one)?

a. Significantly influenced___

b. Somewhat influenced___

c. Minimally influenced___

d. Not influenced at all____

14. Please rate the extent to which teacher professional development programs has enhanced the understanding of pedagogical theories and approaches in early childhood education.

a. Very high____

b. High____

c. Moderate____

d. Low____

15. Please describe any changes you have observed in the teaching methods as a result of your teachers participating in the teacher professional development programs (tick those which are relevant).

a. More student-centered approach____

b. Increased use of technology____

c. Differentiation of instruction____

d. Other (please specify)

16. In what ways do teacher professional development programs encourage reflective practice and ongoing improvement in pedagogical approaches? (probe for journaling/reflection activities, Peer observation/feedback, Self-assessment tools)

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17. How do you see your teachers prioritizing the implementation of ECE pedagogical practices learned through professional development programs amidst competing demands and responsibilities? (tick all that apply)

    - a. Allocate specific time during planning periods_____

    - b. Integrate new practices gradually_____

    - c. Seek administrative support_____

    - d. Other (please specify)_____
    _____
    _____
    ___

18. How does teacher professional development influence pedagogical practices in early childhood education and the usage of play based approaches? (tick one which applies)

    - a. It significantly shapes my pedagogical practices ____.

    - b. It somewhat influences my pedagogical practices_____

    - c. It has minimal impact on my pedagogical practices_____

    - d. It does not influence my pedagogical practices at all_____

19. How do you engage with your teachers to ensure that they apply what they have learned during training on ECE and Play based approaches

    - a. Observation in classrooms_____

    - b. Coaching and mentoring of teaching staff_____

    - c. Review and comments on their lesson plans_____

    - d. asking them to share during PLCs with other teachers_____

    Other approaches_____
    _____

20. How do you perceive the long-term impact of sustained professional development on your teachers' career growth and advancement?

    - a. Significant advancement opportunities

    - b. Moderate career growth potential

    - c. Limited impact on career progression

    - d. Unsure/No impact

21. What opportunities for collaboration and networking do professional development programs offer to early childhood educators exist in your district or zone? (tick off all that apply and explain)

    - a. Local or regional conferences and workshops_____

    - b. Online communities and forums

    - c. Peer mentoring or coaching programs

    - d. Other (please specify)

Please elaborate on those that you have ticked off_____
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THEME3 Implementation of the play-based Inservice training, tool kit/ TLMs resources for training and methodology provisions in the curriculum

22. How often do your teachers incorporate strategies learned from professional development programs into their daily teaching practices? (tick only one)

    - a. Always___

    - b. Often____

    - c. Sometimes____

    - d. Rarely____

23. What resources or support do you feel are necessary to effectively implement pedagogical strategies learned (e.g. Play based approaches) through professional development programs?

    - a. Classroom materials/supplies____

    - b. Additional training sessions____

    - c. Support from colleagues/administration____

- d. Other (please specify)_____
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24. To what extent do professional development programs address the integration of technology in early childhood education particularly in your class? (Tick one please)

- a. Extensively_____

- b. Moderately_____

- c. Minimally_____

- d. Not at all_____

25. How do professional development programs address the changing needs and demands of the early childhood education landscape, such as evolving curriculum standards or educational policies?

- a. Regularly updating content and resources

- b. Providing ongoing training and support

- c. Collaborating with educational stakeholders

- d. Other (please specify)

26. How do teacher professional development programs address the unique needs and challenges faced by early childhood educators in implementing pedagogical practices?

Probe for Individualized coaching, Group discussions/workshops, Resource sharing

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27. What are the challenges and barriers faced by teachers in implementing newly acquired knowledge and skills from professional development programs in early childhood education?

Eg Lack of time for implementation, Resistance to change among colleagues, Limited resources and support

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28. How do professional development programs address the need for ongoing self-reflection and professional growth among early childhood educators?

   eg. Providing tools and resources for self-assessment, Encouraging participation in action research projects, Offering opportunities for feedback and evaluation

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29. How do professional development programs address the integration of technology in early childhood education?. Extensively Moderately Minimally Not at all

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30. What role do leadership and administrative support play in facilitating effective teacher professional development? Essential for program implementation and success, Helpful but not essential, Minimal impact on professional development outcomes, Hindrance to professional growth and development

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31. In what ways do teacher professional development programs encourage reflective practice and ongoing improvement in pedagogical approaches? eg Journaling/reflection activities, peer observation/feedback, self-assessment tools

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32. Can you briefly share your experiences with implementing play-based learning/UDL in your kindergarten classrooms?

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33. What are some of the various strategies you use in implementing UDL in the classrooms? training

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34. 3. What are some of the main challenges or barriers your teachers encounter when trying to integrate play-based learning into your teaching practices?

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35. How do you adapt play-based methods to meet the individual needs and preferences of your students, especially considering the diversity within your classrooms?

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36. How do you collaborate with your colleagues to share insights, challenges, and successful strategies related to play-based learning?

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37. What methods do your teachers use to assess the quality and effectiveness of play-based teaching practices in your classrooms?

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38. Looking ahead, what do you see as key areas for improvement or development in the implementation of play-based learning in kindergarten classrooms following the Ghana curriculum?

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THEME 4 Outcomes of the Scale up of PBL in Ghana--- training and support at the school (look at the lesson notes …for PBL etc)…prp

39. To what degree do you feel that teacher professional development programs have influenced your teachers' ability to create developmentally appropriate learning experiences for young children? (Please tick one)

   - a. Greatly improved___

   - b. Improved____

   - c. Slightly improved___

   - d. Not improved____

40. How do you measure the impact of teacher professional development on student learning outcomes? (Tick those which are relevant)

- a. Standardized test scores____

- b. Observations and assessments____

- c. Student feedback and engagement_____

- d. Other (please specify)_____
_____
_____
_____
_____

41. What specific components of teacher professional development programs have been **most** effective in shaping pedagogical practices in early childhood education? (Tick one please)

   - a. Workshops/seminars_____

   - b. Hands-on training activities____

- c. Mentorship/coaching____

d. Communities of practice_____

e. PLCs driven by the head teacher____

- F. Online courses/webinars_____

42. 5. What are the long-term effects of sustained teacher professional development on the overall quality of early childhood education programs? (tick those which are relevant)

- a. Improved student outcomes and achievement____

- b. Enhanced teacher morale and job satisfaction____

- c. Better classroom management and dynamics____

- d. Other (please specify)_____

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43. How do professional development programs address the unique needs and challenges of diverse learners in early childhood education? (tick all that are relevant)

- a. Culturally responsive teaching strategies

- b. Differentiated instruction techniques

- c. Inclusive classroom practices

- d. Other (please specify)_____

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44. In your opinion, what additional measures can be implemented to enhance the effectiveness and accessibility of professional development programs for early childhood educators? (tick all that are relevant)

- a. Increased funding for program development and implementation____

- b. Expansion of online and virtual learning opportunities_____

- c. Tailoring programs to address specific needs and interests_____

- d. Other (please specify)_____

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45. Which aspect of teacher-student interactions do you believe is most positively influenced by professional development?

- a. Communication and language development

- b. Social-emotional development and relationships

- c. Academic engagement and motivation

- d. Other (please specify)

46. How do professional development programs address the changing needs and demands of the early childhood education landscape, such as evolving curriculum standards or educational policies?

- a. Regularly updating content and resources_____

- b. Providing ongoing training and support_____

- c. Collaborating with educational stakeholders____

- d. Other (please specify)_____

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47. How would you describe the quality and effectiveness of the training and support you've received in implementing play-based methods?

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THEME 5 Cost nature of providing PBL (training costs and TLMs

48. Have you received any training in the district on ECE?

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    a. If yes how was the training sponsored?
- Government____
- Donors____
- NGOS_____
- NTC service providers____
- Self____
- Other please specify_____
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49. How do you fund materials for implementation after the training and needed by headteachers/teachers?

Cost effective materials
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Low cost materials (making materials yourselves as a school)
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No cost material
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50. How do you leverage on low cost materials for the implementation of your ECE classrooms

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51. Can you share any innovative or creative adaptations you've made to enhance the effectiveness of play-based learning in your classrooms?

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THEME 6 Community engagement

52. What strategies have you adopted to engage parents and communities to support children's education?

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53. how can schools engage families and communities to support children's education?

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54. How effective is PTA/SMC in this school and in relation to ECE development in the school?

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55. Which parent is more active in the children's education? Probe for how often do you see fathers engage in the children's education?

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56. What more can be done to engage the support of parents and communities in the school and with the students?

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57. How can the support from the family and community education be sustained?

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58. What role do collaborative learning communities play in enhancing teacher professional development?

    - a. Facilitate knowledge sharing and collaboration_____

    - b. Provide emotional support and camaraderie_____

    - c. Help in problem-solving and brainstorming_____

    - d. Other (please specify)_____

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59. How do you engage and involve parents in supporting play-based activities at home, and what level of support do you typically receive from parents?

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60. How do you leverage support from the local community, such as businesses, organizations, or volunteers, to enhance play-based learning opportunities in your schools?

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61 any final comments or suggestions to the government and district education offices would be most helpful

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INSTRUMENT 7

INSTRUMENT 7: INTERVIEW GUIDE FOR EARLY GRADE TEACHERS (KG1-P2)

(**Note:** This interview should be conducted at KG 1 or KG 2…or with P1 or P2 teachers at the school) please ensure that the teacher who is selected will also be the one you observe in his/her classroom and then conduct the follow up interview)

Hello, my name is _____, and I am conducting this interview on behalf of Associates for Change (AfC), which is collaborating with the Institute of Statistical Social and Economic Research (ISSER) to conduct a study entitled "**Building Teachers' Capacity to Enhance Early Learning -through Child Focused and Play Based Approaches in Ghana and Sierra Leone"**. This will help us to develop a set of concrete policy recommendations and suggest areas for improvement in order to effectively implement play-based learning at the early childhood education level.

The information you provide will be treated with strict confidentiality and will not be shared with any third party. You have the right to withdraw your participation at any time during the interview. If you choose to participate, this will take about an hour, and we appreciate your cooperation.

Do you want me to continue with the interview? [   ] Yes   [   ] No, if no. thank the potential respondents and end the interview.

PART I: BACKGROUND DETAILS

Name of teacher: _____

Name of school: _____

District: _____

Region: _____

Gender of teacher: Male [   ] Female [   ]

Highest academic qualification: _____

Professional qualification: _____

Number of years as a teacher: _____

Number of years teaching at the early childhood level: _____

Number of years as teacher in current school: _____

Telephone no. of teacher _____

Name of interviewer: _____

Date: _____

PART II

Introduction (Context)

61. What are some of the interventions you have engaged yourself in the district? (probe for other districts) on going and completed. Eg

☐Jolly phonic   ☐Standard base   ☐ECE policy

☐FCE
Training   ☐UDL   ☐Other specify

_____ 62.   What was the mode (online or face to face) of the training? Choose one

☐Online ☐Hybrid

☐Face to
Face ☐Other specify

_____

  b. Probe duration and methods   _____

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63. which organizations offered teacher training over the last five years? Give names e.g. (District offices, FHI 360 or USAID, Jolly Phonics, UNESCO others)

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THEME 1: Factors that motivate teacher retention or attrition at the early grade level

64. How many of the ECE teachers have left the school in the past one year?

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  a. From your perspective, what do you believe are the main reasons for the above? (probe the reasons ECE teachers leave their positions in other schools?

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65. What factors do you believe motivate ECE teachers to remain in their positions?

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66. Can you provide examples of initiatives or support systems that have successfully motivated ECE teachers retention? Intrinsic or extrinsic support (tick all that are relevant)

☐Scholarships   ☐Awards   ☐Study leave

☐Tax exemption   ☐Increment of salary   ☐CPD points   ☐Other specify   ....

☐Responsibility allowances for KG teachers   ☐Capacity building   ☐House and loan allowances

67. Why are students and upcoming teachers not pursuing ECE program?

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68. In your opinion what strategies or incentives could be implemented to encourage more teachers to enroll in the ECE area?

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THEME 2 How TPD (inservice) embraces and support ECE teachers progression and development and pedogic efficacy in the classroom

69. How has your participation in teacher professional development programs influenced your choice of teaching methods in early childhood education? (Tick one please)

Significantly influenced_____   Somewhat influenced_____

Minimally influenced_____   Not influenced at all_____

70. Please rate the extent to which teacher professional development programs have enhanced your understanding of pedagogical theories and approaches in early childhood education (tick one please)

☐Very high   ☐Moderate

☐High   ☐Low

71. Please describe any changes you have observed in your teaching methods as a result of participating in teacher professional development programs.

☐More student-centered approach   ☐Differentiation of instruction

☐Increased use of technology   ☐Other (please specify)

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72. In what ways do teacher professional development programs encourage reflective practice and ongoing improvement in pedagogical approaches?

☐ Peer observation/feedback   ☐ Journaling/reflection activities

☐Self-assessment tools   ☐Other (please specify)

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73. How do you prioritize the implementation of pedagogical practices learned through professional development programs amidst competing demands and responsibilities?

☐ Allocate specific time during planning periods   ☐ Seek administrative support

☐ Integrate new practices   ☐ Other (please specify)
gradually

74. How does teacher professional development influence pedagogical practices in early childhood education? (Tick one please)

☐ It significantly shapes my   ☐ It has minimal impact on my
pedagogical practices.   pedagogical practices.

☐ It somewhat influences my   ☐ It does not influence
pedagogical practices.   my pedagogical practices
                                      at all.

75. How do you perceive the long-term impact of sustained professional development on your career growth and advancement? (Tick one please)

☐ Significant advancement   ☐ Limited impact on career
opportunities   progression

☐ Moderate career growth   ☐ Unsure/No impact
potential

76. What opportunities for collaboration and networking do professional development programs offer to early childhood educators? Probe for Local or regional conferences and workshops, Online communities and forums, Peer mentoring or coaching programs

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77. What role do collaborative learning communities play in enhancing teacher professional development? (tick all that apply)

- a. Facilitate knowledge sharing and collaboration_____

- b. Provide emotional support and camaraderie_____

- c. Help in problem-solving and brainstorming_____

- d. Other (please specify)_____
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THEME3 Implementation of the play-based Inservice training, tool kit/ TLMs resources for training and methodology provisions in the curriculum

78. How often do you incorporate strategies learned from professional development programs into your daily teaching practices? (Tick one pls)

- a. Always____

- b. Often_____

- c. Sometimes____

- d. Rarely____

79. What resources or support do you feel are necessary to effectively implement pedagogical strategies in ECE learned through professional development programs?

- a. Classroom materials/supplies____

- b. Additional training sessions____

- c. Support from colleagues/administration_____

- d. Other (please specify)_____

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80. To what extent do professional development programs address the integration of technology in early childhood education?

- a. Extensively____

- b. Moderately____

- c. Minimally____

- d. Not at all_____

81. How do professional development programs address the changing needs and demands of the early childhood education landscape, such as evolving curriculum standards or educational policies?

- a. Regularly updating content and resources____

- b. Providing ongoing training and support____

- c. Collaborating with educational stakeholders____

- d. Other (please specify)_____

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82. How do teacher professional development programs address the unique needs and challenges faced by early childhood educators in implementing pedagogical practices? Probe for Individualized coaching, Group discussions/workshops, Resource sharing

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83. What are the challenges and barriers faced by teachers in implementing newly acquired knowledge and skills from professional development programs in early childhood education? Probe for Lack of time for implementation, Resistance to change among colleagues, Limited resources and support

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84. How do professional development programs address the need for ongoing self-reflection and professional growth among early childhood educators?

Probe for Providing tools and resources for self-assessment, Encouraging participation in action research projects, Offering opportunities for feedback and evaluation

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85. How do professional development programs address the integration of technology in early childhood education? Extensively, Moderately, Minimally, Not at all

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86. What role do leadership and administrative support play in facilitating effective teacher professional development? Probe for Essential for program implementation and success, Helpful but not essential, Minimal impact on professional development outcomes, Hindrance to professional growth and development

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87. 14. In what ways do teacher professional development programs encourage reflective practice and ongoing improvement in pedagogical approaches?
   a. Probe for Journaling/reflection activities Peer observation/feedback c. Self-assessment tools

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88. Can you briefly share your experiences with implementing play-based learning/UDL in your kindergarten classrooms?

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89. What are some of the various strategies you use in implementing UDL in the classrooms? training

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90. What are some of the main challenges or barriers you encounter when trying to integrate play-based learning into your teaching practices?

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91. How do you adapt play-based methods to meet the individual needs and preferences of your students, especially considering the diversity within your classrooms?...are these in your lesson notes ---can we look at your notes

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92. How do you collaborate with your colleagues to share insights, challenges, and successful strategies related to play-based learning?

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93. What methods do you use to assess the quality and effectiveness of play-based teaching practices in your classrooms?

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94. Looking ahead, what do you see as key areas for improvement or development in the implementation of play-based learning in kindergarten classrooms following the Ghana curriculum?

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THEME 4 Outcomes of the Scale up of PBL in Ghana--- training and support at the school (look at the lesson notes …for PBL etc)…prp

95. To what degree do you feel that teacher professional development programs have influenced your ability to create developmentally appropriate learning experiences for young children? (tick one)

☐ Greatly improved

☐ Improved

☐ Slightly improved

☐ Not improved

96. How do you measure the impact of teacher professional development on student learning outcomes at early grade levels?
   ☐ Standardized test scores
   ☐ Observations and assessments
   ☐ Student feedback and engagement
   ☐ Other (please specify)

97. What opportunities for collaboration and networking do professional development programs offer to early childhood educators?
   ☐ Local or regional conferences and workshops
   ☐ Online communities and forums
   ☐ Peer mentoring or coaching programs
   ☐ Other (please specify)_____
   _____
   _____

98. What specific components of teacher professional development programs have been most effective in shaping pedagogical practices in early childhood education? (tick those that apply and explain.

   Probe for Workshops/seminars_____
   , Hands-on training activities, _____
   Mentorship/coaching, _____
   Online courses/webinars_____

Please explain

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99. What are the long-term effects of sustained teacher professional development on the overall quality of early childhood education programs?
   Probe for Improved student outcomes and achievement,
   Enhanced teacher, morale and job satisfaction,

Better classroom management and dynamics

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100. How do professional development programs address the unique needs and challenges of diverse learners in early childhood education?
Probe for Culturally responsive teaching strategies, Differentiated instruction techniques, Inclusive classroom practices

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101. In your opinion, what additional measures can be implemented to enhance the effectiveness and accessibility of professional development programs for early childhood educators?
Probe for Increased funding for program development and implementation, Expansion of online and virtual learning opportunities, Tailoring programs to address specific needs and interests

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102. Which aspect of teacher-student interactions do you believe is most positively influenced by professional development?
a. a. Communication and language development_____
b. b. Social-emotional development and relationships____

    c.   c. Academic engagement and motivation_____

    d.   d. Other (please
        specify)_____

        _____

        _____

103.   How do professional development programs address the changing needs and demands of the early childhood education landscape, such as evolving curriculum standards or educational policies?

    e.   a. Regularly updating content and resources_____

    f.   b. Providing ongoing training and support_____

    g.   c. Collaborating with educational stakeholders_____

    h.   d. Other (please
        specify)_____

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104.   How would you describe the quality and effectiveness of the training and support you've received in implementing play-based methods?

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THEME 5 Cost nature of providing PBL (training costs and TLMs

105.   Have you received any training in the district on ECE?

    a.   If yes how was the training sponsored?

        i.   Government_____

        ii.   Donors_____

        iii.   NGOS_____

        iv.   NTC service providers_____

        v.   Self_____

        vi.   Other_____

        _____

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106.   How do you fund materials for implementation after the training workshops by headteahers/teachers?

Cost effective materials
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Low cost materials
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 No cost material
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107.   How do you develop low or no cost materials for the implementation in your ECE
         classrooms?

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108.   Can you share any innovative or creative adaptations you've made to enhance the
         effectiveness of play-based learning in your classrooms?

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THEME 6 Community engagement

109.   What strategies have you adopted to engage parents and communities to support children's
         education?

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110.   how can schools engage families and communities to support children's education?

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111.   How effective is PTA/SMC in this school?

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112.   Which parents are most active in the children's education? Probe for how often do you see
          fathers engage in the children's education?

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113.   What support services do the communities offer the schools?

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114.   How can the family and community education be sustained?

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115.   What role do collaborative learning communities play in enhancing teacher professional development?

   - a. Facilitate knowledge sharing and collaboration_____

   - b. Provide emotional support and camaraderie_____

   - c. Help in problem-solving and brainstorming____

   - d. Other (please specify)_____

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116.   How do you engage and involve parents in supporting play-based activities at home, and what level of support do you typically receive from parents?

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117.   How do you leverage support from the local community, such as businesses, organizations, or volunteers, to enhance play-based learning opportunities in your schools and improve ECE in general?

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INSTRUMENT 10B

INSTRUMENT 10B: SCHOOL CHECKLIST

INTRODUCTION:

This checklist should be conducted in every school visited.

(Please ensure that observation note is taken on arrival at the school by the team ... initial impressions of the school should be captured as well as a general description of "the workings" of the school for the duration of the research visit). Please skip the question if it is not applicable.

Observation notes on arrival at the school or during the school visit:

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A: Demographic Data

S/N	Particulars	
1.	Region	
2.	District	
3.	Name of school	

4.	Type of school	Mission ☐ DA/LA ☐
5.	Name of school community	
6.	Type of locality	Urban ☐ Para Urban ☐ Rural Deprived ___ Extremely Deprived___
7.	Name of respondent	
8.	Tel. No. of respondent	
9.	Gender of respondent *(Circle one without asking)*	Male ☐ Female ☐
10.	Position of respondent	
11.	Name of Interviewer	
12.	Tel. No. of Interviewer	
13.	Date	
14.	Time of arrival:	Departure:
15.	Location of the school	○ Within a one-hour radius of the district capital ○ Beyond one-hour radius of the district capital and considered rural ○ Considered extremely deprived and hard to reach ○ Very remote area of the district (over 3 hours' drive from capital)

B: School Staff Qualifications (this is another sheet to cross check what is reported by the head teacher)

(*Indicate which of the categories each of the teachers fall into*)

Grade / Subject	Degree		Diploma Basic Education (DBE)		Pupil Teacher/ Untrained teacher		NSS		NYEP		Community Volunteer teachers		Other	Class level teacher is teaching at (KG 1 to P6	Subject they are teaching (if applicable)
	M	F	M	F	M	F	M	F	M	F	M	F			

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H/T													
Teacher 1													
Teacher 2													
Teacher 3													
Teacher 4													
Teacher 5													
Teacher 6													
Teacher 7													
Teacher 8													
Teacher 9													

C. School Infrastructure (based on observation)

No.	Questions	Coding Categories
1.	Please describe the condition of the school building *(Tick one and then describe)*	○ Good condition well kept ○ Average: with some repair work needed ○ Not in good condition
2.	Please state the reasons for this rating above and describe the condition of the school and classrooms (good infrastructure or poor conditions etc) _____ _____ _____ _____ _____ _____	

3.	Are there adequate number of classrooms for the number of grades being taught in the school?	○ Yes ○ No			
4.	a. Staff common room	Adequate [　　]	Inadequate [　　]	None [　　]
	b. Seating spaces	Adequate [　　]	Inadequate [　　]	None [　　]
	c. Furniture	Adequate [　　]	Inadequate [　　]	None [　　]
	d. Computers	Adequate [　　]	Inadequate [　　]	None [　　]
	e. Urinal	Adequate [　　]	Inadequate [　　]	None [　　]
	f. Toilets	Adequate [　　]	Inadequate [　　]	None [　　]
	g. Enough ventilation	Adequate [　　]	Inadequate [　　]	No Books [　　]

Energy Use and Conservation		

5.	What are some of the sources of energy used in this school? *(Tick all relevant answers)*	○ Hydro Electricity ○ Firewood ○ Solar energy ○ Biogas ○ Biomass (biogas, wood, corn, manure, landfills (waste)) ○ Other, please specify………………………

	General Observations	
6.	What are your general observations about the school, the environment and how the teachers/students are taking care of the property? …… …… …… …… …………	
7.	Does the school have a toilet facility for girls and boys	○ Yes ○ No
8.	If yes, what is the condition?	○ Working condition ○ Non-working ○ Other
9.	Where does the school get its water? ……………………………………………………………………………………………………… ……………………………………………………………………………………………………… ……………………………………………………………………………………………………… ………………………………………………………………………………………………	
10.	What are the main problems with the school from your observations? ……………………………………………………………………………………………………… ……………………………………………………………………………………………………… ………………………………………………………………………………………………	

INSTRUMENT 11

INSTRUMENT 11: INTERVIEW GUIDE FOR DISTRICT DIRECTOR OF EDUCATION OR AD Supervision if director is not available

*(NOTE: **This instrument should be used by the team leader to interview at the district office on the 3rd or 4th day of field work…after the team is settled into a pattern of investigation at school level**)*

INTRODUCTION

Hello, my name is _____, and I am conducting this interview on behalf of Associates for Change (AfC), which is collaborating with the Institute of Statistical Social and Economic Research (ISSER) to conduct a study entitled "**Building Teachers' Capacity to Enhance Early Learning -through Child Focused and Play Based Approaches in Ghana and Sierra Leone**". This will help us to develop a set of concrete policy recommendations and suggest areas for improvement in order to effectively implement play-based learning at the early childhood education level.

The information you provide will be treated with strict confidentiality and will not be shared with any third party. You have the right to withdraw your participation at any time during the interview. If you choose to participate, this will take about an hour, and we appreciate your cooperation.

Do you want me to continue with the interview? [   ] Yes   [   ] No, if no. thank the potential respondents and end the interview.

PART I: BACKGROUND DETAILS

Name of Director/AD supervisor: _____

District: _____

Region: _____

Telephone number:_____

Gender of director: Male [   ] Female [   ]

Academic qualification: _____

Number of years as a director/AD supervisor: _____

Number of years in the teaching profession: _____

Telephone no. of Director/AD supervisor: _____

Name of interviewer: _____

Date: _____

PART II: INTERVIEW QUESTIONS

Introduction (Context)

118.   What are some of the interventions you have engaged yourself in the district? (probe for other districts) on going and completed. Eg

☐Jolly phonic   ☐Standard base   ☐ECE policy

☐FCE
Training   ☐UDL   ☐Other specify _____

119.   What was the mode (online or face to face) of the training? etc

☐Online   ☐Hybrid

☐Face to
Face   ☐Other specify _____

120.   which organizations offered the training? Give names per the inset

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THEME 1: Factors that motivate teacher retention or attrition at the early grade level
Research Area: Retention and Attrition rate of ECE teachers

121.   What is the attrition rate for ECE teachers in your district in the past one year? (tick once)
   a. Low (less than 10% [ ]
   b. Moderate (around 20- 40%) [ ]
   c. high (around 50%) [ ]
   d. extremely high (around 80% 16 or more [ ]

122.   Can you provide information on what other fields ECE teachers go to when they leave their positions within the early childhood education sector?

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123.   Which of the following factors contribute to teacher attrition in your district? (tick one or more)
   a. Salary and benefits [ ]

b. Workload and stress [ ]
c. Professional development opportunities elsewhere [ ]
d. Work environment and culture [ ]
e. Other (please specify) ....

124. Can you provide specific instances that illustrate the main factors contributing to teacher attrition within your district?

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125. Which of the following factors are effective in retaining ECE teachers in your district? (tick one or more)
a. Supportive leadership [ ]
b. Opportunities for career advancement [ ]
c. Collaborative work environment [ ]
d. Recognition and appreciation [ ]
e. Other specify…………………

126. How do these factors influence ECE teacher retention in your district?

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THEME 2 How TPD (inservice) embraces and support ECE teachers progression, development and pedagogic efficacy in the classroom

127. How do you assess the effectiveness of professional development initiatives related to play-based learning for educators within your school? (tick one or more)

    a. Pre- and post-assessments [____]

    b. Surveys or feedback forms [____]

    c. Classroom observations [____]

    d. Other (please specify)
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128.   How do you encourage educators to reflect on their practice and seek ongoing professional growth in the context of play-based learning? (tick one or more)

   a. Regular reflection sessions [____]

   b. Professional learning communities [____]

   c. Action research projects [____]

   d. Other (please specify)
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129.   On a scale of 1 to 5, with 1 being never and 5 being always, how do you rate the impact of play-based learning supervision on improving educator practices within your school? (tick once)

   a. 1 (Never) [____]

   b. 2 (Rarely) [____]

   c. 3 (Sometimes) [____]

   d. 4 (Frequently) [____]

   e. 5 (Always) [____]

130.   How do you foster a culture of continuous improvement and innovation in play-based learning within your school? (tick one or more)
   o   Encourage educators to experiment with new ideas and approaches in play-based activities [____]
   o   Provide opportunities for educators to attend conferences or workshops focused on innovative play-based learning practices [____]
   o   Recognize and celebrate innovative approaches to play-based learning through awards or acknowledgments [____]
   o   Other (please specify)
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131.   How do you address any resistance or skepticism among educators towards the implementation of play-based learning in the classroom? (tick one or more)
   o   Provide research-based evidence and case studies demonstrating the effectiveness of play-based learning [____]
   o   Offer professional development opportunities to address misconceptions and concerns about play-based learning [____]
   o   Facilitate peer mentoring or coaching to support educators in implementing play-based strategies with confidence [____]
   o   Other (please specify)

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132.   What opportunities for collaboration and networking do you provide to educators to enhance their supervision of play-based learning? (tick one or more)
- o Facilitate regular meetings or workshops for educators to share experiences and strategies related to play-based learning supervision
- o Encourage participation in professional learning communities or online forums focused on play-based learning
- o Establish partnerships with other schools or organizations to exchange ideas and resources for effective play-based learning supervision
- o Other (please specify)

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133.   What strategies do you employ to ensure equitable access to play-based learning experiences for all students within your school?

a. Consideration of scheduling and resource allocation to ensure all classrooms have adequate time and materials for play-based activities [____]

b. Collaboration with community partners to provide additional resources or funding for play-based learning initiatives [____]

c. Implementation of inclusive practices to support students with diverse needs in participating fully in play-based experiences [____]

d. Other (please specify)

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134.   What role do collaborative learning communities play in enhancing the supervision of play-based learning? (tick one or more)

a. Facilitate knowledge sharing and collaboration among educators [____]

b. Provide emotional support and encouragement for implementing play-based learning [____]

c. Help in problem-solving and sharing best practices in play-based learning [____]

d. Other (please specify)

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THEME3 Implementation of the play-based Inservice training, tool kit/ TLMs resources for training and methodology provisions in the curriculum

135.   How frequently do you analyze assessment data to evaluate the effectiveness of play-based learning supervision on student learning outcomes? (tick once)

    a. Never [____]

    b. Rarely [____]

    c. Occasionally [____]

    d. Frequently [____]

136.   How often do you administer pre- and post-assessments to measure changes in student learning outcomes resulting from play-based learning initiatives? (tick once)

    a. Never [____]

    b. Rarely [____]

    c. Occasionally [____]

    d. Frequently [____]

137.   How often do you observe and provide feedback on the implementation of play-based learning strategies in classrooms? (tick once)

    a. Daily [____]

    b. Weekly [____]

    c. Bi-weekly [____]

    d. Monthly [____]

138.   How do you prioritize the implementation of play-based learning strategies in early childhood education settings amidst other supervisory responsibilities? (tick once)

a. Always prioritize play-based learning first [____]

b. Frequently prioritize play-based learning [____]

c. Sometimes prioritize play-based learning [____]

d. Rarely prioritize play-based learning [____]

139.   On average, how many classroom observations do you conduct per week to assess the implementation of play-based learning strategies? (tick once)

    a. None [____]

    b. 1-2 [____]

    c. 3-4 [____]

    d. 5 or more [____]

140.	How frequently do you provide written feedback to educators based on your observations of play-based learning strategies? (tick once)

a. Never [＿＿]

b. Rarely [＿＿]

c. Occasionally [＿＿]

d. Frequently [＿＿]

141.	How often do you hold formal meetings with educators to discuss their progress in implementing play-based learning strategies? (tick once)

a. Never [＿＿]

b. Rarely [＿＿]

c. Occasionally [＿＿]

d. Frequently [＿＿]

142.	In a typical month, how many hours do you allocate specifically to oversee the implementation of play-based learning strategies in early childhood education settings? (tick once)

a. Less than 5 hours [＿＿]

b. 5-10 hours [＿＿]

c. 10-20 hours [＿＿]

d. More than 20 hours [＿＿]

143.	How frequently do you adjust your schedule to prioritize supervision of play-based learning strategies over other supervisory responsibilities? (tick once)

a. Never [＿＿]

b. Rarely [＿＿]

c. Occasionally [＿＿]

d. Frequently [＿＿]

144.	How do you address any challenges or limitations in the physical environment that may impact the implementation of play-based learning in classrooms?

Eg. Advocate for changes or improvements to classroom spaces to better support play-based activities, Provide guidance and resources for educators to optimize existing classroom layouts for play-based learning, c. Collaborate with school leadership and facilities staff to address issues such as space constraints or safety concerns

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145.   What strategies do you use to ensure effective communication and collaboration among educators, administrators, and support staff in implementing play-based learning initiatives?

Eg a. Regular meetings or check-ins to discuss progress, share ideas, and address challenges related to play-based learning,   b. Use of digital platforms or communication tools to facilitate sharing of resources and best practices among stakeholders,   c. Establishment of interdisciplinary teams or committees focused on advancing play-based learning goals within the school

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146.   What measures do you take to ensure that play-based learning experiences are culturally responsive and inclusive of diverse backgrounds and perspectives?
- o Incorporate diverse literature, materials, and cultural references into play-based activities to reflect the diversity of students' backgrounds and identities
- o Provide training and resources for educators on culturally responsive teaching practices and strategies for creating inclusive learning environments
- o Seek input from students, families, and community members to ensure play-based activities reflect their cultural experiences and identities

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147.   In what ways do you encourage reflective practice and ongoing improvement in play-based learning approaches among educators?
- o Regular debrief sessions after observations
- o Providing opportunities for peer collaboration and feedback
- o Facilitating professional development workshops on play-based learning

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148.   What resources or support do you believe are necessary to effectively implement play-based learning strategies in early childhood education settings?
- o Classroom materials/supplies
- o Professional development for educators
- o Support from school leadership/administration

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THEME 4 Outcomes of the Scale up of PBL in Ghana--- training and support at the school (look at the lesson notes …for PBL etc)…prp

149.   On a scale of 1 to 10, with 1 being not effective at all and 10 being highly effective, how do you rate the overall impact of professional development initiatives related to play-based learning for educators within your school? (tick once)

a. 1 (Not effective at all) [_____]

b. 2-3 (Low effectiveness) [_____]

c. 4-6 (Moderate effectiveness) [___]

d. 7-8 (High effectiveness) [___]

e. 9-10 (Highly effective) [___]

150.　　　On a scale of 1 to 5, with 1 being minimal and 5 being significant, how do you rate the impact of play-based learning supervision on enhancing student outcomes within your school? (tick once)

a. 1 (Minimal) [___]

b. 2 (Low) [___]

c. 3 (Moderate) [___]

d. 4 (High) [___]

e. 5 (Significant) [___]

151.　　　How do you perceive the impact of play-based learning supervision on educator practices and student outcomes within your school? (tick once and explain)

a. Highly positive impact

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b. Moderately positive impact

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c. Neutral impact

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e. Negative impact

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152.　　　How do you measure the impact of play-based learning supervision on student learning outcomes within your school? (tick one or more)

a. Standardized test scores [___]

b. Observations and assessments [____]

c. Student feedback and engagement [____]

d. Other (please specify)

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153.   Please describe any changes you have observed in teaching methods as a result of your supervision of play-based learning programs.
   o   More student-centered approach
   o   Increased collaboration among students
   o   Enhanced creativity and problem-solving skills

1. How has your experience in supervising play-based learning influenced your understanding of its effectiveness in early childhood education?

Probe for Significantly influenced, Moderately influenced, Slightly influenced
   o   Not influenced

154.   Please rate the extent to which your supervision of play-based learning programs has enhanced your understanding of pedagogical theories and approaches in early childhood education.

a. Very high [____]

b. High [____]

c. Moderate [____]

d. Low [____]

155.	To what degree do you feel that your supervision of play-based learning programs has influenced the ability of educators to create developmentally appropriate learning experiences for young children?

a. Greatly improved [____]

b. Improved [____]

c. Slightly improved [____]

d. Not improved [____]

THEME 5 Cost nature of providing PBL (training costs and TLMs
Research Question: Can there be more cost-effective approaches to scaling up early learning?
Theme 8: Cost Efficiency

156.	Have you received funds for implementing/scaling up (tick once)
☐Yes			☐No
a.	If you have not received funding what have you been using (tick one or more)
  b.	GEOP FUNDS [____]
  c.	SAGES [____]
  d.	GALLOP [____]
  e.	Community Of Excellence [____]
  f.	UNICEF [____]
  g.	District Assembly funding [____]
  h.	Other specify
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157.	What are some cost-effective approaches to scaling up early learning activities?

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158.   What are some cost-effective approaches to scaling up early learning activities?

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159.   What value do these approaches/models add to early learning activities?

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160.   How will your district expand play based approaches to other schools in the district?

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161.   What resources are available to do this (PROBE: GALLOP and FHI 360 Learning etc)?

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162. Have you noticed any schools trying to train their own teachers on play based approaches etc>………………….……[ ]………………………………………………………………………………

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163. Who are the interventionists/other NGOs in the district working on these approaches apart from Sabre and or Right to Play?

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THEME 6 Community engagement

164. What role do families and caregivers play in supporting and reinforcing play-based learning experiences outside of the school setting? (tick one or more)

a. Provide resources and suggestions for extending play-based learning at home through newsletters or family workshops [____]

b. Encourage open communication with families about the importance of play-based learning and ways they can support it at home [____]

c. Facilitate opportunities for families to participate in play-based activities and events at school [____]

d. Other (please specify)

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165. On a scale from 1 to 5, how involved are families and communities in supporting the implementation of ECE and Play-Based pedagogies at your districts? (tick once)
a. Not involved at all (1) [ ]
b. Slightly involved (2) [ ]
c. Moderately involved (3) [ ]
d. Very involved (4) [ ]
e. Extremely involved (5) [ ]

166.   What strategies have been successful in engaging families and communities in supporting ECE and Play-Based pedagogies, and what further initiatives could be explored?

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167.   How do you encourage and facilitate communication with families about the importance of play in learning?

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168.   What strategies do you employ to involve families in understanding the goals and objectives of play-based learning activities?

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169.   How do you ensure that families from diverse cultural backgrounds feel included and valued in the play-based learning process?

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170.   What methods do you use to gather input and feedback from families regarding their children's experiences with play-based learning?

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171.   In what ways do you collaborate with community organizations or resources to enrich play-based learning experiences for children and families?

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172.   How do you support families in extending play-based learning experiences beyond the

classroom or childcare setting into the home environment?

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173.	What steps do you take to address any barriers or challenges families may face in participating actively in play-based learning activities?

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174.	How do you promote a sense of belonging and community among families participating in play-based learning programs?

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175.	What strategies do you use to educate families about the developmental benefits of different types of play and how they can support these at home?

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176.   How do you tailor communication and engagement efforts to meet the needs of families who may have limited time or resources?

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177.   What role do you see families playing in shaping the direction and content of play-based learning experiences?

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178.   How do you ensure that families are aware of resources and opportunities available to them within the community to support their children's play-based learning?

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179.   What mechanisms do you have in place for families to share their own expertise and experiences related to play-based learning with each other?

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180.   How do you foster a sense of partnership and mutual respect between educators/supervisors and families in the context of play-based learning?

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181.   What steps do you take to ensure that family engagement efforts are ongoing and responsive to the evolving needs and preferences of families and the community?

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INSTRUMENT 12

INSTRUMENT 12: INTERVIEW GUIDE FOR EARLY CHILDHOOD EDUCATION COORDINATOR

INTRODUCTION

Hello, my name is _____, and I am conducting this interview on behalf of Associates for Change (AfC), which is collaborating with the Institute of Statistical Social and Economic Research (ISSER) to conduct a study entitled "**Building Teachers' Capacity to Enhance Early Learning -through Child Focused and Play Based Approaches in Ghana and Sierra Leone"**. This will help us to develop a set of concrete policy recommendations and suggest areas for improvement in order to effectively implement play-based learning at the early childhood education level.

The information you provide will be treated with strict confidentiality and will not be shared with any third party. You have the right to withdraw your participation at any time during the interview. If you choose to participate, this will take about an hour, and we appreciate your cooperation.

Do you want me to continue with the interview? [   ] Yes   [   ] No, if no. thank the potential respondents and end the interview.

PART I: BACKGROUND DETAILS

Name of Coordinator: _____

District: _____

Region: _____

Gender of Coordinator: Male [   ] Female [   ]

Highest academic qualification: _____

Professional qualification: _____

Number of years in the teaching profession: _____

Number of years as an ECE coordinator: _____

Telephone no. of Coordinator _____

Name of interviewer: _____

Date: _____

PART II: INTERVIEW QUESTIONS

Introduction (Context)

182.   What are some of the interventions you have engaged yourself in the district? (probe for other districts) on going and completed. Eg

☐Jolly phonic   ☐Standard base   ☐ECE policy

☐FCE
Training   ☐UDL   ☐Other specify _____

183.   What was the mode (online or face to face) of the training? etc

☐Online   ☐Hybrid

☐Face to
Face   ☐Other specify _____

  c. Probe duration and methods

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184.   which organizations offered the training? Give names per the inset

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THEME 1: Factors that motivate teacher retention or attrition at the early grade level
Research Area: Retention and Attrition rate of ECE teachers

185.   What is the attrition rate for ECE teachers in your district in the past one year?
   a. Low (less than 10% [ ]
   b. Moderate (around 20- 40%) [ ]
   c. high (around 50%) [ ]
   d. extremely high (around 80% 16 or more [ ]

186.   Can you provide information on what other fields ECE teachers go to when they leave their positions within the early childhood education sector?

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187.   Which of the following factors contribute to teacher attrition in your district?
   f. Salary and benefits [ ]
   g. Workload and stress [ ]
   h. Professional development opportunities elsewhere [ ]
   i. Work environment and culture [ ]
   j. Other (please specify) ....

188.   Can you provide specific instances that illustrate the main factors contributing to teacher attrition within your district?

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189.   Which of the following factors are effective in retaining ECE teachers in your district?
   a. Supportive leadership [ ]
   b. Opportunities for career advancement [ ]
   c. Collaborative work environment [ ]
   d. Recognition and appreciation [ ]
   e. Other specify…………………

190.   How do these factors influence ECE teacher retention in your district?

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THEME 2 How TPD (inservice) embraces and support ECE teachers progression, development and pedagogic efficacy in the classroom

10. How else can the district sustain the positive outcomes that have come out of various play-based interventions? Objective 2

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11. What measures have you put in place to ensure the sustainability of the play-based interventions in school in your district?

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12. Have you noticed any schools trying to train their own teachers on play based approaches etc?

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13. Who are the interventionists/other NGOs in the district working on these approaches apart from Sabre and or Right to Play?

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14. Did these play-based NGOs provide any training for GES district officials to support in the implementation of the interventions?

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15. Please give a description of the content of the training provided.

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16. How are the other innovations helping in building teachers' capacity in implementing play-based

learning? Objectives 2/3

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17. What do you know about education innovations and interventions in your district that support teacher capacity in teaching with play-based pedagogies? (probe for UNICEF, Liveliminds and others). Objective 2

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18. Mention some of the innovations that support teacher capacity in teaching with play-based pedagogies? Objective 2

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19. Are matters of gender and social inclusion of concern to you? How do you ensure that these are realized in schools in your district? What support do you offer early grade teachers in the implementation of play-based learning?

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20. What support do you give to headteachers to help them perform their roles effectively? Are there any specific supports that are closely linked to play-based learning?

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21. What support do you offer circuit supervisors to make their supervision more effective? Are there any specific supports that are closely linked to play-based learning?

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22. Are there any possible challenges that bedevils play-based learning in schools within your district? What are they and why do you suggest them?

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23. How can these identified challenges be addressed? Objective 3 /2

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HEME3 Implementation of the play-based Inservice training, tool kit/ TLMs resources for training and methodology provisions in the curriculum
Research Area: Implementation of play-based methodology provisions in the curriculum

24. How does play-based pedagogies help teachers in effectively delivering lessons among early graders?

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25. How does play-based learning effectively facilitate the understanding of concepts among children?

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26. How will your district expand play based approaches to other schools in the district?

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27. What have been the challenges relating to the implementation of play-based learning?

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28. How can these challenges be addressed?

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THEME 4 Outcomes of the Scale up of PBL in Ghana--- training and support at the school (look at the lesson notes …for PBL etc)…prp
   Objective 4. Outcomes

29. What do you perceive has been the greatest challenge to sustainability of the process after support from the play-based NGOs ended?
   - o   Lack of teaching resources
   - o   Financial resources
   - o   Lack of human resources
   - o   **Others specify………………**

30. Provide concrete examples of schools who have used these approaches and the observations you have made in relation to learning and student participation?

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31. What value do these training approaches/models add to early learning activities?
- o Build capacities of teachers
- o Improved learning outcomes
- o Increases learners attendance
- o Others specify

32. To what extent do you think the training workshops prepared you in monitoring and supporting teachers for delivering play based and child centered in the classroom? How do you know?

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33. To what extent has the play-based interventions influenced the learning outcomes of learners in your district and how do you know?

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34. How have these play based interventions influenced classroom environment? (Pedagogy and interaction with pupils)

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35. Has there been any negative or unexpected outcomes of the play-based interventions on teachers within the districts? Please explain

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36. What do you think are the positive outcomes of the play-based intervention training on your head teachers within the districts?

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37. What has been the impact that the play based training and other training by RTP and Sabre has had in your district (provide detailed examples of how this impacted on schools…separately teachers and children themselves).

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THEME 5 Cost nature of providing PBL (training costs and TLMs
Research Question: Can there be more cost-effective approaches to scaling up early learning?
Theme 8: Cost Efficiency

38. Have you received funds for implementing/scaling up ECE   FOR HEAD TEACHERS AND DISTRICT
    ☐Yes   ☐No
    i.   If you have not received funding what have you been using
            j.   GEOP FUNDS
            k.   SAGES
            l.   GALLOP
            m.   Community Of Excellence
            n.   UNICEF
            o.   District Assembly funding
            p.   Other specify
39. What are some cost-effective approaches to scaling up early learning activities?

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40. What are some cost-effective approaches to scaling up early learning activities?

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41. What value do these approaches/models add to early learning activities?

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42. How will your district expand play based approaches to other schools in the district?

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43. What resources are available to do this (PROBE: GALLOP and FHI 360 Learning etc)?

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44. Have you noticed any schools trying to train their own teachers on play based approaches etc>..

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45. Who are the interventionists/other NGOs in the district working on these approaches apart from Sabre and or Right to Play?

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THEME 6 Community engagement
Research Area: Family and Community Engagement

46. On a scale from 1 to 5, how involved are families and communities in supporting the implementation of ECE and Play-Based pedagogies at your districts?
   o   Not involved at all (1) [ ]
   o   Slightly involved (2) [ ]
   o   Moderately involved (3) [ ]
   o   Very involved (4) [ ]
   o   Extremely involved (5) [ ]

47. What strategies have been successful in engaging families and communities in supporting ECE and Play-Based pedagogies, and what further initiatives could be explored?

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48. How do you encourage and facilitate communication with families about the importance of play in learning?

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49. What strategies do you employ to involve families in understanding the goals and objectives of play-based learning activities?

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50. How do you ensure that families from diverse cultural backgrounds feel included and valued in the play-based learning process?

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51. What methods do you use to gather input and feedback from families regarding their children's experiences with play-based learning?

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52. In what ways do you collaborate with community organizations or resources to enrich play-based learning experiences for children and families?

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53. How do you support families in extending play-based learning experiences beyond the classroom or childcare setting into the home environment?

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54. What steps do you take to address any barriers or challenges families may face in participating actively in play-based learning activities?

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55. How do you promote a sense of belonging and community among families participating in play-based learning programs?

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56. What strategies do you use to educate families about the developmental benefits of different types of play and how they can support these at home?

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57. How do you tailor communication and engagement efforts to meet the needs of families who may

have limited time or resources?

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58. What role do you see families playing in shaping the direction and content of play-based learning experiences?

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59. How do you ensure that families are aware of resources and opportunities available to them within the community to support their children's play-based learning?

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60. What mechanisms do you have in place for families to share their own expertise and experiences related to play-based learning with each other?

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61. How do you foster a sense of partnership and mutual respect between educators/supervisors and families in the context of play-based learning?

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62. What steps do you take to ensure that family engagement efforts are ongoing and responsive to the evolving needs and preferences of families and the community?

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Annex 2: List of research team members

IDRC 2 ECE Final
Phase Team Compos