



Partners in Play Project (P3)

Ghana

Learning Study Report

April 2023

In association with:



Acknowledgements

This report was produced for Right to Play (RTP) as part of its Learning Study of the Partners in Play Project (P3) implemented in Ghana.

The Learning Study was carried out by UK's Open University's Centre for the Study of Global Development (CSGD) and the Institute of Education University of Cape Coast, Ghana. The evaluation team consisted of Professor Kwame Akyeampong (Principal Investigator), Dr Chris Kwaah and Dr Esinam Avornyo from the Institute of Education, University of Cape Coast.

We would like to thank Mr. Eric Opoku, RTP's Senior Global Monitoring Evaluation and Learning Manager, for the guidance and support. We are also indebted to the RTP Ghana team (Josephine Mukakalisa – Country Director, Harrison Akubor and Kwarteng Frimpong (Monitoring and Evaluation team, and the project team) for all their assistance and commitment to the learning study research process.

We are also grateful to Richard Serbeh for supporting the review of documents for this report. We would like to thank the enumerators recruited from across the three regions for supporting the data collection for this report.

This Learning Study is made possible with the support of the LEGO Foundation.

For any questions related to this study, please contact:

Professor Kwame Akyeampong (Principal Investigator)
Centre for the Study of Global Development
Faculty of Wellbeing, Education and Language Studies (WELS)
School of Education, Childhood, Youth and Sport
The Open University | Stuart Hall Building | Level 3 | Walton Hall
Milton Keynes | MK7 6AA

How to cite this report: Akyeampong, K., Avornyo E. A., Kwaah, C. Y., & Serbeh, R. (2023). Partners in Play Project in Ghana: Learning Study Report. Open University, UK

Table of contents

Executive summary	1
Introduction	5
1.1. Purpose and Research Questions	6
Methodology	6
2.1 Sample	6
2.2. Instruments	8
2.2.1. Classroom observation	8
2.2.2. Teacher Survey	8
2.3. Training of enumerators	8
2.4. Piloting of instruments	9
2.5. Data collection	9
Data Management and Quality Assurance	10
Data Analysis	10
Findings: Observed Classroom Practice	10
5.1. Assessment of Lesson Plan	10
5.2 Observed Lesson Delivery Quality	17
5.3. Assessment of Play Activities	24
Findings: Teacher Survey	27
5.4. Attitude towards learning through play	27
5.5. RTP Project Activities	29
5.6. Perceptions of a play-based learning approach	32
5.7. Factors facilitating the use of play-based activities	34
5.8. Motivation to use play-based activities	35
Policy representation of play-based activities and holistic skills development	37
Conclusions and Recommendations	44
References	46

Executive summary

The Partners in Play Project (P3) is an intervention-based project that aims to build capacity and support teachers' use of play-based activities to enhance the quality of primary education in 55 districts in three regions (i.e., Greater Accra, Volta and North) in Ghana. The primary component of the intervention targets teachers through direct training and other teacher professional development services (such as coaching and mentoring, teaching resource materials, and peer learning/community of practice sessions) from Right to Play (RTP) supported implementing partners (District Education Officials) and RTP staff, referred to as the Direct group. The secondary component targets teachers indirectly through the support of trained District Education Officials (District Teacher Support Team) of the Ghana Education Services (GES) and has two groups, referred to as Indirect and GALOP (a World Bank supported Ghana Accountability for Learning Outcomes Project).

After one year of implementation, this learning study was designed to provide information on teachers' classroom practices, their attitude towards learning, their perspectives on the effectiveness of RTP's continuum of teacher training (COTT)¹ in improving their abilities to use play-based activities. The study also examined factors perceived as enabling and motivating teachers' use of play-based activities, teachers' perspectives about play-based approaches as well as the representation of play and holistic skills in educational and policy documents, particularly at the early childhood level. These research goals were addressed using multiple methods – classroom observation, survey and document analysis. A total of 503 teachers' lessons were observed and survey data was collected from 348 teachers across the three intervention groups (Direct, Indirect and GALOP) in the three regions by November 29, 2022. In addition, three documents (Early childhood education (ECE) policy, INSET teacher manual and Education Strategic Plan (ESP) 2018 – 2030) were reviewed.

Key findings

1. Classroom observation revealed that teachers in Direct schools were generally performing better than teachers in Indirect and GALOP. Significant differences were observed for direct schoolteachers in terms of lesson planning, lesson delivery and using play-based activities. However, when compared across regions, it emerged that teachers in Direct schools in the Volta are not performing differently from those in Indirect and GALOP.
2. Teachers' attitude to learning yielded mixed responses, with a spread of responses across statements that emphasise the role of child, the teacher or both in learning. However, the majority of teachers (Direct: 48%; Indirect: 70%; GALOP: 66%) thought teachers are mainly responsible for choosing learning activities for students, which could limit children's own initiatives in their learning.
3. Teachers in Direct schools have participated in more COTT activities than those in Indirect and GALOP. And the majority of the teachers in Direct schools considered the COTT components (i.e., training workshops, coaching/mentoring, and professional learning

¹ The CoTT is a series of training that is aimed at building the capacity of the teachers from Foundational Training to Year 3 training. Through organising teachers in professional learning communities (PLCs) it brings teachers together discuss issues pertaining to their challenges facilitated by a Teacher Champion who acts as a peer coach in the school.

communities (PLCs) as very effective in supporting their use of play-based activities compared to those in Indirect and GALOP.

4. The majority (range: 83% – 97%) of teachers across all intervention groups believed their school culture supports the use of play-based activities and that play-based activities help in effectively supporting children’s academic (i.e., literacy and numeracy) and socio-emotional skills development. However, a significant number of teachers across all intervention groups thought it is difficult to meet curricula goals using play-based activities.
5. The majority of teachers (range: 82% – 99%) across all intervention groups considered training activities, including academic training, workshops, professional communities as enabling their use of play-based activities. In addition, Direct schoolteachers considered RTP-related activities (i.e., the use of teacher champions and mentor/coach) as contributing to their use of play-based activities and only a few of them thought parental attitudes to play hindered their use of play. However, managing children’s behaviour, time required for play, play materials, class size and indoor classroom space were considered as limiting teachers’ use of play-based activities.
6. The documents review revealed that learning through play is represented throughout the three documents with terminologies such as the right to play, play-based pedagogies/approaches and play-based learning. Play-based learning in the INSET manual reviewed is contextualised in terms of objects and materials that could be used by teachers, but the language used predominantly focuses on Akan terms. It is unclear whether this is unique to Akan-dominated communities or is applicable across the country. The review also shows that the documents adopt different phrases to describe learning activities according to their education focus. The ESP 2018-2030 adopt phrases that describe learning activities across different educational levels, and those of the ECE and the INSET Trainer Manual focus on early childhood learning activities. The documents adopted little alternative words for holistic skills. The closest alternative is provided by the Forward page of the ECE policy, which employs ‘readiness skills’ to represent holistic skills but falls short of expanding what they are.

Key recommendations

1. Teachers in Direct schools demonstrated better classroom practices compared with those in Indirect and GALOP. A conscious effort should therefore be made by the RTP team to ensure the cascading approach commits to the improvement of teachers’ classroom practice and the use of play-based activities. Cascading approach has been used extensively to train teachers. It works on the assumption that teachers already have a foundational level of teaching competency on which to build. Often, the most able teachers or in some cases a ‘favourite’ teacher is selected to attend training of trainers upon which the cascade model is based. However, coaching and mentoring have been shown to be more effective in creating sustainable behavioural change and practice. It may be necessary for the RTP programme to intensify its coaching and mentoring programmes as clearly most teachers see this as the most influential.
2. Also, it emerged that Direct teachers in Volta are not performing differently in some critical measures of teacher competency and performance compared to teachers in Indirect and GALOP schools. This has been a surprising finding in this study given that generally

teachers in Direct schools perform better on most measures of competency compared to Indirect and GALOP teachers. Although this is a disappointing result, it may reveal an important issue – direct interventions (e.g., training) cannot be assumed to necessarily produce the same results across regions/districts. Implementation fidelity may not be achieved at the same level across districts which means it is important to closely monitor training, do follow-up and ensure barriers to effective implementation are quickly identified and addressed. It is recommended that the RTP team reviews the implementation strategy with Direct schoolteachers in Volta region for their perspective on why some results are markedly different to other districts and intervention groups in order to identify areas that need revision or strengthening.

3. In terms of TLRs, teachers across the intervention groups scored low, suggesting that all the teachers did not indicate the appropriate TLRs in their lesson plan. This is definitely an area that the project needs to give special attention to – not indicating appropriate TLRs in lesson plans can lead to the delivery of lessons that do not achieve their desired outcomes.
4. Although a number of teachers believed that both teachers and students have an equal role in promoting effective learning, it appears that most teachers still believe that they should be in the driving seat when it comes to initiating learning. The default position in Ghanaian basic school classrooms is for many teachers to tell students what activities they should engage during the instructional process. While teachers' directed instruction has its place and value, it is equally important for teachers to encourage students to initiate learning through the activities they select and justify. Play based activities offers many opportunities for this to take place. This will ensure that increasingly students develop the confidence to make choices that reflect their level of understanding and progress in learning.
5. Teachers still consider *curricula expectations/goals, managing children's behaviour, time for play, class size and indoor spaces as critical limitations to the use of play-based activities*. It is therefore not enough for the project to provide teachers with the skills to implement play-based learning activities. Equally important and needing more emphasis is the ability of teachers to make adjustments to accommodate these 'new' practices. The programme should include discussions with teachers on the kinds of adaptations and innovations that can ensure that play-based learning can still take place under challenging conditions. It is also important to raise this issue at policy level for reforms that can make it easier for teachers to embrace play-based instructional approaches. The project should give consideration to these issues and support teachers appropriately. For instance, while class size and indoor spaces are structural challenges that may not be easy to change, teachers could be trained on how to effectively work within these constraints, how they can use play-based learning approaches to manage children's behaviour and improve classroom safety.
6. Majority of Direct schoolteachers did not consider parental attitudes as a hindrance to their use of play-based activities, suggesting that teachers are unlikely to face stiff opposition in the use of play to promote learning. This is more pronounced in Direct than Indirect and GALOP school teachers who are not as positive. This issue should be brought

to the attention of Districts supporting work in Indirect and GALOP schools for strategies to address any negative attitudes that may exist.

7. In developing education policies particularly for basic education, play and skills development should be presented as two sides of the learning 'coin', and conceptualised as mutually reinforcing to improve learning. RTP should enter into discussions with key curriculum and policy officials at the GES and Ministry of Education on the importance and benefits of socio-emotional learning and skills development.
8. The project should explore play concepts and examples from other ethnic groups to encourage teachers and students from minority ethnic groups to draw on them during the teaching and learning process. More importantly, training manual should encourage teachers to invite children to share play activities that reflect their cultural backgrounds and history.
9. Appendices 1 to 4 provide a detailed breakdown of the following: *Percentage of play activities by intervention and teacher class*, *Effectiveness of training workshop by region and intervention*; *Effectiveness of coaching/mentoring by region and intervention*; *Effectiveness of professional learning communities by region and intervention*. These show in granular and comparative detail specific areas that are strengths and weaknesses across region, intervention and class. Overall, they present a complex picture but useful for beginning dialogue at district level on particular areas that need more attention. Generally, they show that direct intervention schools are making more progress than the schools reached through indirect support i.e., indirect and GALOP, although direct schools in Volta do not always back this trend. Across the grades and interventions students using play in learning outside the confines of the classroom is low; pupil agency play-based activities or learning in lower grades e.g., KG is low; using positive discipline strategies (e.g., identifying the behaviour to be stopped) to support the development of students' behaviour is low in the North compared to other regions. The project team should use these tables as points of discussion with each RTP regional teams and District training teams to identify possible causes and initiate appropriate action.
10. This learning study has revealed issues and areas that can be included in the endline evaluation of the LTP project. It did not include a survey of pupils' views and experiences on play-based learning. It also did not administer an attitude, cognitive and non-cognitive 'tests' to understand the impact of learning through play on the cognitive and non-cognitive development or achievement of children, and to evaluate the impact of teachers classroom practices on learning especially which particular activities exert stronger influence/effect on the development of holistic and foundational literacy and numeracy (FLN) skills. This will help to establish the extent to which play-based learning approaches have contributed to cognitive and non-cognitive skills. The endline should also include in-depth qualitative investigation on the elements of the training which have resulted in changes to the use of play to promote learning, which aspects of coaching and mentoring relationships produce the most impact in culturally specific classroom contexts to enhance uptake of play-based learning.

Introduction

The Partners in Play project (P3) aims at contributing to the Learning through Play (LtP) content in Ghanaian primary schools delivered through a national teacher capacity building and in-service training system. It focuses on the new standard-based curriculum for KG1 and KG2 and primary (B1 and B6), through targeted instruction and structured pedagogy,² play-based and active learning pedagogy using the integrated thematic approach³ for KG teachers. The P3 aims to build capacity and support teachers' use of play-based activities to enhance the quality of primary education for improved learning outcomes including core competencies/soft skills in three regions (i.e., Greater Accra, Volta and North) in Ghana.

The primary component of the intervention targets teachers through direct training and other teacher professional development services (such as coaching and mentoring, teaching resource materials, and peer learning/community of practice sessions) from Right to Play (RTP) staff and supported implementing partners (District Education Officials), referred to as the Direct group. The secondary component targets teachers indirectly through the support of trained District Education Officials (District Teacher Support Team) of the Ghana Education Services (GES) and has two groups, referred to as Indirect and GALOP (a World Bank supported Ghana Accountability for Learning Outcomes Project).

Baseline data has already been collected on teachers' classroom practice in grades 1 and 3 as well as their perceptions of and attitudes towards play-based instructional approaches. In this learning study we examined how RTP's continuum of teacher training approach (COTT) is impacting on teachers' ability to provide improved instruction examining in particular how (a) training, (b) mentoring and (c) coaching are leading to changes in teachers' ability to adopt and improve learning through play. We therefore focused this learning study on observing a sample of teachers' classroom practices at KG, early grades (grades 1-3) and upper grades (grades 4-6), using an adapted classroom observation instruction instrument based on the P3 project's own observation instrument, Ghana's National Schools Inspectorate Authority lesson observation form and RTI's classroom observation instrument. The assumption is that after over a year of the LtP intervention, teachers in schools that have benefited directly— from KG to grade 6 – should be showing improvements in their ability to utilise learning through play (LtP)/ play-based learning approach in their instructional practice for improved learning experience for learners.

Also, using surveys, we examined teachers' perspectives on the effectiveness of COTT approaches in improving their use of play-based activities/strategies, factors facilitating the use of play and their perceptions about the play-based intervention. It is important to note that while the baseline study included a Control group, this learning study focused on the three intervention groups – Direct, Indirect and GALOP. In addition, the learning study examined how play-based learning and children's holistic skills are represented in educational and policy documents.

² Targeted instruction refers to teaching students at their level of knowledge, not their grade level; structured pedagogy is an umbrella term for the collection of evidence-based pedagogies the GALOP partners will bring forward, including LtP.

³ There are 7 themes for KG and each of the themes must be taught using an integrated thematic approach as the curriculum is not subject based. For example, a lesson on "My Family" should address literacy, numeracy, creative arts, our world our people, core competencies, etc.

1.1. Purpose and Research Questions

This learning study aimed to examine teachers' classroom practices in relation to lesson planning, delivery and the use of play-based activities, their perspectives on the effectiveness of the components of COTT and as evident from lesson observation data, perspectives about the play-based intervention and factors enabling or limiting their use of play-based activities as well as a review of documents on play-based learning and children's holistic skills. While the baseline evaluation included teachers, children and caregivers, this learning study focused on only teachers and addressed the following research questions:

1. Are there differences in teachers' classroom practices (i.e., lesson planning, delivery and use of play-based activities) across the different intervention arms (direct, indirect, GALOP)?
2. What are teachers' attitudes towards learning through play?
3. Which activities (*training/workshop, coaching & mentoring; professional learning communities; Teacher Champion*) have been most effective in generating teachers' increased use of LtP/PBL pedagogies?
4. What are teachers' perceptions about play-based learning approaches?
5. What are the factors impacting change in knowledge, attitudes, behaviours, and motivation for teachers to shift from teacher-centred to inclusive learner-centred pedagogical practices? To what extent does the COTT (Continuum of Teacher Training) approach in the P3 project support this shift?
6. How is LtP conceptualised and articulated in key policy and educational documents?

Methodology

This learning study followed a quantitative approach using surveys and structured lesson observations with teachers across the arms of intervention (i.e., Direct, Indirect and GALOP). The goal was to understand teacher classroom practices and their perspectives on the effectiveness of the different project activities and what factors are enabling or hindering their use of play-based instructional approaches. In addition, a theme-based document analysis was used to review policy and educational documents on the representation of play-based learning and children's holistic skills.

2.1 Sample

In the baseline, classroom practices were observed for primary teachers (grade 1 and 3) in Direct and Control schools. However, for this learning study, two changes were made. First, observation with teachers in Control schools was replaced with observation with teachers in Indirect and GALOP schools. Second, this learning study was extended to include teachers in early (KG) and upper grades (grades 4 and 6). Although these allowed a more comprehensive understanding of teachers' practices at both pre-primary and primary levels across all three interventions, we were unable to examine whether there are statistically significant improvements after one year of the project intervention.

For classroom observation, we estimated a total sample of 520 teachers across the three regions, representing 280 teachers for Direct and 120 teachers each for Indirect and GALOP. Out of this, a total of 503 teachers were reached, representing about 96% response rate. Slightly more than half (55%) of

the teachers observed were females. In terms of their professional qualification, half of them (50%) had diploma, 39% had a bachelor's degree, about 1% had a master's degree and approximately 10% had no professional qualification. Majority of the teachers (77%) observed had received training directly from RTP or RTP supported training from the district. In the Volta and Northern region more male teachers teach in the upper grades than female teachers. In KG and B1 there are generally more female than male teachers in the two regions. A breakdown of teacher characteristics by region and grade level is presented in Table 1.

Table 1. Teacher characteristics by region and class

	Accra					Volta					North				
	KG	B1	B3	B4	B6	KG	B1	B3	B4	B6	KG	B1	B3	B4	B6
Gender															
Male	–	–	4 13%	6 19%	12 38%	6 20%	8 28%	13 46%	17 68%	19 79%	11 27%	17 45%	24 62%	30 77%	34 87%
Female	26 100%	28 100%	27 83%	25 81%	20 62%	24 80%	21 72%	15 54%	8 32%	5 21%	30 73%	21 55%	15 38%	9 23%	5 13%
Professional qualification															
Diploma	8 31%	11 39%	5 16%	6 19%	7 22%	20 67%	19 66%	23 82%	18 72%	15 63%	23 50%	22 51%	21 50%	27 62%	24 55%
Bachelor	18 69%	15 54%	26 84%	22 71%	24 75%	6 20%	8 28%	2 7%	5 20%	7 29%	7 29%	14 33%	16 38%	12 27%	11 25%
Masters	–	–	–	2 7%	1 3%	–	–	–	–	2 8%	–	–	–	–	2 5%
None	–	2 7%	–	1 3%	–	4 13%	2 7%	3 11%	2 8%	–	2 8%	7 16%	5 12%	5 11%	7 16%

For the teacher survey, while the same sample size was estimated for teachers in Indirect and GALOP (120 each), a sub-sample of 125 teachers in Direct schools were randomly selected, resulting in a total of 365. Out of this, 348 teachers were reached, representing about 95% response rate. Teacher demographic characteristics for the survey are similar to those reported for classroom observation data. However, 90% of teachers in Direct schools had participated in play-based learning workshops in the past 12 months compared with about half of teachers in both Indirect and GALOP. It means a very high proportion of teachers in Direct schools would have had training in play-based learning than the teachers in Indirect and GALOP. Of those who reported participating, 99% of Direct schoolteachers received the training from RTP compared with 84% and 44% for Indirect and GALOP, respectively. Moreover, 11% of teachers in Direct schools, 29% in Indirect and 76% in GALOP reported receiving training from the Ghana Education Service (GES) officials.

2.2. Instruments

Two main instruments were used in this learning study – classroom observation tool and a survey.

2.2.1. Classroom observation

To understand the learning environment across all three intervention arms, a classroom observation tool that focused on three elements of instruction was used. The first element focused on teachers' lesson planning and examined whether teachers had lesson plans for the lesson observed and whether it included play-based activities. Lesson planning was assessed using six items rated on a 5-point scale and scores could range from 1 – 30, with higher scores indicating a higher quality lesson planning. The second element focused on the actual lesson delivery and targeted different aspects of teaching including the use of reflective questioning, fostering children's agency, using group work effectively. This was assessed using 12 items rated on a 5-point scale and scores could range from 12 – 60, with higher scores indicating a higher quality lesson delivery. The third element examined how teachers integrated play-based activities into the lesson delivery. Play-based activities was assessed using a 17-item checklist. Each activity was coded either observed (a score of 1) or not observed (a score of 0). A score index was created using all 17 items and scores could range from 0 – 17, with higher scores indicating more play-based activities.

2.2.2. Teacher Survey

A teacher survey was used to examine teachers' perspectives on six different areas. First, we assessed teachers' attitudes to play using a scale developed by RTI, which asks respondents to endorse one out of a pair of contrasting statements. The scale focuses on child agency, aspects of the learning environment and teacher behaviour that may facilitate play. Second, the survey assessed teachers' play and learning beliefs. Teachers were asked to rank four instructional approaches (i.e. direct instruction, guided play, free play and games) in relation to fostering the development of academic concepts including literacy, numeracy and children's socioemotional wellbeing. Thirdly, the survey examined which of the project's activities (training/workshop, coaching & mentoring, professional learning communities) has been most effective in generating teachers' use of play-based activities. Also, the survey examined teachers' impressions about the play intervention as well as factors motivating their use of play-based activities. Finally, the survey explored factors that are influencing or impeding teachers' change in behaviours towards the use of play-based activities.

The classroom observation tool and survey were reviewed by RTP, and necessary revisions were made based on feedback received.

2.3. Training of enumerators

The PI had an online meeting with the local team in Ghana to go through the final instruments before the training of enumerators in the various regions. After this meeting, all tablets for the data collection were coded with the final instruments using the KoBoCollect app for surveys. Enumerators were drawn from experienced education specialists with qualifications in teacher education, early childhood education and special education. Their academic qualification ranged from bachelor's to master's degrees. In terms of their profession, 30 of the enumerators are College of Education tutors and the remaining 20 are either post graduate students or work with the district education offices. It

is important to note that the selected district education officers were assigned to schools in districts where they have no affiliation. For example, enumerators from Keta were assigned to Ketu South.

The enumerators for the data collection were divided into two groups – classroom observation and survey – based on their previous experience and skillset. The classroom observation team was mostly college of education tutors who are education experts and have been supervising the teaching practice of the trainees in the partner schools. The teacher survey team were mostly postgraduate students from some universities across the country.

2.4. Piloting of instruments

After the training, we selected three basic schools outside our sample in each region but in one of the districts to pilot the instruments using the coded tablets. The following items (see Table 2) were identified and modified in the piloting exercise to suit the context.

Table 2: Item-related issues

Item	Problem Identified	Solution
Lesson Observation		
Are there sufficient tables and chairs for boys and girls?	This item was difficult to score. There were cases of children sitting three on a desk. However, it was difficult to estimate which groups of children (boys or girls) had more tables/chairs or desks.	This item was replaced with counting the number of desks in the classroom, which will be used together with the number of boys and girls present in class to determine whether the desks are sufficient or not.
Are there sufficient textbooks for boys and girls?	Not all lessons required the use of textbooks.	This item was replaced with three questions: (1) How many textbooks do you have in different subject areas? (2) Does the teacher use textbooks during lesson? (3) How many textbooks are used? Question 3 will be used in relation to the number of children present to determine the sufficiency of the textbooks.
Teacher engages children in using songs to deliver lesson	This item was repeated	It was rephrased to: Teacher engages children in using stories to deliver lesson
Teacher Survey		
Teacher survey: Community of Practices	Teachers did not know the term “community of practice”	This was rephrased to “professional learning communities”

2.5. Data collection

Data collection in the various regions was supposed to have started on the 7th of November to 21st November 2022. However, due to the strike action of the teacher unions in Ghana, the data collection started on the 14th of November 2022 after the strike was called off on Friday 11th of November 2022.

After the first day of data collection in the districts, the research team organized an online debriefing meeting with enumerators to address concerns or issues in the field. Some of the issues addressed were teacher absenteeism after the strike action, low attendance of pupils, and access challenges, especially in flood-prone areas in the Volta region.

Data Management and Quality Assurance

All Enumerators were given one day training in each Region on how to use the software on the Tablet to collect data using the offline mode. All names of enumerators were coded on the tablets. Data collection was done using Android enabled software (KoboCollect). The software had an offline version which enabled data to be collected offline in the remotest communities. All enumerators were given training on how to upload data collected on the software system after connecting to the internet. The data is subsequently downloaded into Ms Excel file. This process enabled our IT team to see all the data collected by each Enumerator since there were Enumerators' names attached to data collected. Data that had issues were scrutinised and Enumerator concerned were called for clarification. This process ensured quality assurance since the software is flexible, you can pause and continue data collection at any time. Throughout the data collection, work was overseen by the country team and the IT team in the University of Cape Coast. Throughout the data collection period, a WhatsApp platform was set up for all enumerators and the research team to report any difficulties for immediate response and support.

Data Analysis

In addition to descriptive statistics, ANOVA (one-way and factorial) was used to determine mean differences at the intervention and regional levels, respectively. A thematic approach was used to examine how learning through play/play-based learning activities and development of children's holistic skills are represented in policy and educational document

Findings: Observed Classroom Practice

Teachers' classroom practices were observed to understand whether there are differences in their practices in terms of their lesson planning, lesson delivery and the use of play-based activities. Results from the observed teacher practices are presented along these three areas.

5.1. Assessment of Lesson Plan

It is important to note that out of the 503 teachers observed across intervention, almost one-fifth (91; 18%) did not have a lesson plan available. A breakdown shows that more teachers in the north across all interventions had no lesson plans compared to those in Accra and Volta (see Table 3). In terms of comparison by intervention and class, the percentage of teachers without lesson plan was similar, with scores ranging from 4% – 10% (see Table 4). Concerning teacher's gender, the results showed that a similar percentage of male and female teachers in Direct schools had no lesson plans. However, more males in Indirect schools did not have lesson plans compared with females, whilst more females in GALOP schools had no lesson plans compared with male teachers (see Table 5). The fact that quite a number of teachers were without lesson plans raises some concerns about teachers' preparation

and future works could explore how teachers manage teaching activities without a plan, and with a bigger sample size whether teachers with lesson plans delivered significantly better lessons than those without plans, as one would expect.

Table 3. Percent of teachers without lesson plans by intervention and region

Intervention	Region		
	Accra (n = 7)	Volta (n = 14)	North (n = 70)
Direct	1 (1%)	4 (4%)	26 (29%)
Indirect	5 (5%)	10 (11%)	20 (22%)
GALOP	1 (1%)	–	24 (26%)

Table 4. Percent of teachers without lesson plans by intervention and class

Intervention	Class Observed				
	KG (n = 23)	Basic 1 (n = 14)	Basic 3 (n = 18)	Basic 4 (n = 17)	Basic 6 (n = 19)
Direct	9 (10%)	4 (4%)	5 (5%)	7 (8%)	6 (7%)
Indirect	7 (8%)	6 (7%)	8 (9%)	5 (5%)	9 (10%)
GALOP	7 (8%)	4 (4%)	5 (5%)	5 (5%)	4 (4%)

Table 5. Percent of teachers without lesson plans by intervention and Gender

Intervention	Teacher Gender	
	Male (n = 43)	Female (n = 46)
Direct	16 (18%)	13 (15%)
Indirect	22 (25%)	13 (15%)
GALOP	5 (6%)	20 (23%)

1.1.1. Item Analysis of Lesson Plan

The production of lesson plans is an important step in delivering good lessons provided the lesson plans are thoughtfully and effectively developed. In other words, lesson plans are important for delivering effective lessons but do not necessarily produce effective outcomes unless teachers are able to translate the plans effectively. Other factors, such as classroom space, textbooks, etc. can impact on effective delivery of lesson plans.

Table 6 shows the average scores of each of the items used to assess teachers' lesson plan. Scores for each item could range from 1 – 5 and are interpreted based on the following criteria: 1 – 2: low; 3: medium and 4 – 5: high.

- Generally, there are variations in the scores for each item, with teachers scoring between low – high on all items, except *planning interactive group activities* and *appropriate teaching and learning resources (TLRs)*.
- With regards to interactive activities, teachers scores ranged between low and medium.
- In terms of TLRs, teachers across the intervention groups scored low, suggesting that all the teachers did not indicate the appropriate TLRs in their lesson plan. This is definitely an area that

the project needs to give special attention to – not indicating appropriate TLRs in lesson plans can lead to the delivery of lessons that do not achieve their desired outcomes. That said, it is worth noting that scores were relatively higher for teachers in Direct schools in Accra compared to Indirect and GALOP teachers in Accra. While similar scores were recorded for teachers in the Volta and Northern regions across all intervention groups, scores were slightly higher for teachers in the Volta region.

Table 6. Average scores for each item by intervention and region

	Accra			Volta			North		
	Direct	Indirect	GALOP	Direct	Indirect	GALOP	Direct	Indirect	GALOP
Lesson plan has clear performance indicators	4.16 (0.73)	3.26 (1.13)	3.48 (0.76)	3.73 (1.06)	2.93 (1.45)	4.12 (0.51)	3.36 (1.46)	2.47 (1.28)	2.02 (1.22)
Stated objectives are relevant and SMART	4.06 (0.69)	3.36 (1.19)	3.58 (0.80)	4.16 (0.58)	4.19 (0.40)	4.02 (0.53)	3.93 (0.80)	3.63 (0.82)	3.00 (1.25)
Lesson plan includes interactive group activities	3.61 (1.05)	2.09 (1.10)	1.6 (1.03)	3.61 (1.03)	3.66 (0.79)	3.24 (1.29)	2.96 (1.30)	2.23 (0.81)	2.00 (1.14)
Relevant core competencies are stated	4.18 (0.73)	3.27 (1.28)	3.31 (0.63)	3.96 (0.63)	4.00 (0.72)	4.18 (0.51)	3.76 (0.97)	3.03 (0.98)	2.70 (1.33)
Appropriate TLRs are stated	1.03 (0.34)	1.00 (0.00)	1.00 (0.00)	1.03 (0.25)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)
Stated learner activities are related to core competencies	4.06 (0.91)	2.75 (1.52)	2.91 (0.81)	3.69 (0.74)	3.66 (0.73)	4.23 (0.63)	3.63 (1.02)	3.12 (1.02)	2.58 (1.21)

Table 7 presents a lesson plan items breakdown by intervention groups and teacher class. Although there are variations in scores, teachers across all classes tend to score better on *stating relevant objectives*, with scores ranging between medium and high. The pattern observed in Table 6 for planning interactive group activities and appropriate TLRs is also seen here, with teachers scoring from low – medium for the former and low for the latter. However, except appropriate TLRs, scores were generally higher for Direct teachers across all classes compared with Indirect and GALOP.

Table 7. Average scores for each item by intervention and class

	Direct					Indirect					GALOP				
	KG	B1	B3	B4	B6	KG	B1	B3	B4	B6	KG	B1	B3	B4	B6
Clear Performance indicators	3.52 (1.36)	3.75 (1.13)	3.68 (1.11)	3.78 (1.31)	3.75 (1.25)	2.86 (1.42)	2.87 (1.19)	2.56 (1.23)	3.17 (1.33)	2.65 (1.46)	2.88 (1.36)	3.16 (1.27)	3.08 (1.28)	3.19 (1.23)	3.37 (1.31)
SMART and relevant objectives	4.02 (0.54)	4.17 (0.56)	4.08 (0.70)	4.06 (0.63)	3.85 (1.03)	3.64 (0.99)	3.83 (0.51)	3.68 (0.79)	3.7 (1.08)	3.43 (1.31)	3.2 (1.23)	3.75 (0.71)	3.68 (1.00)	3.71 (0.56)	3.73 (0.99)
Interactive group activities	3.55 (1.21)	3.38 (1.24)	3.31 (1.22)	3.3 (1.20)	3.18 (1.12)	2.94 (1.24)	2.39 (0.97)	2.06 (0.85)	2.55 (1.19)	2.64 (1.22)	2.31 (1.29)	2.36 (1.42)	2.36 (1.30)	2.19 (1.47)	2.44 (1.50)
Relevant core competencies	3.88 (1.00)	3.8 (0.74)	4.08 (0.75)	4.13 (0.74)	3.87 (0.89)	3.5 (1.15)	3.17 (0.88)	3.12 (1.02)	3.5 (1.14)	3.41 (1.37)	3.31 (1.20)	3.63 (1.01)	3.47 (1.12)	3.52 (0.87)	3.57 (0.90)
Appropriate TLRs	1.04 (0.29)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)
Learner activities relate to core competencies	3.77 (1.08)	3.82 (0.81)	3.64 (0.95)	4.09 (0.78)	3.63 (0.98)	3.5 (1.03)	3.16 (1.15)	2.68 (1.40)	3.15 (1.40)	3.05 (1.24)	3.31 (1.10)	3.26 (1.28)	3.47 (1.17)	3.33 (1.23)	3.36 (0.89)

1.1.2. Lesson Plan Total Score

Scores for assessed lesson plan could range from 1 – 30, with higher scores indicating a higher quality lesson planning. Generally, teachers in Direct schools had higher average scores compared with those in Indirect and GALOP schools. Tables 8 to 11 present a breakdown of results by intervention, region, class, teacher gender.

Table 8. Average Lesson Plan Scores by Intervention (N = 503)

Intervention	Mean	Standard deviation
Direct	17.91	6.85
Indirect	13.07	7.87
GALOP	14.00	7.51
Total	15.83	7.57

As shown in Table 8, on average, teachers in Direct schools had higher average lesson planning scores compared to those in Indirect and GALOP schools. A one-way ANOVA was conducted to determine if lesson planning was statistically different for the three interventions. There was a significant difference between groups ($F(2,500) = 23.07, p < .001$). A Tukey post-hoc test for multiple comparisons showed that mean score for the Direct group ($M = 17.91, SD = 6.85$) was significantly different than the Indirect ($M = 13.07, SD = 7.87$) and GALOP ($M = 14.00, SD = 7.51$). However, there was no significant difference between the mean scores of GALOP and Indirect. Taken together, the results suggest that teachers in Direct schools, statistically, had lesson plans of higher quality. However, the average percentage of the mean scores relative to the highest score (i.e., 30) is 59% for Direct, 43% for Indirect and 46% for GALOP, suggesting the need to improve the lesson planning of teachers across all intervention groups.

Table 9. Average Lesson Plan Scores by Intervention and Region (N = 503)

Intervention	Region		
	Accra	Volta	North
	Mean (SD)	Mean (SD)	Mean (SD)
Direct	21.07 (2.95)	18.86 (5.39)	15.38 (8.25)
Indirect	15.38 (5.77)	14.00 (9.42)	10.98 (7.66)
GALOP	15.35 (3.56)	20.05 (3.82)	7.78 (7.46)
Total	18.33 (4.82)	18.10 (6.56)	12.73 (8.52)

Table 9 presents a breakdown of results by intervention and region. Teachers in Direct schools in Accra and North had higher average scores for lesson planning compared to Indirect and GALOP. However, average scores for teachers in Direct schools in the North is almost twice the scores of those in GALOP schools. Interestingly, the regional average scores relative to the highest score of 30 shows a percentage score of 60% for Accra, 60% for Volta and 42% for North, and highlights the fact that teachers may have difficulties in planning high quality lessons.

We conducted a two-way ANOVA of lesson planning scores on intervention group and region. The results showed a significant interaction between intervention group and region ($F(4,494) = 7.92, p < .001$). We then conducted a post-hoc analysis with the Direct group as the reference category

compared to Indirect and GALOP using Bonferroni correction to counteract the problem of multiple comparisons. The results showed that scores differed significantly for teachers in Direct group across the three regions compared to Indirect (Accra: $t(494) = 4.24, p < .001$; Volta: $t(494) = 3.42, p < .01$; North: $t(494) = 4.05, p < .001$). However, when compared with GALOP, scores differed significantly for teachers in Accra ($t(494) = 4.39, p < .001$) and North ($t(494) = 6.78, p < .001$), but not Volta ($t(494) = -0.91, p = 1.00$). Although the results of Volta region (i.e., Direct vs. GALOP) is puzzling, it is possible that inputs in their training to produce high quality lesson plans has not been at a comparable level with inputs in other intervention groups.

Table 10. Average Lesson Plan Scores by Intervention and Gender (N = 503)

Intervention	Teacher Gender	
	Male (n = 201)	Female (n = 279)
	Mean (SD)	Mean (SD)
Direct	17.03 (7.48)	18.60 (6.38)
Indirect	12.22 (8.36)	14.01 (7.25)
GALOP	15.09 (7.26)	13.60 (7.59)
Total	15.25 (7.97)	16.07 (7.36)

As Table 10 shows, both male and female teachers in Direct schools had higher average lesson planning scores compared with those in Indirect and GALOP.

Table 11. Average Lesson Plan Scores by Intervention and Class (N = 503)

Intervention	Class Observed				
	KG (n = 102)	Basic 1 (n = 100)	Basic 3 (n = 101)	Basic 4 (n = 100)	Basic 6 (n = 100)
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Direct	17.5 (7.72)	18.40 (6.19)	18.14 (6.32)	17.82 (7.53)	17.83 (6.58)
Indirect	13.39 (8.70)	12.91 (7.48)	11.30 (7.67)	15.26 (7.21)	12.52 (8.38)
GALOP	12.65 (7.95)	14.45 (7.39)	14.16 (7.76)	14.30 (7.30)	14.50 (7.55)
Total	15.26 (8.23)	16.14 (7.17)	15.64 (7.50)	16.32 (7.49)	15.81 (7.53)

Table 11 shows that regardless of class, teachers in Direct schools had higher average scores for lesson planning compared with Indirect and GALOP. In Figure 1, scores are disaggregated by region and class for each intervention arm. The results showed that irrespective of class, teachers in Direct schools in Accra had higher scores on lesson planning compared with those in Indirect and GALOP. However, in the Volta region, scores were slightly higher for teachers in GALOP schools across all classes, except basic 6. It is possible that Direct schoolteachers may have difficulties in translating knowledge gained from training activities into effective lesson planning and providing support could help improve their planning. Although scores for Direct teachers in the North was higher for all classes compared with Indirect and GALOP, scores were generally lower compared to Accra and Volta and again raises the issue of equitable translation of skills and knowledge from training. It is possible that other contextual factors (e.g., monitoring and offering teachers on-going support may also not be equitable and responsible for the differences observed).

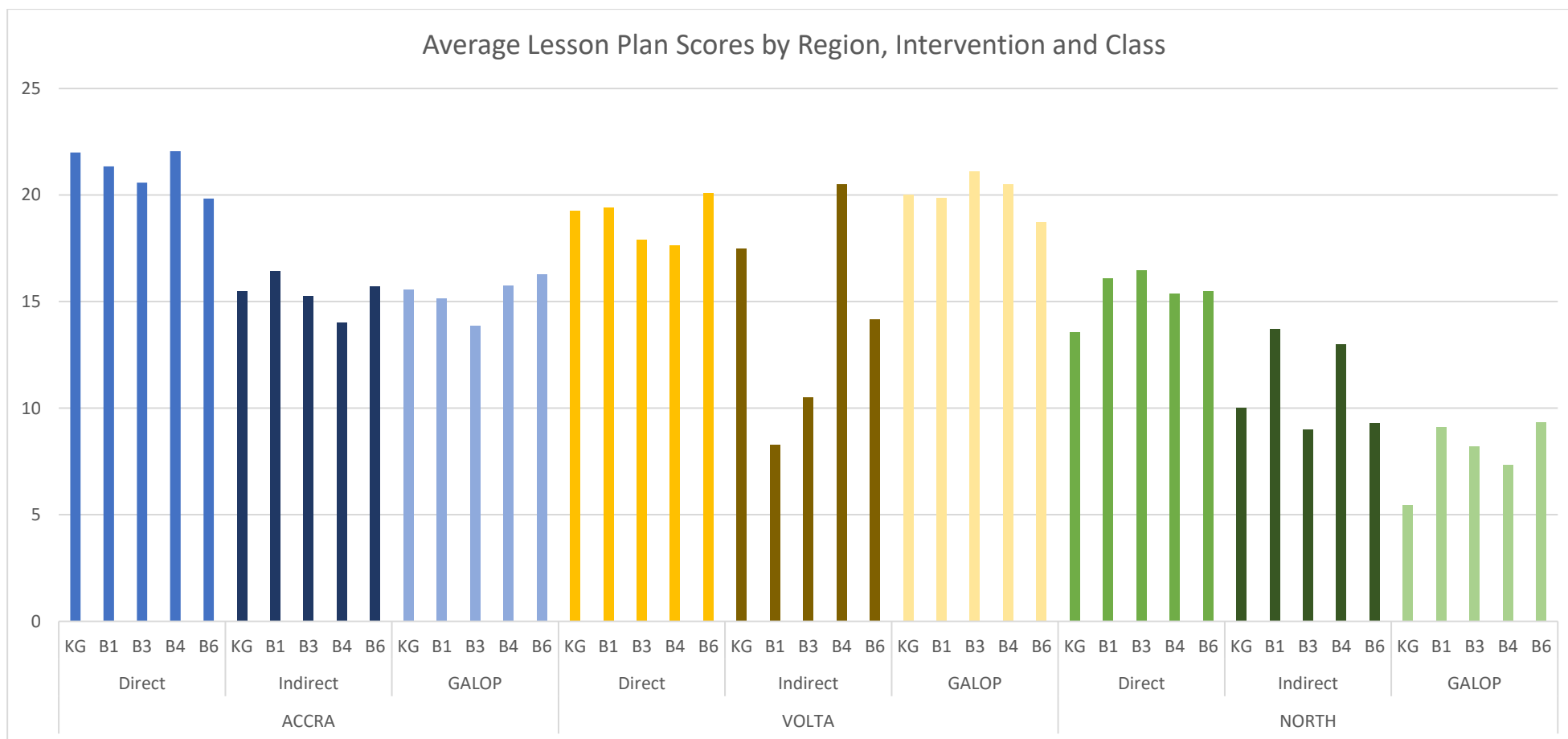


Figure 1. Average lesson plan scores by region, intervention and class

5.2 Observed Lesson Delivery Quality

5.2.1 Lesson Delivery: Item analysis results

Table 12 shows the average scores of each of the items used to assess teachers' lesson delivery. Scores for each item could range from 1 – 5 and are interpreted based on the following criteria: 1 – 2: low; 3: medium and 4 – 5: high. The results are mixed with instances of low to high ratings across most of the items. However, scores were relatively higher for *'teacher tone of voice, allowing children's participation in lesson, encouraging both boys and girls to ask questions, using reflective questions to end lesson and evaluation of lesson'*. In contrast, scores were particularly lower for *'making learning objectives clear, teachers' use of TLRs and pupils asking questions on their own initiative'*. The low scores for the use of TLRs may reflect the lack of *resource planning* observed in the lesson plan stage and highlights the importance for teachers to take this into account during their lesson planning.

Table 12. Average scores for each item by intervention and region

	Accra			Volta			North		
	Direct	Indirect	Galop	Direct	Indirect	Galop	Direct	Indirect	Galop
Learning objectives made clear to pupils	3.61 (1.10)	2.21 (1.40)	1.18 (0.81)	3.2 (1.06)	2.54 (1.17)	2.67 (1.47)	2.8 (1.31)	2.64 (0.97)	1.93 (1.16)
Teacher uses board appropriately	4.09 (0.65)	3.14 (1.13)	3.08 (0.55)	3.48 (1.03)	3.53 (1.00)	3.92 (0.72)	3.65 (1.08)	3.42 (0.70)	3.29 (0.82)
Teacher uses TLRs in lesson	4.15 (0.87)	2.73 (1.46)	2.27 (1.07)	3.49 (1.20)	3.16 (1.20)	3.82 (0.83)	3.2 (1.38)	2.46 (1.38)	2.13 (1.27)
Teacher uses appropriate questioning skills	3.64 (0.79)	3.58 (0.89)	2.78 (0.71)	3.6 (0.84)	3.43 (0.81)	3.89 (0.68)	3.61 (0.96)	3.18 (0.87)	2.93 (0.82)
Teacher clarifies learners' misunderstandings	3.9 (0.79)	4.14 (1.13)	2.97 (0.94)	3.69 (0.79)	3.5 (1.04)	4.12 (0.83)	3.96 (0.87)	3.17 (0.86)	3.02 (1.24)
Teacher encourages boys and girls to answer questions	3.88 (0.77)	3.97 (0.93)	3.51 (0.76)	3.81 (0.78)	3.74 (0.96)	4.12 (0.72)	4.04 (0.85)	3.22 (0.81)	3.41 (1.00)
Pupils ask questions on their own initiative	2.32 (1.15)	1.33 (0.73)	1.56 (0.72)	1.98 (0.98)	1.58 (0.71)	1.47 (0.64)	2.4 (1.20)	2.34 (0.99)	1.47 (0.83)
Teacher speaks to pupils in friendly tone	4.15 (0.65)	4.55 (0.70)	4.32 (0.52)	4.2 (0.66)	4.48 (0.92)	4.3 (0.68)	4.38 (0.74)	4.11 (0.76)	3.76 (0.96)
Teacher acknowledges pupils' effort when they give wrong answers	3.51 (0.96)	3.00 (1.04)	2.91 (1.27)	3.33 (0.98)	3.48 (1.09)	3.87 (0.82)	3.73 (1.11)	3.06 (0.74)	3.12 (1.26)
Teacher allows pupils to participate in lessons	4.33 (0.59)	4.00 (0.69)	2.70 (1.33)	4.09 (0.81)	4.06 (0.72)	4.12 (0.95)	4.12 (0.75)	3.52 (0.98)	3.44 (1.03)
Teacher uses of reflections to end lesson	3.85 (0.86)	3.38 (1.12)	2.91 (1.06)	3.76 (0.92)	3.64 (0.87)	4.02 (0.62)	3.7 (0.82)	3.00 (1.14)	2.8 (1.31)

Teacher evaluates lesson taught	4.22 (0.70)	3.58 (1.04)	3.52 (0.94)	4.04 (0.56)	4.06 (0.57)	4.2 (0.52)	4.1 (0.61)	3.62 (0.81)	3.55 (0.90)
---------------------------------	----------------	----------------	----------------	----------------	----------------	---------------	---------------	----------------	----------------

Note: Standard deviation is in parenthesis

Table 13 shows lesson delivery items breakdown by intervention and teacher class. The pattern observed in Table 12 regarding items with relatively higher and lower scores is also observed when scores were disaggregated by teacher class across intervention arms. Although, scores seem higher for teachers in Direct schools compared with those in Indirect and Galop, a few items are worth mentioning. In particular, teachers in primary classes (i.e., B1 – B6) had slightly higher scores in relation to appropriate use of chalkboard. This may be due to the fact that limited writing on the board is encouraged at the kindergarten level. Also, although Direct teachers in upper primary (B4 and B6) had slightly higher scores in relation to their use of appropriate questioning skills compared with teachers in KG and lower primary (i.e., B1 and B3), all the scores were within the medium range. To score highly (4 – 5) on this item, teachers needed to use a combination of close and open-ended questions and also asks pupils to explain their thinking and rationale for their responses. The scores suggest that teachers may not have the skill to do this effectively. Another item worth mentioning is *‘pupils asking questions on their own initiative’*, which was low for all classes across all intervention groups. Perhaps, the fact that teachers encouraged pupils to ask questions (medium – high scores) may have counteracted the need for pupils to take that initiative.

Table 14. Average scores for each lesson delivery item by intervention and class

	Direct					Indirect					GALOP				
	KG	B1	B3	B4	B6	KG	B1	B3	B4	B6	KG	B1	B3	B4	B6
Learning objectives made clear to pupils	3.09 (1.18)	3.23 (1.11)	2.75 (1.25)	3.36 (1.22)	3.26 (1.38)	2.36 (1.09)	2.62 (1.27)	2.56 (1.19)	2.21 (1.04)	2.69 (1.25)	1.72 (1.17)	2.00 (1.35)	1.95 (1.19)	1.88 (1.36)	2.21 (1.56)
Teacher uses board appropriately	3.43 (1.28)	3.62 (0.87)	3.73 (0.98)	4.00 (0.80)	3.92 (0.85)	3.28 (0.95)	3.37 (1.01)	3.43 (0.58)	3.04 (1.14)	3.69 (0.82)	3.33 (0.76)	3.2 (0.93)	3.63 (0.72)	3.46 (0.64)	3.58 (0.88)
Teacher uses TLRs in lesson	3.70 (1.22)	3.64 (1.21)	3.25 (1.38)	3.58 (1.29)	3.58 (1.23)	3.23 (1.17)	2.87 (0.94)	2.52 (1.37)	2.34 (1.64)	2.69 (1.60)	2.91 (1.28)	2.41 (1.34)	2.95 (1.26)	2.44 (1.29)	2.87 (1.39)
Teacher uses appropriate questioning skills	3.44 (0.93)	3.46 (0.88)	3.57 (0.92)	3.84 (0.81)	3.81 (0.78)	3.23 (0.83)	3.16 (0.76)	3.43 (1.03)	3.34 (0.98)	3.65 (0.71)	3.23 (0.81)	3.21 (0.73)	3.3 (0.82)	2.96 (0.99)	3.29 (1.04)
Teacher clarifies learners' misunderstandings	3.78 (0.99)	3.70 (0.70)	3.82 (0.94)	4.00 (0.80)	4.06 (0.63)	3.50 (1.20)	3.52 (1.16)	3.6 (0.99)	3.6 (0.82)	3.42 (1.6)	3.23 (1.14)	3.43 (1.07)	3.34 (1.26)	3.34 (1.19)	3.45 (1.17)
Teacher encourages boys and girls to answer questions	3.79 (0.88)	4.00 (0.86)	3.88 (0.88)	4.00 (0.72)	4.01 (0.72)	3.30 (1.14)	3.62 (0.76)	3.47 (1.12)	3.60 (0.72)	3.9 (0.81)	3.76 (0.96)	3.62 (0.76)	3.58 (1.05)	3.76 (0.71)	3.62 (1.01)
Pupils ask questions on their own initiative	2.03 (1.07)	2.03 (1.13)	2.42 (1.15)	2.31 (1.08)	2.56 (1.23)	1.65 (0.88)	1.72 (0.88)	1.95 (1.14)	1.73 (1.00)	2.13 (0.83)	1.4 (0.70)	1.37 (0.64)	1.37 (0.57)	1.61 (0.85)	1.75 (0.84)
Teacher speaks to pupils in friendly tone	4.26 (0.81)	4.15 (0.69)	4.22 (0.79)	4.39 (0.56)	4.33 (0.61)	4.13 (1.09)	4.41 (0.71)	4.43 (0.73)	4.34 (0.71)	4.39 (0.78)	4.11 (1.07)	4.25 (0.67)	4.04 (0.69)	4.07 (0.68)	4.04 (0.85)
Teacher acknowledges pupils' effort when they give wrong answers	3.51 (1.12)	3.57 (1.07)	3.68 (1.09)	3.56 (0.80)	3.50 (1.13)	3.21 (1.08)	3.12 (0.89)	2.86 (0.75)	3.14 (0.96)	3.43 (1.03)	3.50 (1.27)	3.37 (1.05)	3.29 (1.23)	3.26 (1.21)	3.08 (1.28)
Teacher allows pupils to participate in lessons	4.15 (0.80)	4.11 (0.73)	4.16 (0.74)	4.23 (0.65)	4.22 (0.72)	3.86 (0.86)	3.95 (0.55)	3.73 (0.91)	3.61 (1.02)	3.86 (0.99)	3.42 (1.30)	3.7 (0.99)	3.41 (1.31)	3.26 (1.28)	3.39 (1.30)
Teacher uses for reflections to end lesson	3.62 (0.95)	3.60 (0.96)	3.83 (0.84)	3.86 (0.60)	3.86 (0.89)	3.34 (1.36)	3.16 (0.91)	3.04 (1.06)	3.19 (1.07)	3.72 (0.98)	3.34 (1.23)	2.91 (1.17)	3.33 (1.16)	3.23 (1.24)	3.30 (1.14)
Teacher evaluates lesson taught	4.08 (0.52)	4.04 (0.69)	4.01 (0.65)	4.34 (0.59)	4.15 (0.63)	3.43 (1.16)	3.83 (0.63)	3.73 (0.68)	3.80 (0.81)	3.86 (0.88)	3.76 (0.99)	3.83 (0.56)	3.73 (0.81)	3.84 (0.83)	3.56 (1.07)

5.2.2. Lesson Delivery – Total Score

Scores for observed lesson delivery could range from 12 – 60, with higher scores indicating a higher quality lesson delivery. On the whole, teachers in Direct schools had higher average scores compared with those in Indirect and GALOP schools. Tables 15 to 18 present a breakdown of results by intervention, region, class, teacher gender.

Table 15. Average Lesson Delivery Scores by Intervention (N = 503)

Intervention	Mean	Standard Deviation
Direct (n = 263)	43.27	7.29
Indirect (n = 116)	38.23	7.96
GALOP (n = 124)	37.19	8.08
Total	40.61	8.13

Table 15 shows that on average, teachers in Direct schools had higher scores for the quality of lesson delivery relative to those in Indirect and GALOP schools. A one-way ANOVA was conducted to determine if lesson delivery was statistically different for the three interventions. There was a significant difference between groups ($F(2,500) = 33.95$, $p < .001$). A Tukey post-hoc test for multiple comparisons showed that mean score for the Direct group ($M = 43.27$, $SD = 7.29$) was significantly different than the Indirect ($M = 38.23$, $SD = 7.96$) and GALOP ($M = 37.19$, $SD = 8.08$). There was no significant difference between the mean scores of GALOP and Indirect. The results suggest that, statistically, teachers in Direct schools delivered lesson of higher quality. However, the average percentage of the mean scores relative to the total score (i.e., 60) is 72% for Direct, 63% for Indirect and 61% for GALOP. Although the scores are higher than those for lesson planning, supporting teachers further can help improve the quality of their lesson delivery.

Table 16. Average Lesson Delivery Scores by Intervention and Region (N = 503)

Intervention	Region		
	Accra (n = 148)	Volta (n = 136)	North (n = 219)
	Mean (SD)	Mean (SD)	Mean (SD)
Direct	45.05 (6.00)	41.73 (7.43)	42.97 (7.77)
Indirect	38.70 (8.17)	40.80 (8.46)	36.35 (7.12)
GALOP	33.51 (4.86)	43.97 (5.73)	34.31 (8.30)
Total	40.70 (7.95)	42.18 (7.28)	39.57 (8.62)

Table 16 presents a breakdown of results by region and intervention and shows that aside from the Volta region, teachers in Direct schools in Accra and North had higher average lesson delivery scores compared with those in Indirect and GALOP schools. We conducted a two-way ANOVA of lesson delivery scores on intervention group and region. The results showed a significant interaction between intervention group and region ($F(4,494) = 13.11$, $p < .001$). We then conducted a post-hoc analysis with the Direct group as the reference category compared to Indirect and GALOP using Bonferroni correction to counteract the problem of multiple comparisons. The results showed that, when compared with Indirect, scores differed significantly for teachers in Direct schools in Accra ($t(494) = 4.27$, $p < .001$) and North ($t(494) = 5.50$, $p < .001$). A similar pattern was observed when compared with GALOP (Accra: $t(494) = 7.99$, $p < .001$ and North: $t(494) = 6.98$, $p < .001$). There was no significant difference between scores of teachers in Direct schools in Volta and Indirect and GALOP.

Although a comparison by intervention only suggests teachers in the Direct schools delivered higher quality lessons, a breakdown by region indicates that teachers in Direct schools in the Volta are not performing differently from those in Indirect and GALOP. Even though the quality of training provided was not assessed, it is possible that variations in training may account for the differences in scores observed. Also, the fact that teachers in the North had lower scores for lesson planning compared to those in Accra and Volta but had similar scores in lesson delivery highlights the complexities associated with teaching. Although lesson planning has an important role in teaching, it may not necessarily translate into effective lesson delivery if other classroom conditions are not as good e.g., adequate textbooks, classroom space etc.

Table 17. Average Lesson Delivery Scores by Intervention and Gender (N = 503)

Intervention	Teacher Gender	
	Male (n = 201)	Female (n = 279)
	Mean (SD)	Mean (SD)
Direct	42.81 (7.91)	43.03 (6.87)
Indirect	38.13 (8.07)	38.34 (7.90)
GALOP	39.51 (7.80)	36.35 (8.05)
Total	40.85 (8.19)	39.92 (8.05)

As shown in Table 17, both male and female teachers in Direct schools had higher average scores for lesson delivery compared with those in Indirect and GALOP.

Table 18. Average Lesson Delivery Scores by Intervention and Class (N = 503)

Intervention	Class Observed				
	KG (n =102)	Basic 1 (n = 100)	Basic 3 (n = 101)	Basic 4 (n =100)	Basic 6 (n =100)
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Direct	41.58 (7.99)	42.09 (6.52)	42.92 (8.25)	44.96 (5.80)	44.86 (7.11)
Indirect	36.86 (9.35)	39.12 (5.85)	38.34 (7.04)	36.34 (9.27)	40.43 (7.78)
GALOP	37.00 (8.75)	37.03 (6.92)	37.25 (8.55)	37.00 (7.17)	37.66 (9.41)
Total	39.35 (8.74)	40.18 (6.75)	40.53 (8.40)	40.91 (8.15)	42.12 (8.37)

Table 18 presents a breakdown of results by class and shows very similar scores across each intervention group, with teachers in Direct schools having slightly higher average scores compared with those in Indirect and GALOP. In Figure 2, scores are disaggregated by region and class for each intervention arm. In general, the results showed that teachers in Direct schools in Accra and North had higher scores on lesson delivery compared with those in Indirect and Galop. However, in the Volta region, scores were slightly similar for teachers in all interventions across all classes. Slightly higher scores are observed for some classes in Direct schools. For instance, scores were higher for KG, B4 and B6 teachers in Accra; higher for B4 and B6 teachers in Volta and B3 – B6 teachers in North. That said, it is worth noting that B6 teacher in Indirect school in Accra scored highly compared to those in the other classes. It is possible that other teacher characteristics, such as self-efficacy, could play a role in influencing their teaching practices and this could be explored in the endline study.

It is important to note that several factors can impact how teachers who have had similar training achieve different outcomes in terms of lesson planning and delivery. Teaching is a complex activity and unless all teachers receive good quality on-going support e.g., through coaching and effective mentoring, their ability to translate training to effective professional practice may differ and inconsistent. In moving forward, it may be important to focus much attention on ensuring all teachers receive quality coaching and mentoring in addition to specific training in how to apply knowledge and skills to achieve effective lesson delivery outcomes.

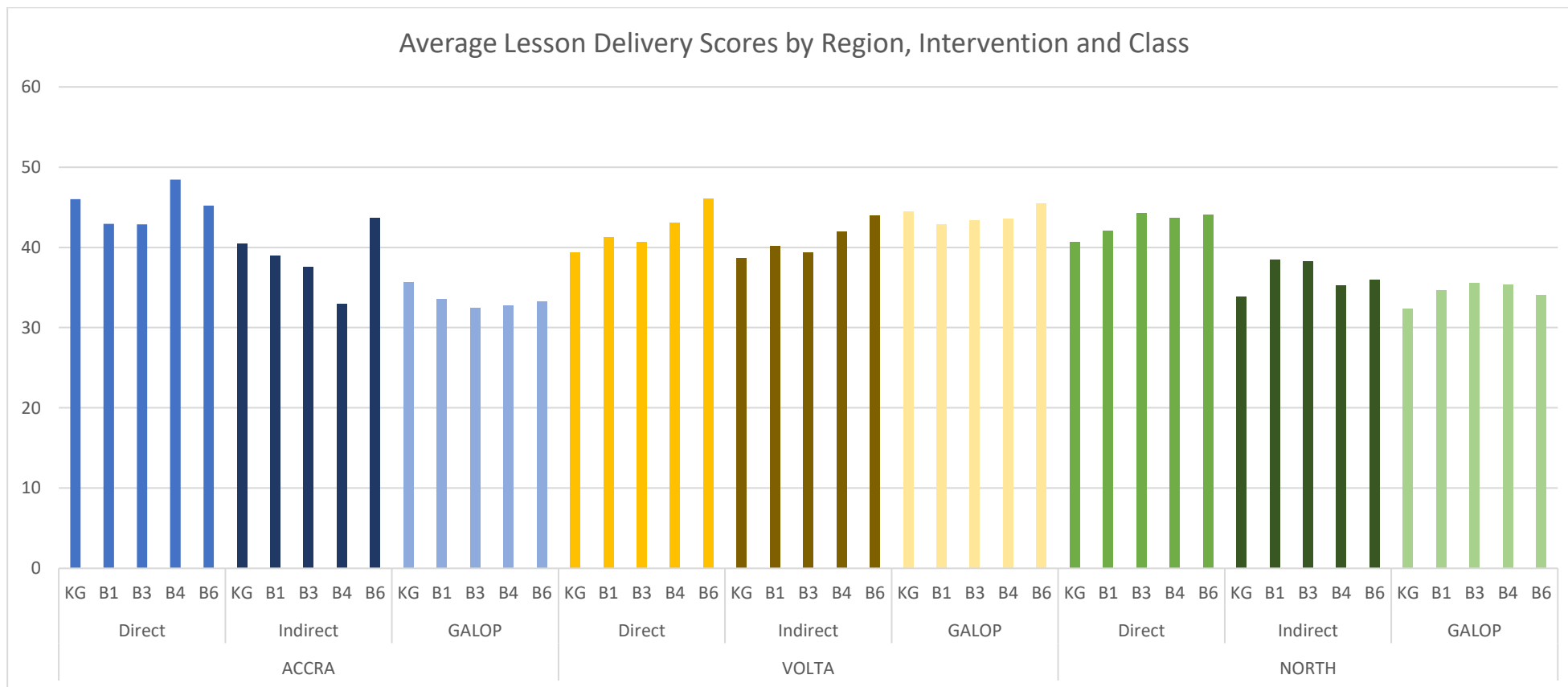


Figure 2. Average lesson delivery scores by region, intervention and class

5.3. Assessment of Play Activities

5.3.1. Item-by-item results

Table 19 shows the percentage scores of the items used to assess play activities. Generally, more teachers in Direct schools across the three regions used different play activities as part of the lessons observed compared with those in Indirect and GALOP. However, for most of the items, the percentage of teachers who used play activities was particularly lower for teachers in GALOP schools in Accra. For instance, only 5% of GALOP teachers in Accra used traditional activities as part of their lessons compared with 60% and 31% in GALOP schools in Volta and North, respectively. Notwithstanding, some of the activities were observed for more than half of teachers across regions and are worth noting. The first one is the use of *movement activities* in lesson, which was used by more than half of teachers across interventions in the three regions (except GALOP in Accra). The second example is in relation to *pupils' responses to open-ended questions*, which was observed for at least 60% of teachers across all regions and interventions. It is also striking that teachers offering children to choose activities and materials to play with is generally low (highest is Direct schools in Accra – 46%). The same applies to children exploring outside the classroom as part of learning. A detailed breakdown of play activities by intervention and teacher class is presented in Appendix 1.

Table 19. Percentage of teachers observed implementing play activities by region and intervention

	Accra			Volta			North		
	Direct	Indirect	GALOP	Direct	Indirect	GALOP	Direct	Indirect	GALOP
The teacher encourages movement activities in lesson	93%	64%	27%	93%	61%	77%	71%	70%	55%
Teacher incorporates traditional games, songs and dances in lesson	77%	15%	5%	71%	41%	60%	54%	47%	31%
The teacher uses guided play in the lesson	64%	25%	2%	60%	41%	55%	62%	37%	29%
The teacher encourages pupils to use manipulatives (e.g., counters, bundles of sticks, charts) in the lesson	59%	35%	16%	58%	48%	41%	61%	61%	27%
Teacher offers children the chance to choose activities and materials for play	46%	6%	—	26%	16%	17%	37%	22%	8%
Teacher engages children in using stories to deliver lesson	42%	30%	10%	32%	41%	25%	46%	8%	17%
Teacher organizes a variety of learning spaces for play (e.g. reading corner)	76%	24%	2%	41%	25%	25%	47%	6%	19%
Pupils have chances to play with materials or objects (different shapes and colours)	72%	41%	11%	63%	38%	36%	65%	44%	21%

Teacher encourages child-guided activities or experiences with scaffolding	77%	40%	16%	71%	38%	47%	71%	62%	34%
Pupils work in pairs or groups	94%	50%	13%	75%	48%	50%	75%	34%	33%
Pupils share their learning in different ways	75%	72%	2%	85%	67%	65%	55%	43%	44%
Pupils choose from a variety of learning activities	45%	2%	—	50%	12%	10%	39%	17%	8%
Pupils works are displayed in the classroom	49%	9%	—	34%	29%	30%	24%	12%	19%
Pupils respond to open-ended questions and discussions	79%	71%	67%	93%	90%	82%	76%	71%	61%
Pupils explore outside of the classroom	47%	14%	8%	13%	6%	40%	18%	11%	4%
Pupils engage in activities with their senses [E.g.s. Find something patterned]	45%	61%	5%	75%	48%	50%	75%	30%	33%
Pupils respond to class content with physical actions [E.g.s. Touch your nose; Kofi says dance]	62%	58%	8%	63%	51%	42%	72%	49%	24%

5.3.2. Total Scores Results

Scores for play activities could range from 0 – 17, with higher scores indicating more play-based activities. Generally, more play activities were observed for teachers in Direct schools across lessons observed compared with those in Indirect and GALOP schools. Tables 20 to 23 present a breakdown of results by intervention, region, class, teacher gender.

Table 20. Average scores for play activities observed across lessons by Intervention (N = 503)

Intervention	Mean	Standard Deviation
Direct (n = 263)	9.97	4.40
Indirect (n = 116)	6.55	3.86
GALOP (n = 124)	4.82	4.39
Total	7.91	4.82

As shown in Table 20, on average, more play activities were observed for teachers in the Direct group compared with both Indirect and GALOP. It is important to note that on average, play activities observed for teachers in the Direct group is almost twice of what was observed for teachers in the GALOP. A one-way ANOVA was conducted to determine if the number of play-based activities observed was statistically different for the three interventions. There was a significant difference between groups ($F(2,500) = 68.56$ $p < .001$). A Tukey post-hoc test for multiple comparisons showed that mean score for the Direct group ($M = 9.97$, $SD = 4.40$) was significantly different than the Indirect ($M = 6.55$, $SD = 3.86$) and GALOP ($M = 4.82$, $SD = 4.39$). Interestingly, there was significant difference between the mean scores of GALOP and Indirect.

These results show that although more play activities were observed for teachers in the Direct schools compared to Indirect and GALOP, the number of play activities observed for those in Indirect schools was statistically higher compared with GALOP.

Table 21. Average scores for play activities observed across lessons by Intervention and Region (N = 503)

Intervention	Region		
	Accra (n = 148)	Volta (n = 136)	North (n = 219)
	Mean (SD)	Mean (SD)	Mean (SD)
Direct	11.11 (3.73)	9.61 (3.66)	9.43 (5.01)
Indirect	6.05 (3.86)	7.09 (4.11)	6.54 (3.72)
GALOP	1.97 (2.27)	7.6 (4.31)	4.70 (4.31)
Total	7.66 (5.17)	8.44 (4.10)	7.74 (4.98)

Table 21 presents a breakdown by region and shows a consistent pattern, with more play activities observed for teachers in the Direct group across lessons compared with those in Indirect and GALOP groups. While the margin of score difference is slightly large for teachers in Volta and North, the difference in play activities observed for teachers in Accra is notable. On average, about 5 more play activities were observed for teachers in Direct schools in Accra across lessons compared with those in Indirect schools and 9 more play activities compared with those in GALOP schools in Accra. We conducted a two-way ANOVA of play-based activities used on intervention group and region. The results showed a significant interaction between intervention group and region ($F(4,494) = 9.69, p < .001$). We then conducted a post-hoc analysis with the Direct group as the reference category compared to Indirect and GALOP using Bonferroni correction to counteract the problem of multiple comparisons. The results showed that, when compared with Indirect, scores differed significantly for teachers in Direct schools in all three regions (Accra: $t(494) = 5.96, p < .001$; Volta: $t(494) = 2.80, p < .05$; North $t(494) = 4.20, p < .001$). However, when compared with GALOP, scores differed significantly for teachers in Accra ($t(494) = 11.08, p < .001$) and North ($t(494) = 6.68, p < .001$), but only marginally for Volta ($t(494) = 2.43, p < 1.00$).

Taken together, the results echo the pattern observed for lesson delivery, with teachers in Direct schools in Volta appearing to be falling behind those in Accra and North.

Table 22. Average scores for play activities observed across lessons by Intervention and Class (N = 503)

Intervention	Class Observed				
	KG (n = 102)	Basic 1 (n = 100)	Basic 3 (n = 101)	Basic 4 (n = 100)	Basic 6 (n = 100)
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Direct	10.66 (4.48)	9.94 (4.06)	9.79 (4.72)	9.90 (4.32)	9.56 (4.47)
Indirect	6.78 (3.84)	7.20 (3.43)	6.82 (3.55)	5.43 (4.00)	6.47 (4.49)
GALOP	5.23 (4.42)	5.29 (4.74)	5.50 (4.61)	4.30 (4.31)	3.79 (3.98)
Total	8.40 (4.92)	8.17 (4.51)	8.09 (4.79)	7.42 (4.93)	7.47 (4.95)

Table 22 shows that regardless of class, more play activities were observed for teachers in the Direct schools across lessons compared with teachers in Indirect and GALOP schools.

Table 23. Average scores for play activities observed across lessons by Intervention and Gender (N = 503)

Intervention	Teacher Gender	
	Male (n = 201)	Female (n = 279)
	Mean (SD)	Mean (SD)
Direct	9.00 (4.76)	10.42 (4.17)
Indirect	6.62 (3.97)	6.47 (3.76)
GALOP	5.03 (3.98)	4.74 (4.55)
Total	7.62 (4.66)	7.79 (4.94)

As presented in Table 23, more play activities were observed for both male and female teachers in Direct schools relative to the Indirect and GALOP groups.

Findings: Teacher Survey

5.4. Attitude towards learning through play

One main goal of the survey was to understand teachers' attitudes to learning with a focus on aspects of learning that reflect active or play-based learning. Teachers' attitude to learning was assessed using a pair of statements and teachers were asked which one they agreed with more.

Overall, teachers' attitudes were similar across intervention groups, but some of them are worth mentioning. For instance, for item 1 (see table 24), although the number of teachers who agreed with statement 1 or both is similar, more teachers in the Direct group believed children learn best from peers compared with those in Indirect and GALOP. Also, more teachers in the Direct group believed that supporting children's own efforts to answer questions will enhance their understanding (item 5). Another item worthy of mention is item 8, which presents a dichotomy between the importance of play-based learning in primary and preschool. The results show that a significant number of teachers across all intervention groups believed play has a role in primary education. This is important because it demonstrates a belief in the power of play beyond preschool. Also, in terms of agency in learning (item 9), a relatively low percentage of teachers across all intervention groups (about 14% – 17%) thought there should be a balance of initiative and responsibility between children and teachers compared to a higher percentage of teachers across all intervention groups (although it is slightly lower for Direct) who thought that teachers are responsible for choosing learning activities for students. These interpretations of agency in learning are important because they may influence how teachers encourage children's initiatives during teaching and learning.

Table 24. Teachers' attitude towards learning

Statements	Responses	Direct	Indirect	GALOP
	Agree with ...			
A 1. Children learn best from the teacher	1 much more than 2	12%	19%	20%
	1 and 2 equally	36%	34%	32%
	2 much more than 1	72%	47%	48%
B 1. It is important for children in class to be quiet and speak only when asked to	1 much more than 2	34%	40%	38%
	1 and 2 equally	16%	11%	11%
	2 much more than 1	50%	49%	51%
C 1. Children learn literacy/language best in small groups	1 much more than 2	66%	64%	60%
	1 and 2 equally	17%	13%	13%
	2 much more than 1	17%	23%	27%
D 1. It is better if children tell the teacher when they don't understand	1 much more than 2	81%	71%	86%
	1 and 2 equally	4%	10%	2%
	2 much more than 1	15%	18%	12%
E 1. If children attempt to answer questions on their own, they will be more likely to understand	1 much more than 2	81%	63%	75%
	1 and 2 equally	8%	16%	6%
	2 much more than 1	11%	21%	18%
F 1. Parents welcome more play-based approaches to learning in the classroom	1 much more than 2	70%	65%	61%
	1 and 2 equally	11%	7%	13%
	2 much more than 1	19%	28%	26%
G 1. Children learn best by exploring new things on their own	1 much more than 2	77%	76%	73%
	1 and 2 equally	16%	11%	14%
	2 much more than 1	7%	13%	13%
H 1. Play is an important part of learning for children in primary school	1 much more than 2	65%	69%	77%
	1 and 2 equally	29%	27%	17%
	2 much more than 1	6%	4%	6%
I 1. Children can choose their own learning activities in the classroom	1 much more than 2	35%	15%	17%
	1 and 2 equally	17%	14%	17%
	2 much more than 1	48%	70%	66%

2. Teachers are responsible for choosing the learning activities for his/her students					
J	1. It is more important that the teacher is engaged with students	1 much more than 2 1 and 2 equally	43% 33%	46% 29%	52% 23%
	2. It is more important that the students are engaged with each other	2 much more than 1	24%	26%	24%

5.5. RTP Project Activities

Another major purpose of the learning study was to determine the effectiveness of the different continuum of teacher training (COTT) activities in helping and sustaining teachers' use of play-based activities. This is a key component of the RTP intervention programme. To assess the effectiveness of the training and related components, teachers were asked to rate the training workshops, coaching/mentoring and professional learning communities (PLC).

In terms of training workshops, the data shows that 85% of Direct, 56% Indirect and 40% GALOP participated in training workshops in 2021. In effect, more training workshops were achieved under the Direct intervention than Indirect and GALOP. A similar trend is observed for participation in training workshops in 2022 (Direct: 86%; Indirect: 44% and 38% GALOP). Of the teachers who participated in workshops in 2022, about 90% in Direct and Indirect and 80% in GALOP attended workshops five times the previous terms (May – August 2022).

Table 25 shows a breakdown of teachers rating of the effectiveness of the training workshops in building their capacity to implement play-based activities. In general, compared with Indirect and GALOP, more than half of teachers in Direct schools rated the training workshops as very effective in improving their abilities to engage in all the key indicators of play-based learning activities listed in Table 25. However, in terms of planning gender-responsive lessons, about 17% more of the teachers in Indirect schools rated the training received at workshops as very effective compared with those in Direct schools. It is important to note here that ratings of teachers in GALOP schools are generally lower compared with Direct and Indirect. A breakdown of responses by region and intervention is presented in Appendix 2.

Table 25. Effectiveness of training workshops

	Direct	Indirect	GALOP
To what extent have the training workshops effectively improved your ability to:			
Lead a play-based activity	80%	77%	58%
Modify games relevant to the contents of curriculum	65%	64%	49%
Create physically safe environment for learning	60%	71%	67%
Develop lesson plan that takes into equal account the needs of girls and boys	65%	82%	55%

Apply the Behaviour-Impact-Do model to correct or reinforce children's behaviour	64%	56%	42%
Help children reflect on activities and their experiences	75%	62%	61%
Adapt games for the purpose of developing listening and speaking skills	66%	67%	57%
Use Reflect-Connect-Apply (RCA) questions in developing children's core competencies (e.g., critical thinking, creativity)	70%	68%	45%
Identify games that are relevant for teaching mathematics content of the curriculum	65%	63%	52%
Help children use their previous experiences in other situations	76%	64%	66%
Use play-based activities that are free of gender biases or stereotypes	78%	75%	69%
Adapt games for reading lessons	68%	61%	71%
Modify Reflect-Connect-Apply (RCA) discussion questions for different content areas of the curriculum	67%	56%	43%
Incorporate play-based activities into the lesson plan	72%	73%	63%
Adapt games for the purpose of developing writing skills	65%	57%	43%
Use Reflect-Connect-Apply (RCA) questions in developing children's language skills	73%	52%	50%
Identify or choose games that are appropriate for their age	71%	66%	56%
Create environments that children feel emotionally safe for learning	75%	77%	79%
Use positive discipline strategies (e.g., identifying the behaviour to be stopped) to support the development of students' behaviour	69%	61%	62%

Note: The color scale is a gradient based on the percentage of teachers reporting very effective training workshops. Green = high effectiveness; yellow = moderate effectiveness; orange = low effectiveness; red = extremely low effectiveness.

In terms of coaching/mentoring activities, 72% of Direct, 48% each of Indirect and GALOP reported receiving support from District Teacher Support Team or Headteacher in the last 12 months. Out of this number, 80% in Direct, 72% Indirect and 39% in GALOP reported interacting with their coach/mentor more than once in the previous term (May – August 2022).

Figure 3 shows the percentage of teachers who reported receiving support from coach/mentor on different activities. It is observed that the majority of the teachers in Direct schools said they had received support on all the key indicators of play-based learning activities compared with teachers in Indirect and GALOP. Table 26 presents teachers' report on the effectiveness of the coaching/mentoring component on their ability to use play-based activities. On the whole, more teachers in Direct schools considered the coaching/mentoring support as very effective compared with those in Indirect and GALOP schools. However, across all intervention groups, the percentage points are generally lower compared with their ratings of training workshops. A breakdown of responses by region and intervention is presented in Appendix 3.

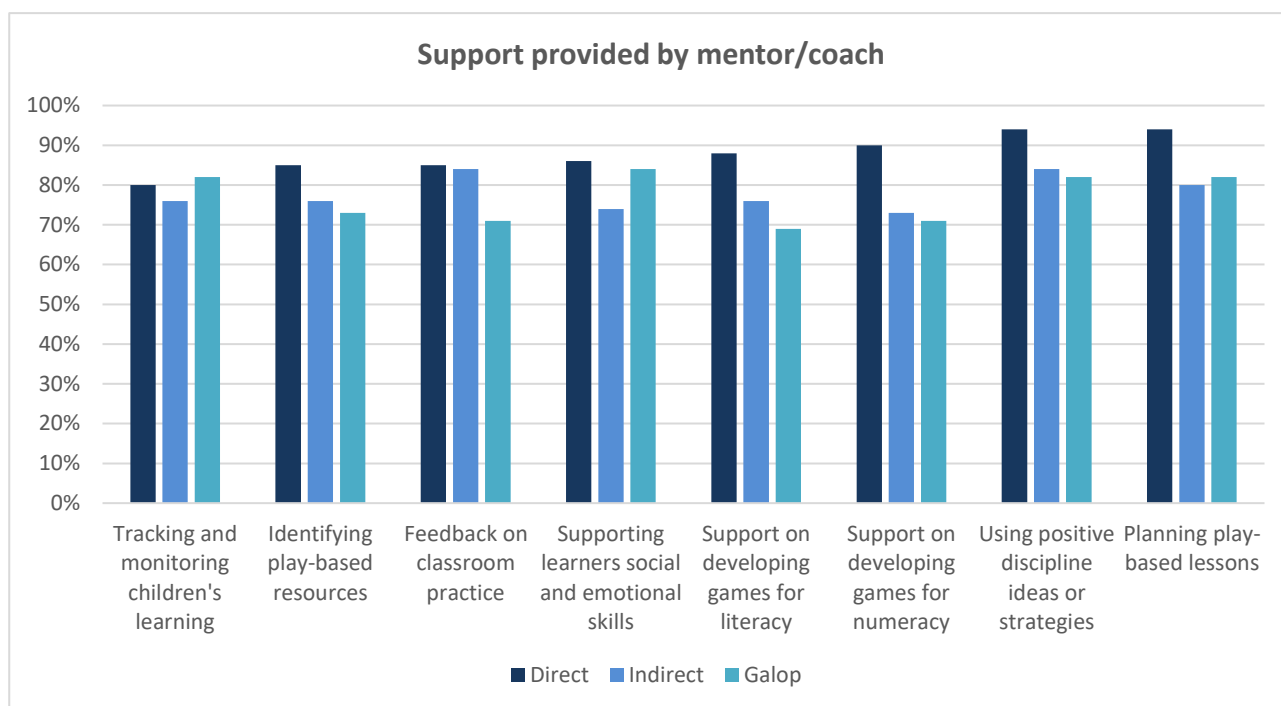


Figure 3. Percentage of teachers who received support from coach/mentor

Table 26. Effectiveness of coaching/mentoring

	Direct	Indirect	GALOP
To what extent has the coaching and mentoring process effectively improved your ability to:			
Use play-based activities	65%	43%	46%
Link children's experiences with their previous knowledge	65%	51%	43%
Incorporate play-based activities into lesson plan	64%	51%	37%
Develop games for numeracy lessons	65%	39%	44%
Guide children to use their experiences in other situations	57%	35%	32%
Create safe learning environments	71%	50%	59%
Design games for literacy lessons	70%	37%	30%
Ask reflective questions	71%	47%	43%
Effectively determine if children are learning	59%	39%	50%
Effectively address the learning needs of a child who is struggling	65%	43%	46%

Note: The color scale is a gradient based on the percentage of teachers reporting very effective coaching/mentoring. Green = high effectiveness; yellow = moderate effectiveness; orange = low effectiveness; red = extremely low effectiveness.

The third component of continuum of teacher training (COTT) examined is professional learning (PLC) communities. Like both training workshops and coaching/mentoring, the majority of teachers in Direct schools reported participating in PLCs in the previous term (May – August 2022) compared with teachers in Indirect and GALOP (89% Direct, 70% Indirect and 44% GALOP). Of those who participated, 97% of those in Direct, 87% in Indirect and 76% in GALOP participated more than once. Table 27 presents teachers' report on the effectiveness of the PLCs on their ability to use play-based activities. Although ratings were generally higher for teachers in Direct schools, the majority of teachers across all interventions considered PLCs as very effective in

supporting their ability to facilitate equal participation for boys and girls and use different teaching styles to meet different learning needs of learners. However, relatively fewer of the teachers across all interventions considered PLCs as very effective in supporting their ability to engage with caregivers on the importance of the use of play. A further breakdown of responses by region and intervention is presented in Appendix 4.

Table 27. Effectiveness of professional learning communities

	Direct	Indirect	GALOP
To what extent has PLCs effectively improved your ability to:			
Generate new ideas for play-based learning	78%	69%	59%
Use creative ideas to promote play-based learning	67%	66%	48%
Use assessment to diagnose children's learning needs for lesson planning	60%	60%	57%
Create a safe classroom learning environment	78%	68%	74%
Use positive strategies for disciplining children	70%	64%	63%
Facilitate children's participation in class/school activities	77%	66%	65%
Equally support boys' and girls' participation in class/school activities	79%	75%	78%
Use different teaching styles to meet different needs of learners in your classroom	75%	71%	72%
Engage parents or caregivers about the usefulness of play-based activities in learning in class and school	44%	34%	14%
Use Reflect-Connect-Apply (RCA) questions in developing children's core competencies	66%	58%	44%

Note: The color scale is a gradient based on the percentage of teachers reporting very effective PLCs. Green = high effectiveness; yellow = moderate effectiveness; orange = low effectiveness; red = extremely low effectiveness.

A close observation of Tables 25, 26 and 27 seem to suggest that the majority of the teachers in Direct schools considered the three activities as contributing very effectively to their use of play-based activities, with at least half of teacher ratings across all three components, except engaging with caregivers under PLCs (i.e., training workshops: 60% – 80%; coaching/mentoring: 57% – 71%; PLCs: 66% – 79%). However, the results seem to suggest that teachers in Indirect schools considered the training workshops and PLCs as effectively supporting their use of play-based activities compared with coaching/mentoring, with at least half of teacher ratings on both components (training: 52% - 82%; PLCs: 58% - 75%), except engaging with caregivers under PLCs. Also, the results seem to suggest that PLCs are more effective in supporting GALOP teachers' use of play-based activities compared with the training workshops and coaching/mentoring.

5.6. Perceptions of a play-based learning approach

In addition to the effectiveness of the intervention activities, teachers' general impressions about a play-based learning approach in terms of the *time required*, *meeting curricula expectations* and *school culture* were examined.

Table 28 presents a breakdown of teachers' perceptions. In general, the majority of teachers across all interventions believed a play-based approach is supported and encouraged by other teachers and school management. Also, although most teachers in Direct and Indirect schools

thought play-based activities are not difficult to use in classrooms, about one-third of GALOP teachers thought otherwise. In terms of using a play-based approach and meeting curricula requirements, on the one hand, most teachers across all intervention believed it is highly effective in developing children's literacy, numeracy and social-emotional skills. However, quite a number of teachers (range: 19% – 44%) believed that a play-based approach is not adequately reflected in the curriculum goals, *makes it difficult to meet school curriculum goals and manage children's behaviour*. It is significant to note that while 27% of Direct teachers believed a play-based approach has not made significant change in children's learning, a relatively lower percentage of teachers in Indirect and GALOP believed same. Although these inconsistencies are puzzling, they raise questions about how to effectively communicate to teachers the representation of play-based learning in the curriculum and its contribution to children's learning.

Table 28. Teachers' perceptions of the play-based learning approach

	Direct	Indirect	GALOP
To what extent do you agree with the following statements about play-based learning?			
I find play-based activities difficult to use in classrooms*	86%	77%	70%
Time required			
I require more time to prepare play-based activities for my lessons	79%	80%	86%
Assessing children's learning through play-based activities requires more time than other activities	56%	68%	80%
It takes more time to deliver play-based learning lessons	54%	62%	75%
Curricula expectations			
It is difficult to use the play-based approach and still meet school curriculum goals*	71%	71%	57%
The play-based approach is highly effective in developing children's literacy skills	96%	95%	96%
The play-based approach is highly effective in developing children's numeracy skills	98%	96%	97%
The play-based approach makes it difficult to manage children's behaviour during the lesson*	67%	62%	56%
The play-based approach is highly effective in developing children's social and emotional skills	100%	93%	97%
From my experience, the play-based approach has not made significant change in children's learning*	73%	88%	82%
The play-based approach is not adequately reflected in the goals of the new curriculum*	76%	81%	66%
School culture			
Teachers in my school are committed to using the play-based approach	96%	85%	83%
Teachers in my school feel motivated to adopt the play-based approach for lessons	95%	88%	84%
Our school management supports the use of play-based approaches in teaching	96%	88%	87%
Teachers in my school are determined to use the play-based approach despite the challenges	97%	92%	92%

Note: The color scale is a gradient based on the percentage of teachers agreeing to each statement. Green = high agreement; yellow = moderate agreement; orange = low agreement; red = extremely low agreement. *Items have been reverse-coded. Responses reflect percentage of teachers disagreeing.

5.7. Factors facilitating the use of play-based activities

The survey examined factors impacting change in teachers use of play-based activities. Teachers were asked to determine whether certain factors served as a *facilitator* or *hindrance* to their use of play-based activities. Results of teachers' responses to the factors as facilitating play-based activities are shown in Figure 4. On the whole, a high proportion of teachers across all interventions considered training activities, including academic training, workshops, professional learning communities, as important in enabling their use of play-based activities. However, compared to teachers in Indirect and GALOP schools, most Direct school teachers considered RTP-related activities (i.e., *the use of teacher champions and mentor/coach*) as contributing to their use of play-based activities.

Also, almost all teachers across all intervention groups considered the outdoor space as an enabling factor to the use of play. While most of the teachers in Direct schools did not consider the curricular expectations as a hindrance to the use of play, a significant proportion (about 30%) in both Indirect and GALOP considered it as a hindrance. It is possible that RTP activities with teachers in Direct schools have made it easier for them to connect play-based activities to curricular requirements. That said, teachers across all groups considered some factors, *including managing children's behaviour, time required for play, play materials, class size and indoor classroom space*, as limiting factors in their use of play-based activities. Interestingly, while about a quarter of teachers in Direct schools thought parental attitudes to play hindered their use of play, approximately half of the teachers in Indirect and GALOP schools considered it as a hindrance. It is possible that teachers who benefit from RTP's intervention tend to translate this into more positive engagements with caregivers on the use of play.

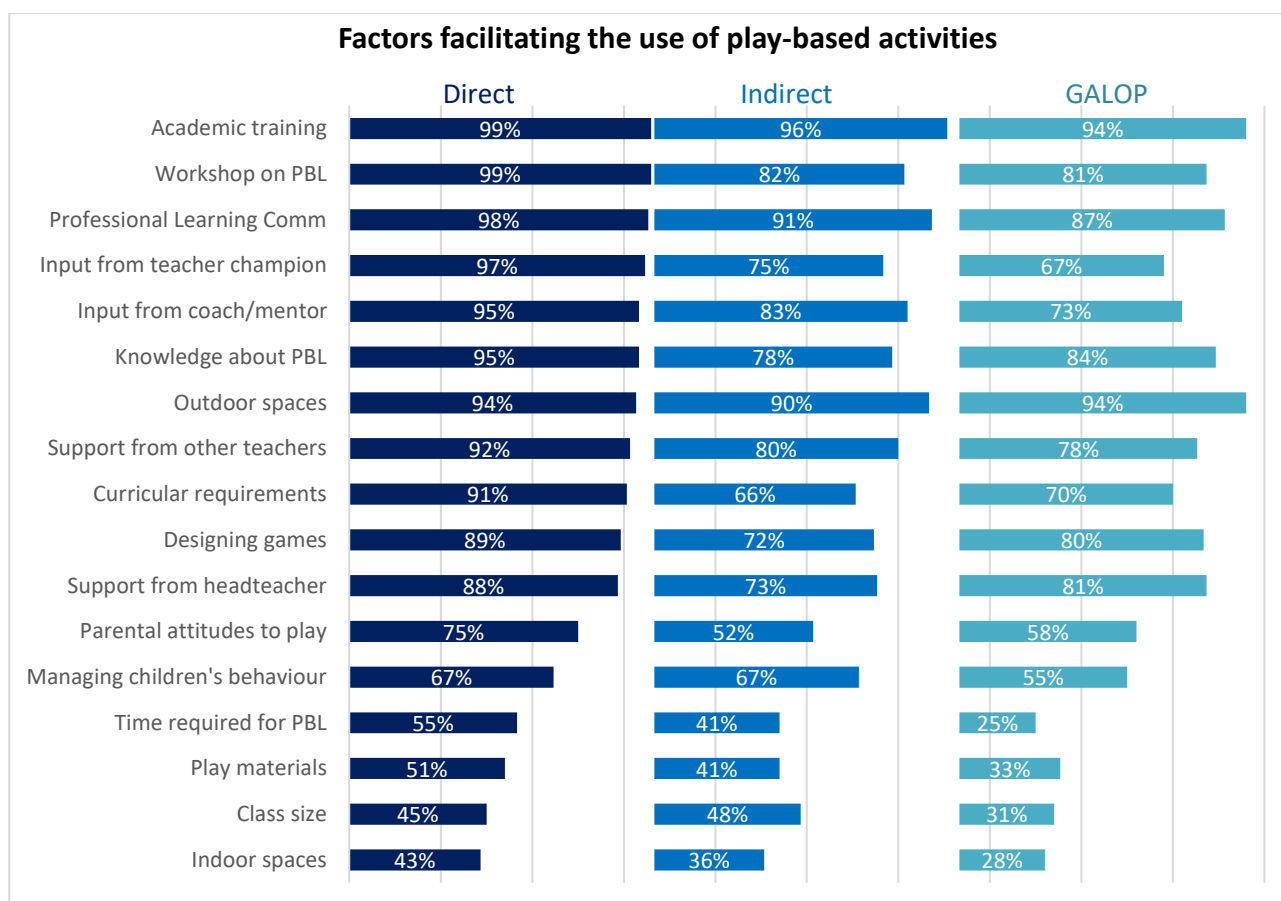


Figure 4. Percentage of teachers who reported factors enabling the use of play

5.8. Motivation to use play-based activities

Closely related to factors enabling teachers' use of play-based activities is what motivates or influences teachers' decision to use play-based activities. Motivations to use play-based activities were assessed in four areas: *instructional strategies*, which focused on teachers' ability to use different approaches and assessment to meet children's learning needs; *value of play*, which focused on the importance of play in the teaching and learning process; *classroom management*, which focused on teachers' ability to organise and manage classroom behaviour; and *resources*, which examined the importance of teaching and learning resources in the use of play-based activities. Table 29 shows a breakdown of teachers' responses to each item.

The results showed that the *flexibility associated with play-based instructional strategies*, *value of play* and *teachers' ability to effectively manage classroom behaviour* are important motivations for teachers' use of play-based activities across all intervention groups. However, access to resources (except outdoor spaces) was not among the most influential motivations to teachers' use of play-based activities, although percentages are higher for Direct and Indirect compared with GALOP. This is a surprising result. Teachers who rated resources as less important may have become accustomed with working within the constraints they find themselves. It is worth mentioning that this finding is consistent with the results presented in Figure 4 and highlights the prevalence of structural challenges in the discourse of play-based activities in Ghana.

Table 29. Factors motivating teachers' use of play-based activities

	Direct	Indirect	GALOP
Instructional strategies			
Play-based activities are important because they enable me to:			
Use a variety of assessment strategies to assess children's learning	97%	95%	90%
Respond to difficult questions from learners	96%	89%	86%
Assess children's understanding of basic concepts	99%	97%	95%
Design good questions to assess children's learning	98%	95%	97%
Adjust lessons to the appropriate level of children	100%	95%	95%
Provide alternative paths to learning when children are confused or do not understand	100%	98%	94%
Child engagement/ value of play			
Play-based activities enable me to:			
Motivate children who show low interest in learning	100%	94%	97%
Help children to believe or think they can do well in class activities	100%	97%	98%
Help children to value learning	100%	99%	96%
Grab the attention of the most difficult children	96%	98%	92%
Help children think critically	99%	99%	96%
Help children develop creativity	100%	98%	96%
Identify children who are struggling with their learning or falling behind in class	99%	97%	94%
Help improve children's reading skills	98%	99%	92%
Help improve children's numeracy skills	100%	98%	96%
Classroom management			
Play-based activities are important for helping me to:			
Control or manage disruptive behaviour during lessons	91%	90%	76%
Make what I expect children to learn clear to them	99%	98%	91%
Establish routines to keep activities running smoothly	100%	95%	86%
Get children in my class to follow rules	97%	92%	88%
Calm a learner who is disruptive	92%	96%	94%
Get the few disruptive children to focus on their learning	95%	97%	90%
Resources			
I use play-based activities because:			
I have more time for lessons	83%	77%	58%
I have access to indoor play spaces	77%	79%	56%
I have access to outdoor play spaces	91%	90%	85%
I have access to physical play resources (e.g., books, playdough)	79%	72%	57%
I have access to online play resources (e.g., tips for games and activities)	69%	49%	36%

Note: The color scale is a gradient based on the percentage of teachers reporting importance of each item in motivating their use of play. Green/Yellow = high importance; orange = moderate effectiveness; red = low importance.

Policy representation of play-based activities and holistic skills development

This section of the report presents a document analysis of two educational policies and a trainer's manual for kindergarten education in Ghana. By adopting a thematic approach, the analysis examines how learning through play/play-based learning activities and development of children's holistic skills are represented in policy and educational documents. For this analysis, four themes were employed, which consisted of brief description of the document, language for learning through play, descriptors of learning through play/holistic skills and contextualising play-based learning. Themes two, three and four had sub-themes that are examined in detail in later sections of the report.

Brief description of Documents

The Education Strategic Plan (ESP) 2018-2030 is the third of its kind in a series of plans introduced in 2019 by the Ministry of Education to improve learning outcomes and standards at all levels and in every educational institution in the country. It follows ESP 2010-2020 and sought to align learning outcomes with the Sustainable Development Goals, particularly SGD 4 which seeks to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. Covering 12 years, the ESP 2018-2030 focuses on three key issues namely improving learning outcomes, prioritising policies and activities in the education sector and a focus on the efficiency of the education system.

Published in 2020 by the Ministry of Education, the Early Childhood Education Policy focuses on kindergarten education and represents Ghana's commitment to ensuring access to quality early childhood development. This focus introduces a significant difference between this policy and the ESP 2018-2030. Unlike the ESP which focuses on improving learning outcomes generally, the ECE exclusively centres on early childhood education. This notwithstanding the ECE recognises and highlights issues documented in the ESP 2018-2030 and identifies pathways through which they can be addressed.

Developed by the Ghana Education Service in 2022, the National KG INSET Trainer Manual recognises the significance of play-based learning to improve learning outcomes. Given this recognition, the Manual seeks to enhance teachers' capacity to provide the requisite experience for learners to engage, interact and play. Unlike, the ECE and ESP 2018-2030, the manual positions play-based learning at the centre of early childhood education and seeks to provide teachers with training for play-based learning, coaching and mentoring. The manual, however, draws on the ESP 2018-2030 to ensure that learners obtain holistic early childhood development.

Language for Learning through play

From the analysis of ECE policy and INSET documents, play-based learning is referenced in two out of three documents reviewed (i.e., ECE policy and INSET documents). The ESP policy document focuses on improving learning outcomes generally at all levels of the country's education, but is silent on how these may be achieved, especially any mention of the range of pedagogical practices to be promoted at basic school level.

Basic education should provide all learners with the foundational skills and confidence to prepare themselves to make informed choices and choose between different learning streams at the secondary level. (ESP p 21).

However, unlike the ESP 2018-2030, the ECE policy and the INSET Trainer Manual specifically refer to learning through play. The INSET Trainer manual dedicates two sections to discuss several aspects of LtP. For the KG INSET manual, it states that the objective is (p. v)

... provide teachers with the knowledge and skills required to apply learner-centred, play-based learning pedagogy in their kindergarten (KG) classrooms (p. V).

Despite sharing a similarity in their references to learning through play, the two documents also display marked differences. The ECE policy communicates the idea of *learning through play* in six different ways: *right to play, play-based learning, play-based approaches, play-based pedagogies, play-based language and play-based materials*. These appear about 27 times. It is not clear what the difference is between ‘play-based approaches’ and ‘play-based pedagogies’. It would be important for any distinctions to be made clear to avoid duplication of ideas or confused understanding.

The INSET Trainer Manual communicates the idea of play using *play-based learning, role play and free play*. Play-based learning is mentioned 673 times, Free play 159 times, and role-play 88 times. This is not surprising given that this is a training manual dedicated to improving play-based learning. Table 19 displays the types and frequency of languages used to communicate the idea of play in the ECE policy and the National KG INSET Trainer Manual.

Table 30. Type and Frequency of language used

Document	Language used	Frequency
ECE Policy	Play-based pedagogies	27
	Play-based learning	3
	Play-based approaches	3
	Play material	3
	Right to play	3
	Play language	2
INSET Manual	Play-based learning	673
	Free play	159
	Role play	88

The phrasing of the notion of play

The ECE policy and the INSET Trainer Manual phrase the idea of learning through play in several ways. This section examines some of the ways in which the notion of play is presented.

Play as a right

The ECE policy phrases the idea of learning through play as a moral and legal entitlement that children should have at the early stage of their development:

The government, through my Ministry, is committed to enforcing and achieving the Convention on the Rights of the Child – children have a right to high quality education and a right to play... (ECE, p. iv)

The legal imperative advances the view that play should be seen as an entitlement in early childhood education centres. It implies that educational institutions have to make play an essential component of learning and that this is essential right of every child. To deliver this right, educational institutions need the resources, equipment and teachers to make this right a reality for children. However, the ECE Policy does not clearly specify the structures that promote the achievement of this objective in early childhood education centres.

As a method and practice of teaching

The documents regard play as a *method* and a *teaching practice*. This conception is particularly dominant in the ECE policy, which refers to learning through play with phrases such as play-based ‘pedagogy’ and ‘play-based approach’.

Utilise a play-based approach to delivering KG education to improve learning outcomes for continuous growth (p. 7).

The policy goal of this action area aims at directing the development and implementation of a KG curriculum that is participatory, equitable and inclusive and delivered through a play-based pedagogy to promote the holistic development of all KG children (p.13).

A growing body of research over the last decade and a half highlight how play, when applied effectively in the classroom, can contribute to learning in literacy, numeracy and generic competencies (INSET Trainer Manual, p. i)

This conception perhaps indicates that there exist different methods and teaching practices for promoting learning through play in early childhood education. The difference between learning through play and other methods and practices is evident in the former’s recognition of the interconnectedness between learning and play. The policy’s focus is, therefore, on shifting attention to and employing an approach to teaching and learning that is play driven.

The role accorded play as a method of teaching has some implications for education delivery and management including its role in the development of literacy and numeracy skills as articulated in the INSET trainer manual.

The United Nations Convention on the Rights of the Child (2013) conceives play as an activity that *is initiated, controlled and structured* by the child and which suggests that children are to be encouraged to see and make play activities as important in their learning. It also raises the importance of children’s agency in play which is key to how they become active learners. The survey results suggested that teachers are less likely to encourage greater initiative from children when it comes to play, which reflects their dominant role in traditional teaching and learning process.

As a method and teaching practice, play-based pedagogies training programmes focus on teachers. Such training programmes are intended to help teachers acquire the skills and competencies to maximise the opportunities associated with play. The ECE policy highlights this in the policy goal of Action Area 3: *Improved skills and competencies of KG teachers in play-based pedagogy* (p. 25). The focal point of policies is, therefore, on having well-trained instructors for early childhood education and who have the ability to use play effectively to promote children's learning. The significance of learners' active participation in learning through play also suggests examining and understanding their readiness to use play in learning and giving them sufficient opportunity to facilitate their own learning through play.

Play as a method of learning

The ECE and INSET Trainer Manual also conceive play as a method through which children learn at their early stages. This method of learning is distinguished from others in its recognition and use of play as a platform for learners to acquire and develop competencies. Combining play with learning appears attractive to learners, hence, its popularisation particularly in the INSET Trainer Manual:

Because play-based learning (PBL) is fun and engaging, girls and boys are motivated to attend and stay in school and perform better academically (INSET Trainer Manual, p. i).

As a learning method, play emerges as a tool for creating and sustaining learners' interests in learning activities. The outcomes of this method of learning include *developing cognitive, social, emotional and physical skills* (INSET Trainer Manual, p. 70). Implicitly, play-based learning emerges as an instrument for achieving some universally accepted objectives of early childhood education. This intrinsic character identifies some similarities between this conception and play-based pedagogies.

Play is also conceptualised as a "learning method" that is child centred. This child-centred character also informs the choice of strategies employed to facilitate learning through play. For instance, early childhood education centres may focus on providing the appropriate environment that guarantees children's access to play. From this perspective, the teacher and other school-level authorities may be tasked with designing an environment that supports learners' play needs as highlighted in this extract from the INSET Trainer Manual: *...it is expected that the teacher will be able to design a safe, supportive and inclusive learning environment that purposefully promotes play-based learning for all learners* (p. 9).

Descriptors of learning activities/holistic skills

The documents do not adopt a uniform description of learning activities. Given this, examining the diverse descriptors of learning is necessary to highlight observed differences and/or similarities. This section examines the descriptors of learning activities by focusing on keywords/phrases that describe learning activities, description of learning, words used for holistic skills and frequency of words used.

Keywords/phrases describing learning activities

The ECE policy uses some keywords to describe learning activities. From the analysis, notable keywords describing learning activities include *early learning, cognitive skills learning, life-long learning, and child-friendly learning*. These keywords inherently describe learning activities during

the early childhood stage of education. This focus on early childhood education is reflected in words such as 'early' and 'child friendly'.

In the ESP 2018-2030, *adult learning, distance learning, superficial learning, technology-mediated, learning and life-long learning* are used to describe learning activities. A phrase that the ESP 2018-2030 shares with the ECE policy is *life-long learning*.

The INSET Trainer Manual offers a variety of phrases to describe learning activities. These include *life-long learning, integrated learning, children's learning, hands-on learning, free play and structured play*. The Manual further identifies *teacher-directed learning, deep learning, playful learning, small group learning, individual learning, literacy learning, rote learning, numeracy learning, learner-centred learning and visual-spatial learning* as other phrases that refer to learning activities. Despite this diversity, a significant proportion of the phrases focus on children rather than adult learning. Thus, unlike the ESP 2018-2030, the INSET Trainer Manual describes learning activities during the early stages of child development.

Description of learning

The ESP 2018-2030 describes learning differently at each level of education in Ghana. At the kindergarten level, it describes learning as the acquisition of foundational skills (p. 22). This definition conceives early childhood education as the basis of lifelong learning. Acquiring the requisite skills at this level, therefore, partly influences the level of success at other levels of education.

The foundational skills of interest identified by the ESP 2018-2030 include *reading, writing, arithmetic and creativity* (p. 28). These skills according to the plan provides a sufficient basis for pursuing future educational progression. Missing from these skill sets are socioemotional skills, which have risen to prominence in discourses on early childhood education over the years. The UNICEF North Macedonia (2019), for instance, observe that developing socioemotional skills enable children to manage daily social interactions in later life. As the foundation, therefore, early childhood education should facilitate the acquisition of such skills. The absence of socioemotional skills in the ESP 2018-2030 description of learning at the KG level, therefore, renders this conception incomplete. Socioemotional skills constitute a key component of the early childhood education jigsaw puzzle.

At the Primary and Junior High School Levels, the ESP 2018-2030 describes learning as building on the foundational skills acquired at the kindergarten level. Learning at these levels emerges as a sequel to early childhood education and this has implications for learning outcomes. This paints a picture of learning outcomes at this level as possessing a semblance of those acquired during early childhood education. Following this thought, a weakness in early childhood education pedagogies may negatively affect the achievement of some learning outcomes at this level. For instance, the inability to incorporate socio-emotional learning in kindergarten education suggests that learners may lack the foundation for expanding and building such skills at the primary and junior high school levels.

The close association between learning at the different levels of education gives learning a unique identity. Learning does not become a one-off activity but a life-long activity. The INSET Trainer Manual follows this logic and describes learning as a life-long activity. The ECE Policy shares this

view when it described learning as a life-long activity, with early childhood education as its foundation (p. 6). This description of learning as a life-long activity and the subsequent emergence of early childhood education as its foundation reiterates the call for increased attention to educational improvement at this level.

Words used for holistic skills

From the analysis, few words are used to refer to holistic skills. A case in point is observed in the forward to the ECE Policy, where the authors use '*readiness skills*' to refer to holistic skills. From this perspective, the ECE Policy regards holistic skills as necessary indicators of learners' preparedness for progression to other levels of education. This view is reinforced by the policy's acceptance of early childhood education as the foundation for pursuing life-long learning in the Ghanaian context.

Although this phrase describes learners' readiness for progression, the policy's inability to list these skills conceals the composite nature of holistic skills. Besides, this inability to define the composition of such skills opens the door to subjective interpretations of readiness skills.

Frequency of words used

In the INSET Trainer Manual, the word play occurs about 2285 times, whereas it appears 71 times in the Early Childhood Education Policy. The Education Sector Plan 2018-2030 has fewer mentions of the word, appearing six times albeit in a context different from play-based learning. The higher representation of 'play' in the INSET Trainer Manual highlights the document's interest in and recognition of play as an indispensable tool for childhood education delivery and management. The number of times 'skill' is used in the documents differs from that observed with 'play'. Skills appear 457 times in the INSET Trainer Manual while it is used 75 times in the ESP 2018-2030. The ECE has the least mentions for skill, appearing 20 times in the policy. The frequency of occurrence of 'skill' in the INSET Trainer manual highlight the importance the document attaches to skills development in early childhood education centres in Ghana. While not suggesting that the ECE (with the least mentions of skill) considers skill as less important, the view is that when there exists a wide disparity in terms of usage, it is important for clarity in how it is defined and how it intersects with the concept of play and play-based learning. Play-based learning promotes the development of cognitive and non-cognitive skills and stronger articulation of this will need to be expressed in policy documents as clearly indicated in the INSET Trainer Manual.

Contextualising play-based learning

The sampled documents (particularly the ECE policy and the INSET Trainer Manual) contextualise play-based learning. The documents place play-based learning in the context of early childhood education. It also represents educational policymakers' recognition that what has worked in a different context may not necessarily suit the Ghanaian case. This contextual scope subsequently has implications for certain aspects and components of learning through play such as the objects/materials of play, play activities and play language.

Objects/materials of play

The documents identify play objects/materials as components of the conducive environment that promotes learning through play. The play-based learning environment consists of

objects/materials that may give learners a unique experience compared to the traditional learning environment. The INSET Trainer Manual identifies several objects/materials that can be used to design an appropriate play-based learning environment. Sample objects/materials identified for the design of a play-based learning environment include *shells, sand, water, play dough, corn, beans, beads and blocks* (INSET Trainer Manual, p. 102). By listing such local objects/materials, the Manual positions play-based learning in the social environment of the learners and teachers.

This focus on local objects/materials helps teachers and learners identify with objects/materials of play-based learning. From this perspective, the INSET Trainer Manual shows that although play-based learning is a global objective, policy should make this activity contextually relevant by employing objects/materials that learners can identify with. This logic is premised on the assumption that societal differences create little room to adopt similar play-based objects/materials irrespective of contextual factors. Following this view, educational authorities should define aspects of play (for instance objects/materials) to suit local conditions rather than universal standards that have little local significance.

Play activities

Play activities defy a single typology. The INSET Trainer Manual shares this view when it mentions several local-based activities as possible games that can be recreated in the play-based learning environment. From the Manual, activities such as *pilolo, ampe, oware, ludo, football, hopscotch, and seesaw* are potential games that can facilitate learning at the kindergarten level. The emphasis on local activities shows that children and the play-based learning environment are embedded in a wider social environment. This environment provides opportunities for mainstreaming play into children's education. The interconnectedness between the social and play-based learning environments suggests that adopting activities that are uncharacteristic of children's social environment for play-based learning may encounter adoption constraints. When learners are introduced to activities that are common to their social environments, they may encounter little difficulty adapting to and participating in such activities. Based on this view, there is a reduced likelihood that learners may conceive such activities as external to their learning.

The suitability of these games for play-based learning may be premised on the assumption that they require less physical effort and can be organised without much difficulty. Thus, although there is increasing recognition of play activities as components of instructional approaches at the early childhood level, the INSET Trainer Manual suggests that not every activity qualifies to be recreated to facilitate learning. The Manual, therefore, suggests the differentiation of play activities in educational institutions. This signifies a call for appropriate play-based activities in early childhood education centres.

Play Language

The INSET Trainer Manual highlights the significance of play language in the design and organisation of the play-based learning environment. The document positions play language within Ghanaian society and make references to several words such as '*trotro*', '*pampanaa*' and '*Kotokuraba*'. These words may help learners understand play instructions more than words borrowed from other contexts.

Although these words highlight some degree of contextualisation, a careful view of the terminologies shows that these are mostly Akan terms. It is important that corresponding terms from other regions of Ghana are identified to signal the importance of adopting locally relevant examples. This logic signifies adopting play language that serves the needs of minority ethnic groups, to facilitate the participation of learners from such groups in play-based learning activities. In designing play-based educational content, careful consideration should be given to the learners' cultural identities. This consideration will, therefore, inform the choice of words in policies that seek to improve children's access to play-based learning. The experiences of one group should not constitute a sufficient basis to generalise for learners from different socio-cultural backgrounds.

Conclusions and Recommendations

This study sought to examine teachers' classroom practices and their perspectives regarding the RTP COTT activities, play-based approach and factors enabling and motivating teachers' use of play-based activities. In addition, the study aimed to understand the representation of play and children's holistic skills in educational documents. Several important findings emerged from the learning study. The key ones that require critical attention are highlighted below:

1. Teachers in Direct schools demonstrated better classroom practices compared with those in Indirect and GALOP. A conscious effort should therefore be made by the RTP team to ensure the cascading approach commits to the improvement of teachers' classroom practice and the use of play-based activities. Cascading approach has been used extensively to train teachers. It works on the assumption that teachers already have a foundational level of teaching competency on which to build. Often, the most able teachers or in some cases a 'favourite' teacher is selected to attend training of trainers upon which the cascade model is based. However, coaching and mentoring have been shown to be more effective in creating sustainable behavioural change and practice. It may be necessary for the RTP programme to intensify its coaching and mentoring programmes as clearly most teachers see this as the most influential.
2. Also, it emerged that Direct teachers in Volta are not performing differently in some critical measures of teacher competency and performance compared to teachers in Indirect and GALOP schools. This has been a surprising finding in this study given that generally teachers in Direct schools perform better on most measures of competency compared to Indirect and GALOP teachers. Although this is a disappointing result, it may reveal an important issue – direct interventions (e.g., training) cannot be assumed to necessarily produce the same results across regions/districts. Implementation fidelity may not be achieved at the same level across districts which means it is important to closely monitor training, do follow-up and ensure barriers to effective implementation are quickly identified and addressed. It is recommended that the RTP team reviews the implementation strategy with Direct schoolteachers in Volta region for their perspective on why some results are markedly different to other districts and intervention groups in order to identify areas that need revision or strengthening.
3. Although a number of teachers believed that both teachers and students have an equal role in promoting effective learning, it appears that most teachers still believe that they

should be in the driving seat when it comes to initiating learning. The default position in Ghanaian basic school classrooms is for many teachers to tell students what activities they should engage during the instructional process. While teachers' directed instruction has its place and value, it is equally important for teachers to encourage students to initiate learning through the activities they select and justify. Play based activities offers many opportunities for this to take place. This will ensure that increasingly students develop the confidence to make choices that reflect their level of understanding and progress in learning.

4. Teachers still consider *curricula expectations/goals, managing children's behaviour, time for play, class size and indoor spaces as critical limitations to the use of play-based activities*. It is therefore not enough for the project to provide teachers with the skills to implement play-based learning activities. Equally important and needing more emphasis is the ability of teachers to make adjustments to accommodate these 'new' practices. The programme should include discussions with teachers on the kinds of adaptations and innovations that can ensure that play-based learning can still take place under challenging conditions. It is also important to raise this issue at policy level for reforms that can make it easier for teachers to embrace play-based instructional approaches. The project should give consideration to these issues and support teachers appropriately. For instance, while class size and indoor spaces are structural challenges that may not be easy to change, teachers could be trained on how to effectively work within these constraints, how they can use play-based learning approaches to manage children's behaviour and improve classroom safety.
5. Majority of Direct schoolteachers did not consider parental attitudes as a hindrance to their use of play-based activities, suggesting that teachers are unlikely to face stiff opposition in the use of play to promote learning. This is more pronounced in Direct than Indirect and GALOP school teachers who are not as positive. This issue should be brought to the attention of Districts supporting work in Indirect and GALOP schools for strategies to address any negative attitudes that may exist.
6. In developing education policies particularly for basic education, play and skills development should be presented as two sides of the learning 'coin', and conceptualised as mutually reinforcing to improve learning. RTP should enter into discussions with key curriculum and policy officials at the GES and Ministry of Education on the importance and benefits of socio-emotional learning and skills development.
7. The project should explore play concepts and examples from other ethnic groups to encourage teachers and students from minority ethnic groups to draw on them during the teaching and learning process. More importantly, training manual should encourage teachers to invite children to share play activities that reflect their cultural backgrounds and history.
8. Appendices 1 to 4 provide a detailed breakdown of the following: *Percentage of play activities by intervention and teacher class, Effectiveness of training workshop by region and intervention; Effectiveness of coaching/mentoring by region and intervention; Effectiveness of professional learning communities by region and intervention*. These show in granular and comparative detail specific areas that are strengths and weaknesses across

region, intervention and class. Overall, they present a complex picture but useful for beginning dialogue at district level on particular areas that need more attention.

Generally, they show that direct intervention schools are making more progress than the schools reached through indirect support i.e., indirect and GALOP, although direct schools in Volta do not always back this trend. Across the grades and interventions students using play in learning outside the confines of the classroom is low; pupil agency play-based activities or learning in lower grades e.g., KG is low; using positive discipline strategies (e.g., identifying the behaviour to be stopped) to support the development of students' behaviour is low in the North compared to other regions. The project team should use these tables as points of discussion with each RTP regional teams and District training teams to identify possible causes and initiate appropriate action.

9. This learning study has revealed issues and areas that can be included in the endline evaluation of the LtP project. It did not include a survey of pupils' views and experiences on play-based learning. It also did not administer an attitude, cognitive and non-cognitive 'tests' to understand the impact of learning through on the cognitive and non-cognitive development or achievement of children, and to evaluate the impact of teachers classroom practices on learning especially which particular activities exert stronger influence/effect on the development of holistic and foundational literacy and numeracy (FLN) skills. This will help to establish the extent to which play-based learning approaches have contributed to cognitive and non-cognitive skills. The endline should also include in-depth qualitative investigation on the elements of the training which have resulted in changes to the use of play to promote learning, which aspects of coaching and mentoring relationships produce the most impact in culturally specific classroom contexts to enhance uptake of play-based learning.

References

- Ghana Education Service (2022) National KG INSET Trainer Manual. Accra
- Ministry of Education (2020) Early Childhood Education Policy. Accra
- Ministry of Education (2019) Education Strategic Plan 2018-2030. Accra
- UNCRC (2010) The United Nations Convention on the Rights of the Child. Available at: https://downloads.unicef.org.uk/wpcontent/uploads/2010/05/UNCRC_united_nations_convention_on_the_rights_of_the_child.pdf?_ga=2.108420747.863076140.15918821271145322627
- UNCRC (2013) General Comment No. 17 on the Right of the Child to Rest, Leisure, Play, Recreational Activities, Cultural Life and the Arts (Art. 31). Geneva: United Nations.
- UNICEF North Macedonia (2019) Learning Social and Emotional Skills in Pre-School: Building foundations for the future. Available at: <https://www.unicef.org/northmacedonia/learning-social-and-emotional-skills-pre-school>
- Walters-Davies, J. (2021) Children's Right to Play. Available at: https://uk.sagepub.com/sites/default/files/upm-assets/122734_book_item_122734.pdf. 15/02/2023.

Appendices

Appendix 1. Percentage of play activities by intervention and teacher class

	Direct					Indirect					GALOP				
	KG2	B1	B3	B4	B6	KG2	B1	B3	B4	B6	KG2	B1	B3	B4	B6
The teacher encourages movement activities in lesson	92%	86%	79%	82%	75%	78%	62%	73%	52%	65%	—	—	—	—	—
Teacher incorporates traditional games, songs and dances in lesson	75%	59%	66%	66%	59%	43%	37%	30%	30%	39%	34%	37%	33%	34%	25%
The teacher uses guided play in the lesson	69%	59%	63%	60%	60%	34%	34%	34%	26%	45%	34%	29%	33%	30%	20%
The teacher encourages pupils to use manipulatives (e.g., counters, bundles of sticks, charts, objects etc.) in the lesson	63%	69%	51%	62%	53%	65%	65%	52%	34%	34%	32%	37%	37%	19%	16%
Teacher offers children the chance to choose activities and materials for play	40%	37%	35%	29%	44%	18%	13%	21%	13%	13%	19%	4%	12%	—	8%
Teacher engages children in using stories to deliver lesson	49%	39%	41%	39%	39%	40%	30%	43%	17%	54%	19%	8%	12%	26%	20%
Teacher organizes a variety of learning spaces for play (e.g. reading corner)	66%	61%	52%	49%	42%	22%	26%	18%	13%	26%	24%	33%	26%	12%	20%
Pupils have chances to play with materials or objects (different shapes and colours)	78%	72%	57%	66%	66%	40%	69%	43%	27%	27%	24%	34%	27%	16%	12%
Teacher encourages child-guided activities or experiences with scaffolding	70%	80%	71%	72%	71%	40%	56%	56%	45%	47%	23%	47%	30%	36%	29%
Pupils work in pairs or groups	75%	83%	82%	83%	82%	27%	47%	47%	40%	47%	24%	36%	39%	40%	25%
Pupils share their learning in different ways	6%	59%	73%	78%	64%	43%	54%	69%	63%	60%	38%	33%	41%	42%	37%
Pupils choose from a variety of learning activities	50%	38%	46%	39%	44%	17%	4%	17%	4%	17%	3%	4%	16%	3%	4%
Pupils works are displayed in the classroom	32%	31%	36%	33%	37%	17%	13%	14%	17%	17%	19%	12%	20%	19%	13%
Pupils respond to open-ended questions and discussions	74%	79%	79%	86%	86%	66%	79%	72%	78%	86%	76%	62%	75%	69%	66%
Pupils explore outside of the classroom	47%	12%	26%	25%	17%	17%	16%	4%	13%	4%	30%	25%	8%	11%	8%
Pupils engage in activities with their senses [E.gs. Find something patterned; Find something to make music with; find something soft; Find a smell you like]	76%	69%	63%	59%	59%	45%	58%	39%	43%	36%	34%	37%	37%	20%	20%
Pupils respond to class content with physical actions [E.gs. Touch your nose; Kofi says dance; sit; jump]	71%	71%	66%	60%	65%	77%	66%	52%	30%	36%	30%	33%	33%	11%	12%

Appendix 2. Effectiveness of training workshop by region and intervention

	Accra			Volta			North		
	Direct	Indirect	GALOP	Direct	Indirect	GALOP	Direct	Indirect	GALOP
Lead a play-based activity	85%	67%	61%	82%	90%	54%	74%	73%	64%
Modify games relevant to the contents of curriculum	66%	62%	67%	78%	85%	45%	52%	50%	35%
Create physically safe environment for learning	65%	57%	50%	67%	100%	85%	50%	62%	42%
Develop lesson plan that takes into equal account the needs of girls and boys	75%	71%	61%	67%	95%	57%	52%	79%	42%
Apply the Behaviour-Impact-Do model to correct or reinforce children's behaviour	67%	28%	33%	67%	90%	51%	56%	48%	28%
Help children reflect on activities and their experiences	74%	57%	50%	85%	90%	62%	66%	44%	71%
Adapt games for the purpose of developing listening and speaking skills	67%	57%	61%	78%	85%	57%	55%	58%	50%
Use Reflect-Connect-Apply (RCA) questions in developing children's core competencies (e.g. critical thinking, creativity)	80%	66%	50%	78%	85%	51%	54%	55%	21%
Identify games that are relevant for teaching mathematics content of the curriculum	70%	47%	77%	67%	90%	45%	56%	53%	35%
Help children use their previous experiences in other situations	80%	47%	50%	82%	80%	71%	68%	62%	73%
Use play-based activities that are free of gender biases or stereotypes	87%	66%	88%	82%	95%	57%	65%	65%	73%
Adapt games for reading lessons	72%	38%	83%	64%	90%	68%	65%	55%	60%
Modify Reflect-Connect-Apply (RCA) discussion questions for different content areas of the curriculum	74%	47%	27%	77%	85%	60%	52%	37%	20%
Incorporate play-based activities into the lesson plan	75%	57%	77%	78%	94%	62%	63%	68%	46%
Adapt games for the purpose of developing writing skills	61%	42%	44%	85%	84%	45%	52%	48%	33%
Use RCA questions in developing children's language skills	82%	52%	38%	75%	77%	62%	62%	34%	33%
Identify or choose games that are appropriate for their age	75%	57%	72%	75%	88%	54%	63%	57%	40%
Create environments that children feel emotionally safe for learning	75%	71%	88%	96%	88%	77%	60%	72%	73%
Use positive discipline strategies (e.g., identifying the behaviour to be stopped) to support the development of students' behaviour	87%	57%	61%	57%	94%	62%	57%	41%	60%

Appendix 3. Effectiveness of coaching/mentoring by region and intervention

	Accra			Volta			North		
To what extent has coaching/mentoring effectively improved your ability to:	Direct	Indirect	GALOP	Direct	Indirect	GALOP	Direct	Indirect	GALOP
Use play-based activities	68%	58%	52%	75%	29%	42%	54%	37%	44%
Link children's experiences with their previous knowledge	71%	64%	47%	65%	29%	42%	59%	56%	33%
Incorporate play-based activities into lesson plan	81%	64%	38%	45%	35%	34%	59%	56%	44%
Develop games for numeracy lessons	78%	47%	57%	70%	23%	26%	50%	50%	66%
Guide children to use their experiences in other situations	62%	52%	23%	65%	23%	30%	46%	31%	55%
Create safe learning environments	78%	58%	66%	80%	25%	53%	59%	68%	55%
Design games for literacy lessons	71%	41%	33%	85%	23%	26%	58%	50%	33%
Ask reflective questions	87%	64%	42%	65%	35%	38%	59%	43%	55%
Effectively determine if children are learning	75%	47%	42%	55%	35%	46%	46%	37%	77%
Effectively address the learning needs of a child who is struggling	75%	58%	52%	55%	29%	42%	62%	43%	44%

Appendix 4. Effectiveness of professional learning communities by region and intervention

	Accra			Volta			North		
To what extent has PLCs effectively improved your ability to:	Direct	Indirect	GALOP	Direct	Indirect	GALOP	Direct	Indirect	GALOP
Generate new ideas for play-based learning	84%	68%	61%	81%	80%	63%	64%	56%	24%
Use creative ideas to promote play-based learning	81%	58%	41%	68%	85%	72%	48%	60%	42%
Use assessment to diagnose children's learning needs for lesson planning	76%	51%	55%	62%	90%	63%	36%	43%	57%
Create a safe classroom learning environment	86%	58%	75%	87%	90%	72%	58%	60%	71%
Use positive strategies for disciplining children	86%	65%	63%	68%	95%	45%	51%	34%	85%
Facilitate children's participation in class/school activities	92%	58%	55%	81%	90%	81%	54%	52%	85%
Equally support boys' and girls' participation in class/school activities	92%	68%	75%	90%	95%	72%	51%	62%	100%
Use different teaching styles to meet different needs of learners in your classroom	78%	72%	69%	90%	90%	63%	54%	52%	100%
Engage parents or caregivers about the usefulness of play-based activities in learning in class and school	36%	17%	8%	46%	71%	36%	51%	21%	14%
Use Reflect-Connect-Apply (RCA) questions in developing children's core competencies	71%	57%	41%	68%	90%	54%	58%	30%	42%

Appendix 5 Average Class information Scores

	Direct					Indirect					GALOP				
	KG	B1	B3	B4	B6	KG	B1	B3	B4	B6	KG	B1	B3	B4	B6
Number of girls present															
Mean (standard deviation)	15.07 (8.65)	11.31 (6.52)	15.27 (7.41)	16.35 (10.38)	16.45 (12.13)	13.26 (9.16)	12.08 (8.78)	13.08 (7.95)	14.30 (8.50)	14.91 (10.93)	16.38 (10.74)	19.29 (7.98)	22.54 (6.74)	21.80 (6.71)	25.08 (12.37)
Range	3 - 51	2-28	3-34	1-47	0-48	2-41	4-37	1-29	3-33	0-35	2-43	1-36	10-35	6-34	10-56
Number of boys present															
Mean (standard deviation)	15.15 (8.10)	14.59 (7.07)	15.35 (8.01)	15.68 (8.00)	17.24 (9.78)	13.95 (10.88)	13.45 (9.97)	15.34 (9.69)	15.34 (10.16)	15.43 (9.03)	16.92 (9.17)	19.62 (7.85)	22.75 (9.64)	25.08 (9.45)	23.04 (6.83)
Range	4-35	0-30	2-37	2-38	0-40	2-44	3-40	2-41	1-41	4-36	5-41	2-34	6-45	8-45	11-43
Number of boys with special needs															
Mean (standard deviation)	0.21 (0.49)	0.71 (3.19)	0.33 (0.77)	0.30 (0.70)	0.15 (0.45)	0.21 (1.04)	0.83 (0.28)	0.09 (0.29)	0.17 (0.38)	0.21 (0.42)	0.36 (0.63)	1.62 (7.11)	0.16 (0.48)	1.00 (4.49)	1.34 (5.82)
Range	0-2	0-21	0-4)	0-4	0-2	0-5	0-1	0-1	0-1	0-1	0-2	0-35	0-2	0-23	0-28
Number of girls with special needs															

Mean (standard deviation)	0.82 (4.44)	0.05 (0.30)	0.14 (0.40)	0.21 (0.80)	0.11 (0.32)	0.31 (1.28)	—	0.17 (0.49)	0.08 (0.28)	0.08 (0.28)	0.12 (0.33)	0.43 (0.89)	0.20 (0.50)	0.11 (0.32)	0.04 (0.21)
Range	0-32	0-2	0-2	0-5	0-1	0-6	—	0-2	0-1	0-1	0-1	0-4	0-2	0-1	0-1
Number of desks in the classroom															
Mean (standard deviation)	10.42 (10.46)	14.54 (9.14)	18.38 (11.51)	17.60 (12.00)	20.49 (13.21)	8.08 (9.73)	9.45 (8.07)	15.18 (8.82)	17.13 (10.51)	16.86 (12.34)	12.19 (10.78)	17.73 (6.05)	20.50 (10.10)	23.95 (12.04)	24.68 (16.23)
Range	0-47	0-38	0-50	0-50	1-60	0-38	0-30	0-35	3-42	0-41	0-46	6-26	2-41	0-47	0-54
Number of textbooks available															
Literacy															
Mean (standard deviation)	8.00 (20.59)	29.51 (9.62)	33.62 (21.54)	30.85 (13.55)	28.47 (14.51)	7.81 (17.92)	10.29 (17.00)	15.60 (22.75)	10.65 (12.76)	9.73 (11.65)	2.61 (6.50)	25.56 (28.17)	25.83 (25.71)	11.19 (12.37)	14.45 (17.00)
Range	0-130	0-136	1-130	1-89	0-56	0-69	0-46	0-80	0-44	0-44	0-29	0-90	0-84	0-40	0-54
Numeracy															
Mean (standard deviation)	4.02 (9.64)	23.88 (12.52)	26.88 (15.65)	25.59 (11.73)	26.60 (13.30)	2.69 (9.46)	4.29 (13.24)	2.08 (9.14)	2.17 (9.13)	3.91 (11.04)	0.84 (2.92)	0.17 (0.38)	3.33 (8.38)	0.45 (1.06)	0.91 (3.04)
Range	0-44	0-62	0-82	0-63	0-56	0-44	0-50	0-44	0-44	0-44	0-15	0-1	0-36	0-5	0-15
Science															
Mean (standard deviation)	2.16 (6.05)	25.69 (10.97)	29.22 (16.47)	34.61 (17.21)	33.43 (19.47)	2.00 (9.16)	7.30 (12.75)	7.34 (11.22)	14.68 (14.06)	16.81 (16.24)	0.23 (0.65)	5.69 (13.64)	12.08 (22.97)	26.46 (23.05)	26.95 (26.23)
Range	0-31	0-62	0-81	1-92	0-85	0-44	0-44	0-44	0-44	0-55	0-3	0-60	0-93	0-79	0-106

Appendix 6

CLASSROOM/LESSON OBSERVATION SHEET (P3 LEARNING STUDY)

ID of Enumerator				
ID of School (Name of School:				
Circuit:				
District:	Weija-Gbawe [1] Ga South [2] Ga West [3] Keta [4] Ketu South [5] Angloga [6] Tolon [7] Savelugu [8] Kumbugu [9] Sagnarigu [10] Tamale [11]			
Region:	Accra [1] Volta [2] Northern [3]			
Intervention	[1] Direct [2] Indirect [3] Galop			
Academic Year:	2021/2022			
Term:	Third			
Date of Lesson Observation				
Full Name of Teacher				
Grade/Class:	[1] KG2 [2] Class 1 [3] Class 3 [4] Class 4 [5] Class 6			
Subject taught/observed				
Topic/strand: Sub-topics/sub strand				
Reference Materials:				
Aspects:				
Planned Time for lesson delivery (in minutes)		Actual Time for lesson delivery (in minutes)		Time Variance:
The lesson observation seeks to identify total number and percentage of teachers trained in PBL who demonstrate four key indicators of gender responsive play-based learning methodology during their lesson as observed through the classroom observation. These criteria include: • Whether the lesson used play-based learning approaches • Whether the lesson provided opportunities for reflect, connect and apply.				

- Whether the teacher made use of positive discipline approaches.
- Whether the lesson was gender-responsive in its treatment of boys and girls and in terms of content delivered, materials used and learner engagement.

Part A: Teacher and Class information (before lesson observation)			Circle codes
Que s. #	Questions/Observations	Answers	code s
1	Sex of teacher	1. Male	0
		2. Female	1
2	Highest Professional qualification	a. Diploma in Education	1
		b. Bachelor of Education	2
		c. Master's in education	3
		d. Other(s) specify	4
		e. None	5
3	Has the teacher received training from RTP or RTP supported training from the district? (if No or Don't Know, skip to question 5)	a. Yes	1
		b. No	2
		c. Don't Know	3
4	If yes in question 3, above, what kind of training did teacher receive? (Please circle all that apply)	a. Foundational training	1
		b. Play Based Learning Year 1	2
		c. Play Based Learning Year 2	3
		d. Play Based Learning Year 3	4
		e. Positive Learning Environment	5
		f. Others (specify)	6
5	Subject taught in this lesson observation Primary specify but KG any subject	a. English Language	1
		b. Ghanaian Language	2
		c. Maths	3
		d. Science	4
		e. Our World Our People (OWOP)	5
		f. Other (specify)	6
6	Language teacher used during lesson observation (Circle all languages used if more than one)	a. English	1
		b. Ga	2
		c. Dagbani	3
		d. Ewe	4
		e. Twi	5
		f. Others (specify)	6
7	Number of girls present:	RECORD NUMBER:	#
8	Number of boys present:	RECORD NUMBER:	#
9	Number of children with special needs/disability present (ask teacher):	RECORD NUMBER: Boys	#
		RECORD NUMBER Girls	#

10	Number of desks in the classroom?	RECORD NUMBER:	
11	Number of textbooks available: Literacy/English Numeracy/ Mathematics Science		
		RECORD NUMBER	
		RECORD NUMBER	
		RECORD NUMBER	
12	Are boys and girls distributed around the classroom?		
		a. Yes	1
		b. No, boys are with boys and girls are with girls	2
		c. No, girls sit in front and boys at the back	3
		d. No, boys sit in front and girls at the back	4

Part B: Instruction Planning Skills (Assessment of Lesson Plan)			
13	Is there a lesson plan with clear performance indicators available when requested from teacher? <i>(NB: skip to Q19 if No lesson plan is available)</i>	a. No lesson plan available	1
		b. Lesson plan available but no learning objectives/performance indicators	2
		c. Lesson plan available with clear objectives/performance indicators	3
		d. Lesson plan available with clear objectives/performance and appropriate teaching and learning resources	4
		e. Lesson plan available with clear objectives/performance indicators, appropriate teaching and learning resources related to current or previous lesson/topic/theme	5
14	Are objectives SMART and relevant to topics? S – Specific M- Measurable A – Achievable/Attainable R- Relevant T- Time bound	a. Objectives are irrelevant to topics/subtopics/themes	1
		b. Objectives are clear and relevant to topics/sub-topics/themes but generally in abstract terms	2
		c. Objectives are clear and SMART, but NOT related to evaluations which are stated in lesson plan	3
		d. Objectives are clear and SMART, and related to evaluations which are stated in lesson plan	4
		e. Objectives are clear and SMART related evaluations stated in the lesson and include at least 2 profile dimensions in the syllabus.	5
		Profile dimension (Knowledge, understanding, application, process skills and attitudes)	

15	Does the lesson plan include any interactive group activities (e.g. games, group work, pair learning, role plays, demonstrations, songs? Rhymes?)	a. Lesson plan does not include any interactive group activity	1
		b. Lesson plan include one interactive group activity	2
		c. Lesson plan include two interactive group activities	3
		d. Lesson plan include three interactive group activities	4
		e. Lesson plan include more than three interactive group activities	5
16	Are relevant Core Competencies stated? (e.g. critical thinking and problem solving, creativity and innovation, communication and collaboration, cultural identity and global citizenship, personal development and leadership, digital literacy)	a. No core competencies are stated	1
		b. Core competencies are stated but are not relevant to topics/sub-topics/themes	2
		c. Core competencies are stated and are relevant to topics /sub-topics/themes	3
		d. Core competencies are stated relevant to topics/sub-topics/themes and related to lesson objectives	4
		e. Core Competencies are stated. They are relevant to topics/sub-topics/themes, related to lesson objectives and pupils' daily lives	5
17	Has the teacher stated appropriate TLRs?	a. Teacher did not state TLRs	1
		b. TLRs stated BUT not relevant to lesson objectives/performance indicators	2
		c. TLRs stated and are relevant to lesson objectives/performance indicators	3
		d. TLRs are stated relevant lesson objectives but not clearly linked to the stages of lesson development (i.e., Introduction, lesson delivery, evaluation)	4
		e. TLRs are stated relevant lesson objectives/performance indicators and clearly linked to the stages of lesson development (i.e. Introduction, lesson delivery, evaluation)	5
18	Does the lesson plan have learner activities related to the core Competencies?	a. Activities are provided but not related to core competencies	1
		b. Activities provided that are related to core competencies of the lesson, but these are not relevant in relation to understanding new concepts	2
		c. Activities are provided relevant to core competencies and enable pupils understand new concepts.	3

		d. Activities are provided relevant to core competencies, enable pupils understand new concepts and existing knowledge.	4
		e. Activities are provided relevant to core competencies and enable pupils understand new concepts to apply new knowledge or concepts to their daily life.	5
19	What visual aids are displayed on walls? (This is a categorical item) (Circle all that apply)	a. Manufactured wall charts	1
		b. Home-made wall charts	2
		c. Pupils' work from this term	3
		d. Pupils' work from previous terms	4
		e. None displayed	5
		f. Both manufactured and home made	6
		g. Other (Specify)	7

Part C: Teaching Methodology and Delivery (Observations during teaching)			
20	Are the learning objectives/ content standard/Performance Indicators for the lesson made clear to the pupils at the start of lesson?	a. Teacher does not state any performance indicators at the start of the lesson	1
		b. Teacher writes performance indicators on the board but does not explain	2
		c. Teacher explains performance indicators but does not write on the board	3
		d. Teacher explains performance indicators and write them on the board	4
		e. Teacher explains and write on the board performance indicators and asks pupils' understanding	5
21	Does teacher use the board appropriately?	a. Teacher does not write on the board	1
		b. Teacher writes on the board but not clear and visible	2
		c. Teacher writes on the board and is clear and visible	3
		d. Teacher writing on the board is clear, visible and logically organised	4
		e. Teacher writing on the board is clear, visible, logically organized and systematically used to help learners during reflections	5
22	Does the teacher use TLRs in teaching?	a. Teacher does not use any TLR in lesson	1
		b. Teacher uses TLRs, but not relevant to lesson objectives/ content standard/Performance indicators.	2
		c. Teacher uses TLRs which are relevant to lesson objectives at appropriate stages in lesson.	3

		d. Teacher uses TLRs which are relevant to lesson objectives at appropriate stages in lesson. Teacher makes pupils to use TLRs actively.	4
		e. Teacher uses TLRs which are relevant to lesson objectives at appropriate stages in lesson. Teacher makes pupils to use them actively and links to pupil's previous lesson and daily life	5
23	Does the teacher use any textbooks for the lesson?	[1] Yes [0] No	
24	[If Yes to 23] How many textbooks are used for the lesson?	RECORD NUMBER:	
25	Does the teacher use appropriate questioning skills?	a. Teacher does not ask questions at all in lesson.	1
		b. Teacher asks only low order (recall) and rhetorical questions such as yes-or-no questions.	2
		c. Teacher asks a combination of 'yes/no' and 'how/why' questions but does not ask pupils to explain their rational for their responses	3
		d. Teacher asks a combination of 'yes/no and how/why' questions and occasionally ask pupils to explain their rational on their responses	4
		e. Teacher asks a combination of 'yes/no, and how/why' questions sequenced in order of difficulty. Teacher consistently asks pupils to explain their rational on their responses	5
26	Does teacher clarify learners' misunderstandings and helps identify their successes?	Teacher does not clarify learners misunderstanding	1
		Teacher rarely clarifies pupils misunderstanding	2
		Teacher occasionally clarifies pupils misunderstanding	3
		Teacher frequently clarifies pupils' misunderstandings	4
		Teacher consistently clarifies pupils misunderstanding	5
		Did not happen	88
27	Does teacher encourage both boys and girls to answer questions?	a. Teacher does not encourage boys and girls to answer questions	1
		b. Teacher rarely encourages boys and girls to answer questions	2
		c. Teacher occasionally encourages both boys and girls to answer questions	3
		d. Teacher frequently encourages both boys and girls to answer questions	4

		e. Teacher consistently encourages both boys and girls to answer questions	5
28	Which of group of pupils does the teacher encourage to answer questions or ask questions (this a categorical item)	Mainly boys	1
		Mainly girls	2
		Both boys and girls	3
29	Do pupils (boys and girls) ask the teacher questions on their own initiative?	a. Pupils do not ask the teacher questions on their own initiative	1
		b. Pupils rarely ask the teacher questions on their own initiative	2
		c. Pupils occasionally ask the teacher questions on their own initiative	3
		d. Pupils frequently ask the teacher questions on their own initiative	4
		e. Pupils consistently ask the teacher questions on their own initiative	5
30	Which group of pupils ask the teacher questions on their own initiative	a. Mainly boys	1
		b. Mainly Girls	2
		c. Both boys and girls	3
31	Does the teacher address individual pupils in class by name? (This is a categorical item)	d. Not at all	1
		e. Yes, mostly boys	2
		f. Yes, mostly girls	3
		g. Yes, Both girls and girls	4
32	Does teacher speak to pupils in a friendly tone? (e.g. does not shout at or ridicule pupils)	a. Teacher does not speak to pupils in a friendly tone	1
		b. Teacher rarely speaks to pupils in a friendly tone	2
		c. Teacher occasionally speaks to pupils in a friendly tone	3
		d. Teacher frequently speaks to pupils in a friendly tone	4
		e. Teacher consistently speaks to pupils in a friendly tone	5
33	Does the teacher actively acknowledge student effort when they give incorrect answers? (For example: thank them for participating)	a. Teacher does not actively acknowledge student effort when they give incorrect answers	1
		b. Teacher rarely actively acknowledges student effort when they give incorrect answers	2
		c. Teacher occasionally actively acknowledges student effort when they give incorrect answers	3
		d. Teacher frequently actively acknowledges student effort when they give incorrect answers	4
		e. Teacher consistently actively acknowledges student effort when they give incorrect answers	5
		a. Teacher keeps talking without involving pupils in any activity	1

34	Does teacher allow pupils to participate in lesson? (Does the teacher introduce activities that allow pupils to actively participate in the lesson?)	b. Teacher introduces activities but demonstrates them by teacher him / herself.	2	
		c. Teacher introduces activities but pupils do not participate actively	3	
		d. Teacher introduces activities which arouse pupils' interest and participate actively	4	
		e. Teacher introduces activities that promote mutual learning among pupils (Pupils initiate collaborative inquiry-based learning).	5	
35	Does the teacher walk around the classroom and check in with students (this is categorical item)	a. Not at all	1	
		b. Sometimes	2	
		c. Frequently	3	
36	Does the teacher use questions for reflections to end the lesson (frequency)?	a. Teacher does not use questions for reflections	1	
		b. Teacher asks only low order (recall: yes-or-no questions) for reflections.	2	
		c. Teacher asks a combination of 'yes/no' and 'how/why' questions but does not link to lesson objectives	3	
		d. Teacher asks a combination of 'yes/no and 'how/why' questions for reflections and links to lesson objectives	4	
		e. Teacher asks a combination of 'yes/no' and 'how/why' questions for reflections, links to lesson objectives/performance indicators. Teacher asks pupils to explain their rationale to determine their understanding	5	
37	Does teacher make evaluation of the lesson taught? [THIS INCLUDES ORAL AND WRITTEN EVALUATION]	a. Teacher makes no evaluation of the lesson	1	
		b. Teacher evaluates lesson but assessment is not related to objectives/core competencies	2	
		c. Teacher evaluate lesson but some of the assessment are not related to objectives/core competencies	3	
		d. Teacher evaluate lesson and all of the assessment are related to objectives/core competencies	4	
		e. Teacher evaluate lesson and all of the assessments are related to objectives/core competencies and pupils demonstrate understanding of the lesson	5	
38	Circle the disciplinary methods that teacher uses during the lesson observation		Boy	Girl
		A. Kneeling		
		B. Cane		
		C. Writing Lines of words		
		D. Explain the impact of behavior to learning to learner		

(CIRCLE ALL METHODS THAT APPLY IF OBSERVED)	E. Gives learner opportunity to explain him/herself		
	F. Gave no attention to the learner/perpetrator		
	G. Refer learners to the agreed rules for classroom engagement		
	H. Assigns learners to share and pack learners' books for the day		
	I. Sent to Head Teacher		
	J. Shouting/Yelling		
	K. Clean Classroom		
	L. Clean Washroom		
	M. Clean School Yard/Compound		
	N. Other Physical Punishment (specify)		
	O. No Disciplinary Method was used		

39.	Does the teacher use appropriate play-based activities?	Yes [1]	No [0]
a.	The teacher encourages movement activities in lesson		
b.	Teacher incorporates traditional games, songs and dances in lesson		
c.	The teacher uses guided play in the lesson		
d.	The teacher encourages pupils to use manipulatives (e.g., counters, bundles of sticks, charts, objects etc.) in the lesson		
e.	Teacher offers children the chance to choose activities and/or materials for play		
f.	Teacher engages children in using stories to deliver lesson		
g.	Teacher organizes a variety of learning spaces for play (e.g. reading corner)		
h.	Pupils have chances to play with materials or objects (different shapes and colours)		
i.	Teacher encourages child-guided activities or experiences with scaffolding		
j.	Pupils work in pairs or groups		
k.	Pupils share their learning in different ways		
l.	Pupils choose from a variety of learning activities		
m.	Pupils works are displayed in the classroom		
n.	Pupils respond to open-ended questions and discussions		
o.	Pupils explore outside of the classroom		
p.	Pupils engage in activities with their senses [E.g.s. Find something patterned; Find something to make music with; find something soft; Find a smell you like]		

q.	Pupils respond to class content with physical actions [E.gs. Touch your nose; Kofi says dance; sit; jump]		
----	--	--	--

40	Where is the lesson held?	1. Classroom (Indoor) only 2. Outdoor only 3. Both classroom and outdoor
----	---------------------------	--

41	What do you think went well? (Use this space to record your thoughts)
----	---

42	What do you think needs to be improved to make the lesson play-based and gender responsive? (Use this space to record your thoughts)
----	---

Note. Adapted from "GES Nationwide INSET Programme - SBI/CBI Lesson Observation Sheet," by Ghana Education Service, 2005, & One South Development Consulting, Lesson Observation for the GREAT Project Baseline.

TEACHER SURVEY

	IDENTIFICATION					
	COMPLETE THIS SECTION BEFORE YOU BEGIN THE SURVEY					
ID1	Enumerator ID	_ _ _ _ _ _ _				
ID2	Enumerator Name	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _				
ID3	Survey Date	DD _ _ MM _ _ YY _ _ _ _ _				
ID4	Teacher ID	_ _ _ _ _ _ _				
ID5	Confirm Teacher ID	_ _ _ _ _ _ _				
ID6	School ID	_ _ _ _ _ _ _				
ID7	Name of School	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _				
ID8	Region	1 Accra 2 Volta 3 North				
ID9	District	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _				
ID10	Teacher Class [CODE TO FIT]	[] KG 2 [] P1 [] P3 [] P4 [] P6				
ID11	Teacher Gender	1. _ Male 2. _ Female				
ID12	Teacher age (In Years) [READ OPTIONS]	1. 20 – 30 2. 31 – 40 3. 41- 50 4. 51 – 60 5. > 60 888. Don't know 999. Refused				
ID13	Teacher Phone number 1	_ _ _ _ _ _ _ _ _ _ _ _ _				
ID14	Teacher Phone number 2 (If Available)	_ _ _ _ _ _ _ _ _ _ _ _ _				
ID15	Teacher Phone number 3 (If Available)	_ _ _ _ _ _ _ _ _ _ _ _ _				
ID16	Time survey started	[] : []				
ID17	Time survey ended	[] : []				

CONSENT

ADMINISTER THE CONSENT TO TEACHER BEFORE YOU BEGIN.

Hello! My name is _____. I am part of a research team that is conducting a study on learning through play in Ghana. You have been selected to be participate in this survey as [TEACHER] in this [SCHOOL].

This survey is being conducted by researchers at the Open University (UK), University of Cape Coast (Ghana) and Right to Play International with support from the Ministry of Education, Ghana. In this research, we are trying to learn about your attitudes and beliefs about learning through play and your experiences with different activities. If you could spare some time, I would like to ask you a few questions about your background, beliefs about play and learning and other Right-to-Play project-related activities. This should only take 40 minutes.

We do not anticipate any risks to you from study participation. The research staff will not share your personal information with anyone outside the study, and they will keep your information and responses confidential to the extent possible. Your participation in this study is voluntary. That means you do not have to participate if you do not want to. You are free to (1) decline to participate; (2) withdraw from the study at any time; and (3) skip any question you feel uncomfortable answering without penalty or loss of existing benefits.

If you have questions, comments, or concerns about the research and your rights as research participants, please contact Chris Kwaah (050 551 5164); Ebo Amuah (024 540 8097) or Esinam Avornyo (0249065656)

Do you have any questions that I can answer?

CO	Do you agree to participate in this survey?	1. Yes 2. No → SO2
-----------	---	-----------------------

BACKGROUND CHARACTERISTICS

READ: I will now ask you some questions about your background

BC1	What is your highest academic qualification? [DO NOT READ OPTIONS]	1. ☐ SSSCE/WASSCE 2. ☐ GCE 'O' Level 3. ☐ GCE 'A' Level 4. ☐ HND/ Diploma 5. ☐ Degree 6. ☐ PGDE 7. ☐ Masters 8. ☐ Other specify.....
BC2	What is your professional qualification? [READ OPTIONS]	0. None (e.g., SSCE, other programmes) 1. ☐ Teacher's Certificate 'A' 2. ☐ Diploma in Education 3. ☐ B.Ed. 4. ☐ M.Ed. 5. ☐ MPhil 6. ☐ PhD in Education 7. ☐ Other specify.....
BC3	How long have you been working as a teacher? [DO NOT READ OPTIONS. CODE TO FIT]	1. ☐ I am in my first year 2. ☐ 1-2 years 3. ☐ 3-5 years 4. ☐ 6-10 years

		5. ☐ 11-15 years 6. ☐ 16-20 years 7. ☐ 20+ years
BC4	How long have you been working as a teacher in this school? [DO NOT READ OPTIONS. CODE TO FIT]	1. ☐ I am in my first year 2. ☐ 1-2 years 3. ☐ 3-5 years 4. ☐ 6-10 years 5. ☐ 11-15 years 6. ☐ 16-20 years 7. ☐ 20+ years
BC5	What language do you use to communicate with your pupils in class? [DO NOT READ OPTIONS. CODE TO FIT]	1. ☐ English only 2. ☐ Ghanaian language only 3. ☐ Mixture of English and Ghanaian language
BC6	In the last 12 months have you ever attended any workshop or training on play-based learning or learning through play?	1. ☐ Yes → BC7 0. ☐ No
BC7	Which organisation or institution organised the training for you? [DO NOT READ OPTIONS. CODE TO FIT]	1. ☐ Ghana Education Service 2. ☐ Right to Play 3. ☐ Lively Minds 4. Sabre Education 5. Pencils of Promise/USAID/MAKAZ/Geneva Office for Human Rights 6. Other (Specify)

ATTITUDE SCALE		
READ: In the following set of questions, I will read you two statements. I want you to tell me which of the two statements you agree with most, or which statement you prefer. For example, let me read two statements to you: Statement 1: I like tea. Statement 2: I like coffee. Which do you agree with? If they agree with both, say “Which do you agree with more.” So, you see, perhaps you like both tea and coffee, but we want to know which statement you agree with most. When answering the following questions, I want you to think of children in your class		
	Statement 1	Statement 2
AT1	Children learn best from the teacher.	Children learn best from their peers.
	1. Agree with 1 much more than 2 2. Agree with 1 and 2 equally. 3. Agree with 2 much more than 1	
2	It is important for children in the class to be quiet and speak only when asked to	It is important for children to talk and express their opinions freely at any time in the class.
	1. Agree with 1 much more than 2	

	2. Agree with 1 and 2 equally. 3. Agree with 2 much more than 1	
3	Children learn literacy/language best in small groups.	Children learn literacy/language best as a whole class.
	1. Agree with 1 much more than 2 2. Agree with 1 and 2 equally. 3. Agree with 2 much more than 1	
4	It is better if children tell the teacher when they don't understand.	If children don't understand, they should try to find the answer independently before asking the teacher.
	1. Agree with 1 much more than 2 2. Agree with 1 and 2 equally. 3. Agree with 2 much more than 1	
5	If children attempt to answer questions on their own, they will be more likely to understand.	If the teacher answers children's questions they will be more likely to understand.
	1. Agree with 1 much more than 2 2. Agree with 1 and 2 equally. 3. Agree with 2 much more than 1	
6	Parents welcome more play-based approaches to learning in the classroom	Parents prefer that I stick to traditional teaching approaches in the classroom
	1. Agree with 1 much more than 2 2. Agree with 1 and 2 equally. 3. Agree with 2 much more than 1	
7	Children learn best by exploring new things on their own.	Children learn best when new things are explained by the teacher.
	1. Agree with 1 much more than 2 2. Agree with 1 and 2 equally. 3. Agree with 2 much more than 1	
8	Play is an important part of learning for children in primary school	Play is only important for learning for preschool aged children
	1. Agree with 1 much more than 2 2. Agree with 1 and 2 equally. 3. Agree with 2 much more than 1	
9	Children can choose their own learning activities in the classroom.	Teachers are responsible for choosing the learning activities for his/her students.
	1. Agree with 1 much more than 2 2. Agree with 1 and 2 equally. 3. Agree with 2 much more than 1	
10	It is more important that the teacher is engaged with students.	It is more important that the students are engaged with each other.
	1. Agree with 1 much more than 2 2. Agree with 1 and 2 equally. 3. Agree with 2 much more than 1	

RTP PROJECT ACTIVITIES					
Which of the project's activities (training/workshop, coaching & mentoring; community of practices; Teacher Champion; supply of TLMs/material creation) has been most effective in generating and sustaining teachers' use of LtP/PBL activities?					
PA1	Which of the following activities apply to you? CODE TO FIT (READ OPTIONS) MARK ALL THAT APPLY	1. ☐ Participated in training workshop 2. ☐ Participated in community of practice 3. ☐ Have an assigned teacher champion 4. ☐ Serve as a teacher champion 5. ☐ Received coaching/mentoring from District Teacher Support Team 6. ☐ Serve as a coach and mentor 7. ☐ Received training from district officials 8. ☐ None			
PA2	Did you participate in RTP training workshops (organised by RTP staff or GES district officials) in 2021?	[1] Yes [0] No			
PA3	Have you participated in RTP training workshops this year (2022)? [If YES to PA2, but NO to PA3, skip to TW1a] [If NO to PA2, but YES to PA3, ask PA4] [If NO to PA2 and PA3, skip to CM1]	[1] Yes [0] No			
PA4	How many times did you attend or participate in Right to Play training workshop last term?	1. ☐ One 2. ☐ Two 3. ☐ Three 4. ☐ More than three 5. ☐ None			
TRAINING WORKSHOPS (CoTT)					
	How effectively has the training workshops been in addressing the following:	Very Ineffective	Somewhat ineffective	Somewhat effective	Very effective
TW1a	Understanding about the importance of play?				
TW1b	Developing play-based teaching and learning resources?				
TW1c	Integrating play-based activities into lessons?				
TW1d	Managing children's disruptive behaviours?				
TW1e	Asking reflective or reflect-connect-apply (RCA) questions				
	To what extent have the training workshops effectively improved your ability to:	Very Ineffective	Somewhat ineffective	Somewhat effective	Very effective
TW2	Lead a play-based activity				
TW3	Modify or adapt games that are relevant to the contents of the curriculum?				
TW4	Create physically safe environment for learning				

TW5	Develop lesson plan that takes into equal account the needs of girls and boys in the teaching-learning process?				
TW6	Apply the Behaviour-Impact-Do model to correct or reinforce children's behaviour?				
TW7	Help children reflect on activities and their experiences?				
TW8	Adapt games for the purpose of developing listening and speaking skills?				
TW9	Use reflective or Reflect-Connect-Apply (RCA) questions in developing children's core competencies (such as ability to think critically, be creative, develop leadership skills)?				
TW10	Identify games that are relevant for teaching mathematics content of the curriculum?				
TW11	Help children use their previous experiences in other situations?				
TW12	Use play-based activities that are free of gender biases or stereotypes?				
TW13	Adapt games for reading lessons?				
TW14	Modify Reflect-Connect-Apply (RCA) discussion questions for different content areas of the curriculum?				
TW15	Incorporate play-based activities into the lesson plan				
TW16	Adapt games for the purpose of developing writing skills?				
TW17	Use Reflect-Connect-Apply (RCA) questions in developing children's language skills?				
TW18	Identify or choose games that are appropriate for their age				
TW29	Create environments that children feel emotionally safe for learning				
TW20	Use positive discipline strategies (e.g., identifying the behaviour to be stopped) to support the development of students' behaviour				
COACHING AND MENTORING					
CM1a	Do (Did) you receive coaching and mentoring support from District Teacher Support Team or Headteacher in the last 12 months?	[1] Yes [0] No >> CP1a [-88] Don't know >> CP1a			

CM1b	If your answer to CM1a is yes, how many times did you have an interaction with your coach/mentor last term? [If your response to CM1a is no, skip to CP1a]	1. _ One 2. _ Two 3. _ Three 4. _ More than three 5. _ None			
	Indicate whether your coach/mentor has provided you with the following:	Yes	No	Not sure	
CM2a	Information or support on how to develop games for numeracy lessons				
CM2b	Assistance in planning play-based lesson plans				
CM2c	Feedback on classroom practice				
CM2d	Support in how to track and monitor children's learning				
CM2e	Information on how to support learners' social and emotional skills				
CM2f	How to identify play-based resources				
CM2g	How to develop or use positive discipline ideas or strategies				
CM2h	Information or support on how to develop games for literacy lessons				
	To what extent has the coaching and mentoring process effectively improved your ability to:	Very Ineffective	Somewhat ineffective	Somewhat effective	Very effective
CM3a	Use play-based activities?				
CM3b	Link children's experiences with their previous knowledge?				
CM3c	Incorporate play-based activities into lesson plan?				
CM3d	Develop games for numeracy lessons?				
CM3e	Guide children to use their experiences in other situations?				
CM3f	Create safe learning environments?				
CM3g	Design games for literacy lessons?				
CM3h	Ask reflective questions?				
CM3i	How to effectively determine if children are learning				
CM3j	How to effectively address the learning needs of a child who is struggling to learn				
PROFESSIONAL LEARNING COMMUNITIES					
CP1a	Did you participate in professional learning communities activities last term?	[1] Yes [0] No >> TP1 [-88] Don't know >> TP1			

CP1b	How many times did you participate in community of practices last term?	1. ☐ One 2. ☐ Two 3. ☐ Three 4. ☐ More than three 5. ☐ None			
	To what extent has community of practices effectively improved your ability to:	Very Ineffective	Somewhat ineffective	Somewhat effective	Very effective
CP2a	Generate new/creative ideas for play-based learning?				
CP2b	Use creative ideas to promote play-based learning?				
CP2c	Use assessment to diagnose children's learning needs for the purpose of planning your lesson?				
CP2d	Create a classroom learning environment that is safe for children to learn? ?				
CP2e	Use positive strategies for disciplining children such as positive reinforcement or role modelling?				
CP2f	Facilitate learners' participation in class/school activities?				
CP2g	Equally support boys' and girls' participation in class/school activities?				
CP2h	Use different teaching styles to meet different needs of learners in your classroom?				
CP2i	Engage parents or caregivers about the usefulness of play-based activities in learning in class and school?				
CP2j	Use Reflect-Connect-Apply (RCA) questions in developing children's core competencies (e.g., critical thinking, creativity, leadership)?				

TEACHERS' PERCEPTIONS OF THE P3 INTERVENTION					
	What are teachers' general impressions of play-based learning				
	READ: To what extent do you agree with the following statements about the Right to Play intervention? [intervention to introduce play-based learning]	Strongly Disagree	Disagree	Agree	Strongly Agree
TP1	I find play-based activities difficult to use in classrooms				
	Time required				
TP2	I require more time to prepare Play-based activities for my lessons				

TP3	Assessing children's learning through play-based activities requires more time than other activities				
TP4	It takes more time to deliver play-based learning lessons.				
	Curricula expectations				
TP5	It is difficult to use the play-based approach and still meet school curriculum goals				
TP6	The play-based approach is highly effective in developing children's literacy skills				
TP7	The play-based approach is highly effective in developing children's numeracy skills				
TP8	The play-based approach makes it difficult to manage children's behaviour during the lesson				
TP9	The play-based approach is highly effective in developing children's social and emotional skills				
TP10	From my experience, the play-based approach has not made significant change in children's learning				
TP11	The play-based approach is not adequately reflected in the goals of the new curriculum				
	School culture				
TP12	Teachers in my school are committed to using the play-based approach				
TP13	Teachers in my school feel motivated to adopt the play-based approach for lessons				
TP14	Our school management supports the use of play-based approaches in teaching				
TP15	Teachers in my school are determined to use the play-based approach despite the challenges				

MOTIVATION TO USE PLAY-BASED ACTIVITIES					
What motivates teachers' use of LtP/PBL activities?					
	READ: How important is each of the following statement in influencing your decisions to use play-based activities?	Not Important	Slightly Important	Important	Very Important
	Teacher efficacy: Instructional strategies Play-based activities are important because they enable me to:				

MP1	Use a variety of assessment strategies to assess children's learning				
MP2	Respond to difficult questions from learners				
MP3	Assess children's understanding of basic concepts				
MP4	Design good questions to assess children's learning				
MP5	Adjust lessons to the appropriate level of children				
MP6	Provide alternative paths to learning when children are confused or do not understand				
	Teacher efficacy: Child engagement/ value of play Play-based activities enable me to:				
MP7	Motivate children who show low interest in learning				
MP8	Help children to believe or think they can do well in class activities				
MP9	Help children to value learning				
MP10	Grab the attention of the most difficult children				
MP11	Help children think critically				
MP12	Help children develop creativity				
MP13	Identify children who are struggling with their learning or falling behind in class				
MP14	Help improve children's reading skills				
MP15	Help improve children's numeracy skills				
	Teacher efficacy: Classroom management Play-based activities are important for helping me to:				
MP16	Control or manage disruptive behaviour during lessons				
MP17	Make what I expect children to learn clear to them				
MP18	Establish routines to keep activities running smoothly				
MP19	Get children in my class to follow rules				
MP20	Calm a learner who is disruptive				
MP21	Get the few disruptive children to focus on their learning				
	Resources (Task demand)				

	I use play-based activities because:				
MP22	I have more time for lessons				
MP23	I have access to indoor play spaces				
MP24	I have access to outdoor play spaces				
MP25	I have access to physical play resources (e.g., books, playdough)				
MP26	I have access to online play resources (e.g., tips for games and activities)				

ENABLERS AND HINDRANCES TO PLAY-BASED ACTIVITIES			
	What factors are influencing or impeding teachers' change in attitude and behaviours towards the use of LtP/PBL activities?		
	READ: Please tell if each of the following facilitates or hinders your efforts in using play-based activities. (add class)	Enabler/ Facilitator	Hindrane
EH1	Class size		
EH2	Indoor space(s)		
EH3	Outdoor space(s)		
EH4	Play materials		
EH5	Managing children's behaviour		
EH6	Time required for play-based activities		
EH7	Support from head teacher or school management		
EH8	Support from other teachers		
EH9	Knowledge about play-based activities		
EH10	Parental attitudes towards play		
EH11	Workshop training on play-based activities		
EH12	Curricular requirements		
EH13	Input from coach/mentor		
EH14	Participating in community of practices		
EH15	Academic training		
EH16	Input from teacher champion(s)		
EH17	Designing games		

SURVEY OUTCOME		
GO THROUGH THE SURVEY TO CHECK FOR ANY MISSED QUESTIONS, MISCODES AND ANY OTHER ERRORS. ASK THE TEACHER ANY QUESTIONS YOU MAY HAVE MISSED AND CORRECT ANY ERRORS.		
SO1	What is the MAIN language used to conduct the interview? [MARK ONLY ONE OPTION]	1. ☐ Twi/Fante 2. ☐ Ga-Dangme 3. ☐ Ewe 4. ☐ Frafra/Grusi

		5. ☐ Nzema 6. ☐ Wale/Dagari 7. ☐ Hausa 8. ☐ English 9. Other (specify)
S02	Survey result	1. ☐ Complete 2. ☐ Incomplete 3. ☐ Refused 4. ☐ Teacher not available 5. ☐ Other (specify)
S03	If refused, why?	1. ☐ Has no time - busy 2. ☐ Not interested 3. Other (specify)
S04	If incomplete, why?	

THANK YOU SO MUCH FOR YOUR TIME