



RIGHT TO PLAY
PROTECT. EDUCATE. EMPOWER.

Rwandan Primary Teachers' Experiences with Online Teacher Training and Learning Through Play

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Executive Summary

Right To Play, the LEGO Foundation, the Government of Rwanda and the University of Cambridge are implementing a Learning through Play E-training and Certification programme to support play-based learning in the classroom. Play has been identified as an essential part for holistic skills development in children, but practical play pedagogy is lacking, partly because of a lack of quality training for teachers. The E-Training and Certification programme will train, certify and mentor lower primary teachers in Rwanda, first piloting a small pre-alpha cohort and then expanding to 3,343 lower primary teachers. This context learning study is the first planned in a monitoring, evaluation and learning plan that will include a pilot design study, a deep dive study, and a baseline and endline evaluation.

The goal of this context study is to define *who* the users of the e-certification programme will be and *what* their prior experiences are related to online training and learning through play. The study plays a role in the *empathise, define and ideate* steps of the design process of the e-certification platform¹. The evidence collected on users and their experiences will allow us to define what we should do in the next stage of the innovation process and explain why it matters logically, coherently and convincingly.

The data used in this study comes from a listing exercise on 383 lower primary teachers to identify potential respondents and 12 Focus Group Discussions (FGDs) with female and male teachers and school leaders in 4 districts. The listing exercise collected basic demographic information on teachers who could be selected to participate in the study, their previous experience with training and their access to digital devices. This list was then used to select FGD participants. FGDs collected detailed information on teachers' experiences with teacher training, online training and learning through play in the classroom. For each district, one female teacher focus group, one male teacher focus group, and one school leader focus group were conducted. Neither the listing data nor the FGDs can be used to derive generalizable findings about primary teachers in Rwanda nor in the districts of interest.

The listing data shows that teachers are primarily female, that access to smartphones is unequal across groups and districts, and that attendance to online training is related to access to electronic devices. Lower primary teachers from the listing data are of all ages and usually teach multiple subjects. Female and urban teachers have higher access to smartphones, but not to computers. Access to devices and online training greatly varies across districts, with teachers in Ngororero having the lowest access.

Teachers are mainly motivated to attend training if it is of high quality and is made accessible through reimbursements, ICT devices and preparation. Providing late or insufficient reimbursements, not providing ICT devices or preparation for online training, and other accessibility issues would stop teachers from participating in trainings. Many teachers also

¹ This is outlined in the overview of the Design Process in Section 2.

stressed the importance of high-quality training in terms of good time management and skilled trainers. On making training accessible to everyone, participants suggested providing childcare and support for teachers with caring responsibilities and tailoring content for both men and women.

Learning through play is mainly seen as including games and songs to improve learning and motivation, indicating that teachers usually only focus on “gamification” elements. Most teachers do not feel ready to deliver it in the classroom and believe there are many barriers for students with disabilities. Learning through play was described by many teachers as a set of playful activities to deliver content, with the outcome of improving students’ learning and motivation. The overwhelming response from teachers is that despite their willingness to engage with playful learning, they do not have the resources nor training to deliver learning through play in the classroom, along with external challenges such as overwork and overcrowded classrooms. While virtually all focus groups (23 out of 24) mentioned major barriers to learning through play for students with disabilities, less than half (10 out of 24) believe there are significant barriers related to gender.

Teachers recommend that blended learning approaches include accommodating for teachers’ unequal access to technology, focusing on accessibility to training for all groups, putting an emphasis on high-quality content and making online training as interactive as possible. Putting an emphasis on factors that make training accessible, such as reimbursements and a language that all teachers can understand, will increase teachers’ motivation to attend. Since access to and familiarity with electronic devices are unequally spread across districts and groups of teachers, resources should be provided to bridge this gap. Focusing on a clear and consistent lesson plan for training, as well as following up on the concepts learned, will support the view of training as a learning opportunity. Finally, including an interactive component in online training will make it more interesting and appealing to all teachers.

The Learning through Play component of training should ensure a shared understanding of what learning through play consists of and recognise the external factors that may limit the adoption of playful learning. Time at the beginning of the course should be dedicated to building a consensus on what learning through play is and to suggesting evidence-based methods to deliver playful learning in an impactful way. Moreover, training could focus on delivering playful learning in large classrooms and with constrained resources, recognizing the factors that are outside of teachers’ control when implementing play-based approaches.

1. Project Background

Ninety-two percent of children in low-income countries are predicted to reach adulthood without the skills they need to thrive (International Commission on Financing Global Education Opportunity, 2016). In light of this, holistic skills development has become a priority in education to ensure improved academic performance, socio-emotional skills and outcomes in physical and psychosocial wellbeing. Play has been identified as an essential strategy for holistic skills development, although practical play pedagogy is reportedly lacking, particularly in developing countries (UNESCO, 2016).

This is partly due to a lack of quality training for teachers on how to implement play-based learning in the classroom. Right To Play, the LEGO Foundation, the Government of Rwanda and the University of Cambridge are attempting to address this through a comprehensive e-training program for teachers in Rwanda, relying on the scalability, accessibility, cost-effectiveness and impact of online training. Rwanda has been identified as an optimal location to test this approach given its efforts in becoming a leader in the technology and education spaces.

This Learning through Play (LtP) E-training and Certification project will be implemented through a blended Continuous Professional Development (CPD) approach. It will train, certify, and mentor lower primary teachers (P1-P3) in Rwanda to deliver the Competence Based Curriculum (CBC) through LtP, inspiring them to facilitate more collaborative, engaging, and playful learning classrooms. The LtP training will be accredited by the University of Rwanda – College of Education and hosted on Rwanda Education Board’s Learning Management System. The project will be piloted first with a small pre-alpha cohort of 30 lower primary teachers (approximately 25% male, 75% female), before eventually expanding to a total of seven districts in Rwanda (Burera, Muhanga, Musanze, Ngoma, Ngororero, Nyanza, and Rwamagana), reaching 304 public and government aided schools and up to 3,343 lower primary teachers (25% male, 75% female), who will in turn reach up to 158,837 lower primary learners. The project will adopt a user-centred design and co-creation approach, giving teachers a central role in the design process of the e-learning platform and blended training approach from the very beginning.

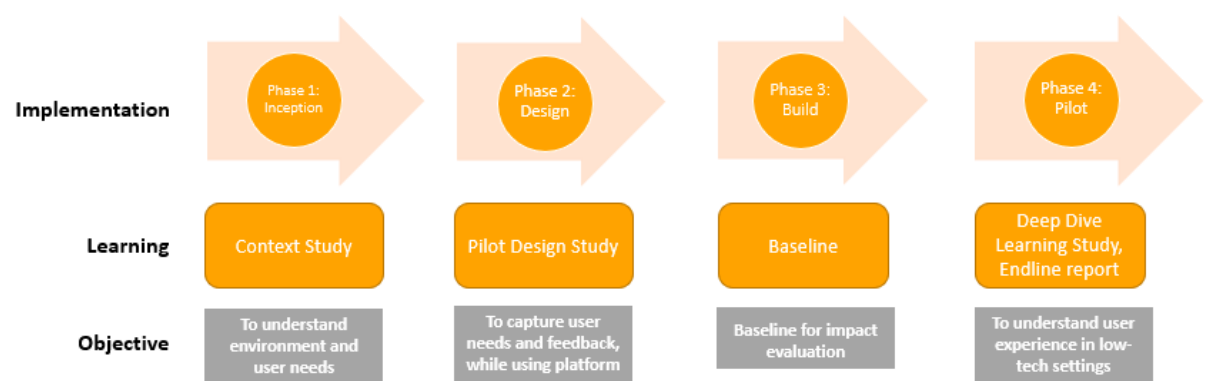
The project aims to achieve impact by addressing two long-term outcomes:

1. Improve teacher classroom practice in delivering the CBC through the implementation of LtP in lower primary classrooms.
2. Increase Right To Play’s ability to develop and deliver scalable, playful online Teacher Professional Development.

To answer research questions around these and any related outcomes, the monitoring, evaluation and learning plan developed by Right To Play, Laterite and Oxford MeasurED includes (see Figure 1):

- A **context learning study** to inform the design of the LtP e-course based on educators' needs.
- A **pilot design study** to improve the e-course prototype through user insights.
- A **deep dive study** into the application of the LtP e-course in low-technology settings to better understand user experience and engagement for users in such contexts.
- A **baseline and endline evaluation** to assess whether teachers' participation in the LtP e-course results in changes in their knowledge and improved perceptions and behaviours of LtP.

Figure 1. Overview of learning studies in relation to Right To Play implementation stages



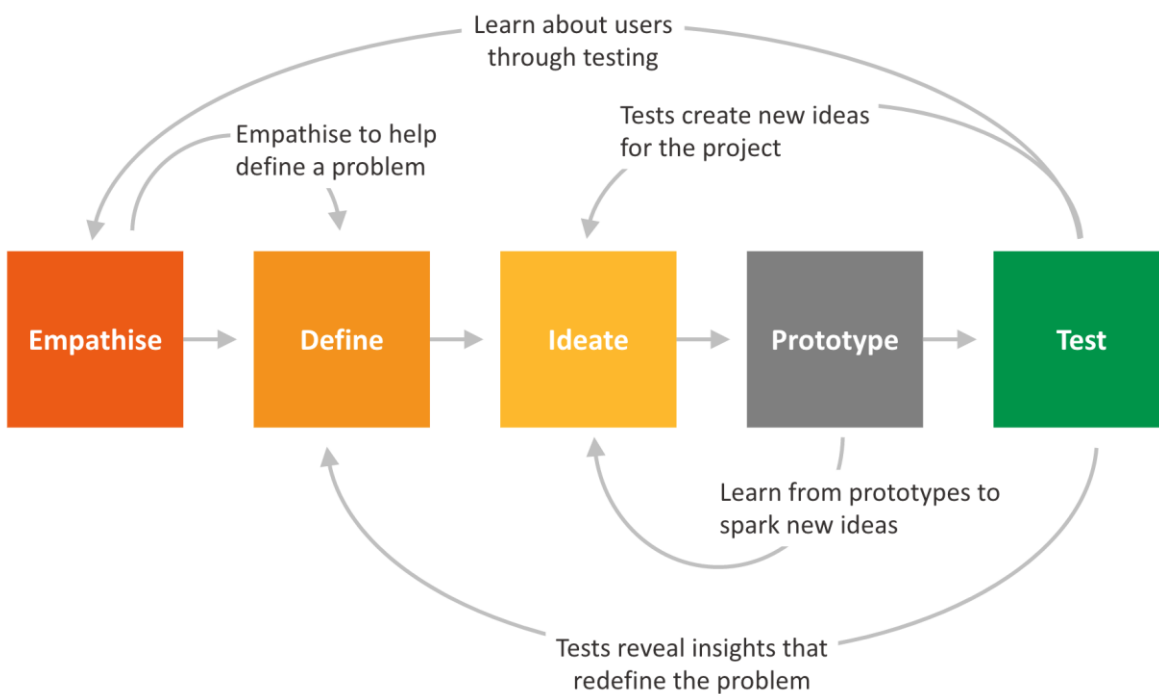
2. Study Purpose, Objective and Questions

Situating the context study in the innovation pathway

During October 2022, we² conducted a workshop with the Right To Play team to discuss design thinking processes and the role that evidence plays at each stage of the process of moving to scale with EdTech innovations. This context study represents the first opportunity for us as learning partners to collect and analyse data to support progress along this pathway.

When we look at **Figure 2** below, we can see a process for design thinking. This is an iterative and cyclical process which begins with a focus on understanding the users and context for innovation before solutions are ideated, prototyped and tested.

Figure 2. Overview of Design Process³



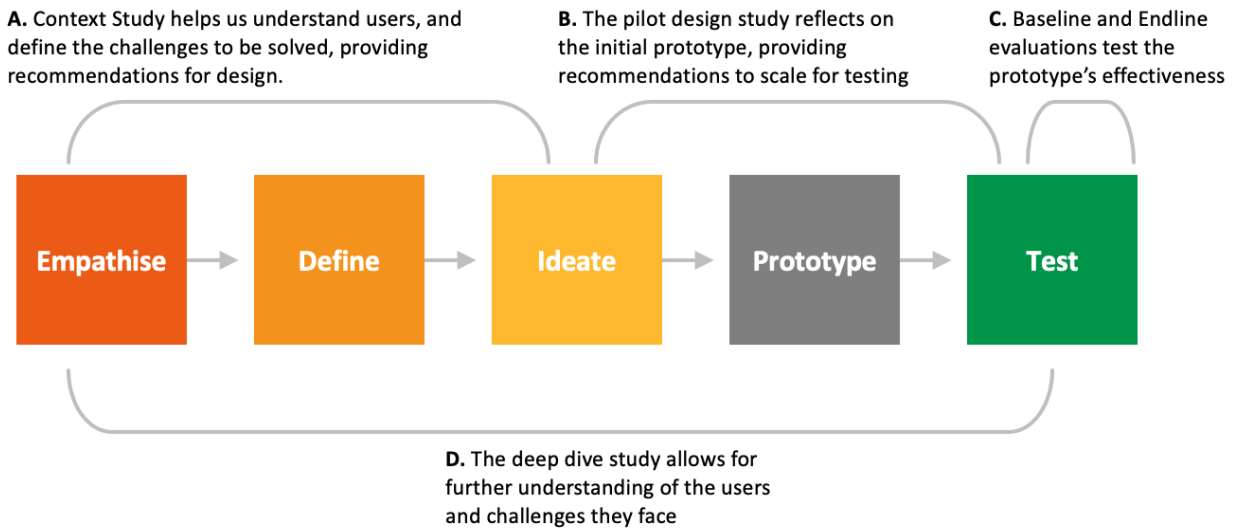
For the purpose of planning our learning partnership, we can overlay this pathway with the studies and design activities that will take place over the next two years. In this overlay, shown in **Figure 3**, we can see that the context study plays a key role in the **empathise, define** and **ideate** process. We will use the data from this study to look at *who* the users of the programme will be (empathise), as well as *what* the experiences they have and the challenges they face in using online learning or delivering learning through play (define). This understanding will allow us, as

² We here, and throughout, refers to Laterite and Oxford MeasurEd.

³ This model was first proposed by the Stanford School of design, but is now commonly used by a range of organisations working in design thinking.

learning partners, to make evidence-based recommendations to support Right To Play in the ideation process.

Figure 3. Role of Learning Partnership in Design Process

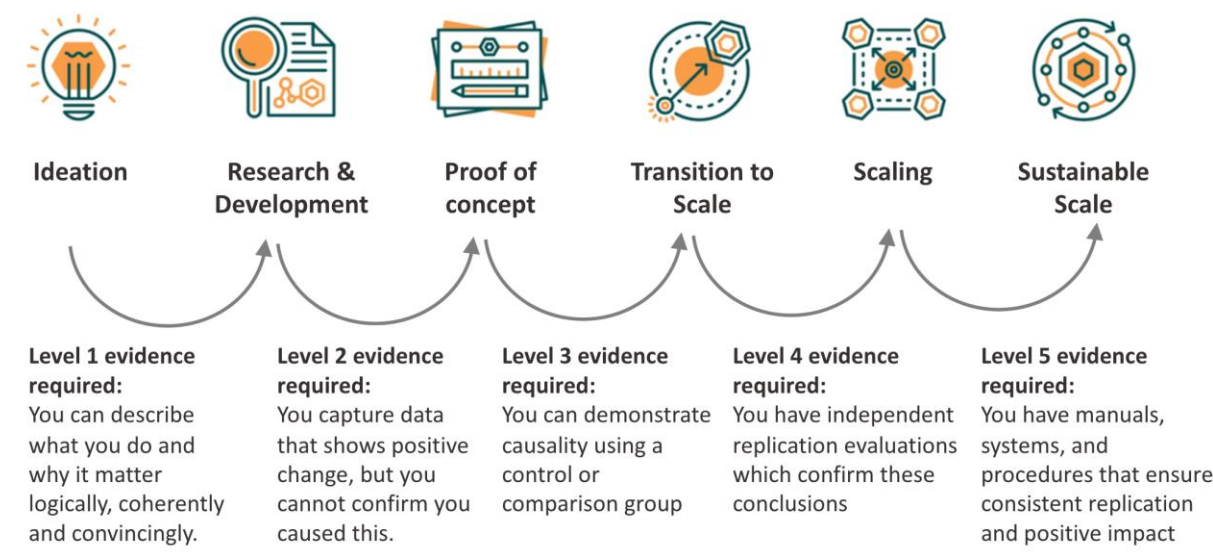


Standards of Evidence

Another key framework guiding our work as learning partners is an understanding of the levels and types of evidence needed to move an innovation to scale. Presented in Figure 4, this framework presents six levels of evidence which move from ideation to sustainable scale. For each of these levels, the model outlines what level and types of evidence are sufficient to allow an innovation to move to the next stage. Following this pathway ensures that an innovation has enough evidence to support scaling, but also ensures that unnecessary data is not being collected too early in the process.

As presented above, we aim to support the ideation process with the context study. This means we are looking to reach **level one** in this evidence pathway. The outputs of this study should therefore allow us to **describe what the E-Training and Certification project will do, and why it will matter, logically, coherently and convincingly**. We can use this standard to reflect on whether the context study has supported the programme in reaching the level of evidence required to reach level one on the evidence pathway.

Figure 4. Levels of evidence to move from ideation to scale⁴



Study Objectives

To fulfil the evidence needs outlined above, the data collection for the context study focused on questions of **who** the potential users of the e-certification programme are and **what** their prior experiences are related to online training and learning through play. Specifically, we sought to answer the following questions:

- Who are the teachers whom Right To Play will target with the e-certification programme? What are their previous experiences with online training and learning through play?
- What are their intrinsic and extrinsic motivations for taking part in in-person or online training?
- What are the barriers and the opportunities for teachers to take part in a blended training programme?
- What is their understanding of and readiness to adopt learning through play in their classrooms?

⁴ This model is adapted by Oxford MeasurEd from UNICEF's scaling innovation strategy. For more information see: <https://www.unicef.org/innovation/media/4551/file/Scaling%20Innovation%20for%20Every%20Child%20v2.pdf>

3. Research Methodology and Limitations

For this study, we deployed a listing exercise of primary school teachers, followed by Focus Group Discussions (FGDs) with teachers and school leaders. The following sections describe in more detail the methodologies used to collect and analyse data, as well as the limitations that come with each method.

Listing Exercise

The aim of the listing exercise was to collect basic information about demographics of teachers that will participate in the programme, previous experience with training and access to devices. The list was used as a pool to identify FGD participants and will be used to select pilot design study participants. Identification of FGD participants was done by sector: for each sector, the gender of teachers from the listing data was used to exclude schools with very low quotas of male teachers. After that, schools were randomly selected in each sector and teachers were contacted to take part in the FGDs.

The listing exercise was conducted in the four districts of Musanze, Ngororero, Rwamagana and Nyanza. The four districts were selected to represent each of the four provinces covered by the study, meaning that they are located in different parts of the country and each district is significantly different from the others. In each district three sectors were chosen, selecting two rural sectors and one urban sector for representation purposes. For each sector, one Sector Education Officer (SEO) and two headteachers were interviewed – for a total of 12 SEOs and 24 headteachers. From headteachers, information was collected on about 383 lower primary teachers (P1 to P3). In the teachers listing database, data was collected on teachers' gender, age, subjects taught, access to electronic devices, previous experience of online training and previous experience of Learning through Play training.

Focus Group Discussions

The aim of the Focus Group Discussions (FGDs) was to collect detailed information about teachers' experiences with teacher training, online training and Learning through Play in the classroom. Particular importance was given to the goals highlighted in the context study research questions:

1. To understand teachers' intrinsic and extrinsic motivation when it comes to teacher training
2. To understand teachers' experiences and barriers in relation to online training
3. To identify the perceptions, experiences and barriers of primary teachers in relation to Learning through Play

A total of 12 FGDs were conducted in the districts of Musanze, Ngororero, Rwamagana and Nyanza. In each district, 3 FGDs took place with 8 participants each:

- One discussion involved female primary teachers (5 from rural areas, 3 from urban areas).
- One discussion involved male primary teachers (5 from rural areas, 3 from urban areas).
- One discussion involved school leaders, i.e., SEOs and Headteachers.

In this way, we were able to collect enough responses for both gender groups and to gather separate information from teachers and school leaders, avoiding potential situations of teachers feeling constrained to speak out in the presence of their superiors.

Each FGD was organized in two sessions. In each session, teachers were randomly assigned to one of two groups to discuss the questions assigned to them; then, they regrouped and presented their findings to the entire focus group, and a discussion followed. While in the first session groups were presented slightly different questions, in the second session they all answered the same set of questions. The first session was split to ensure that teachers discussed both teacher training in general (group 1) and issues that are specific to online training (group 2). The second session was not split to ensure that data from a higher number of groups would be collected on opinions related to Learning through Play. The questions posed to groups in the two sessions were the following:

Session 1 – Group 1

1. What factors would make you interested or excited to participate in teacher training or professional development?
2. What factors, barriers or challenges would discourage or stop you from participating in teacher training or professional development?
3. What factors should be considered to help both men and women to benefit from teacher training?

Session 1 – Group 2

1. What factors would make you interested or excited to participate in a digital or online teacher training course?
2. What factors would discourage or prevent you from participating in a digital or online teacher training course?
3. What factors should be considered to help both men and women to benefit from teacher training when done online?

Session 2 – Groups 1 and 2

1. In your view, what does Learning through Play mean or include?
2. Do you feel equipped or able to facilitate Learning through Play? Why or why not?
3. What barriers or difficulties do you see to the adoption or strengthening of Learning through Play in classrooms in Rwandan schools in general?
4. Do you perceive there to be particular difficulties for boys, for girls, or for children with disabilities about Learning through Play, and if so, what might those be?

Analysis

Analysis of Listing Data

Listing data was analysed by extracting descriptive statistics and graphs for each key variable, grouped by gender, urban/rural status, district, and other relevant variables. We tested the statistical significance of associations using t-tests. The analysis was conducted on the statistical analysis software STATA.

Analysis of Qualitative Data from Focus Group Discussions

FGD data was analysed by first coding main themes in the discussions and then logging the frequency of each theme across all groups. After the FGDs were conducted, recordings were transcribed and translated from Kinyarwanda into English. The transcripts were then coded, highlighting all the instances where a theme (e.g., reimbursements as a factor to encourage training attendance) was mentioned in a discussion. We organised coded themes for each question sorted by frequency on a table in Microsoft Excel, so that the most common themes across all groups were identified. Relevant quotes were collected to add depth to each theme.

Although there are several possible methods to analyse qualitative data, the rationale for this analysis was to use a semi-quantitative approach (i.e., reporting frequencies) to be able to visualize which issues are the most common across different groups of teachers and quickly identify priorities across the sample. A qualitative component (i.e., the use of quotes) was added to ensure that frequencies are complemented by more nuanced and detailed explanations.

Limitations

Listing Exercise

It is important to note that listed teachers are not representative of primary teachers in Rwanda, hence findings from the listing data cannot be generalized to the country or districts of interest. The listing data was collected to gather information that is *qualitatively* representative of teachers in Rwanda in the four districts chosen; however, budgetary constraints implied that listed teachers are not enough in terms of sample size to be *statistically* representative of the overall population. Moreover, only basic information was collected due to the time and budgetary constraints of the listing exercise. This implies that we were not able to collect potentially useful information for planning purposes, such as information about the topic or specific modalities of the trainings attended.

Focus Group Discussions

One limitation to keep in mind for FGDs is that they are not representative of the overall study population and cannot be generalized to our sample of interest. This is due to the nature of any qualitative exercise. Moreover, due to the modality of presentation where one member summarizes results agreed on by the group, it is hard to understand any individual preferences

and make inference about personal opinions of teachers, except in the brief discussion following the presentation where participants intervene individually. Another issue related to FGDs is that in cases where a majority expresses similar opinions on a topic, a 'silencing effect' could take place, where minority voices do not feel comfortable expressing their dissent. This would imply that only the opinion of the majority of teachers in a group is reported in the discussion.

Constructing Teacher Personas

One of our aims for the analysis context study was to look at the feasibility of generating 'personas' which would help categorise how different teachers are motivated and prepared to engage with online or blended training. To generate these personas, we would look at how different background characteristics, individually or in conjunction, predicted attitudes towards blended training. Whilst we were able to use the listing data to generate descriptive statistics for teachers with different characteristics using the listing data, for the FGDs this would have been a largely qualitative exercise, considering the small size of the sample available.

In practice, the participatory format of the focus groups meant that data was presented by groups, based on their internal discussions. This limited the ability to single out the views of individual teachers to construct personas. Instead, the conclusions here are based on overall group responses.

It may be more feasible to construct these personas during the design study, with a greater focus on semi-structured interviews (SSIs) and understanding teachers' individual engagement with the pilot training programme.

4. Findings

In this section we present findings from the context study. We first report findings from the listing exercise and then those from the Focus Group Discussions.

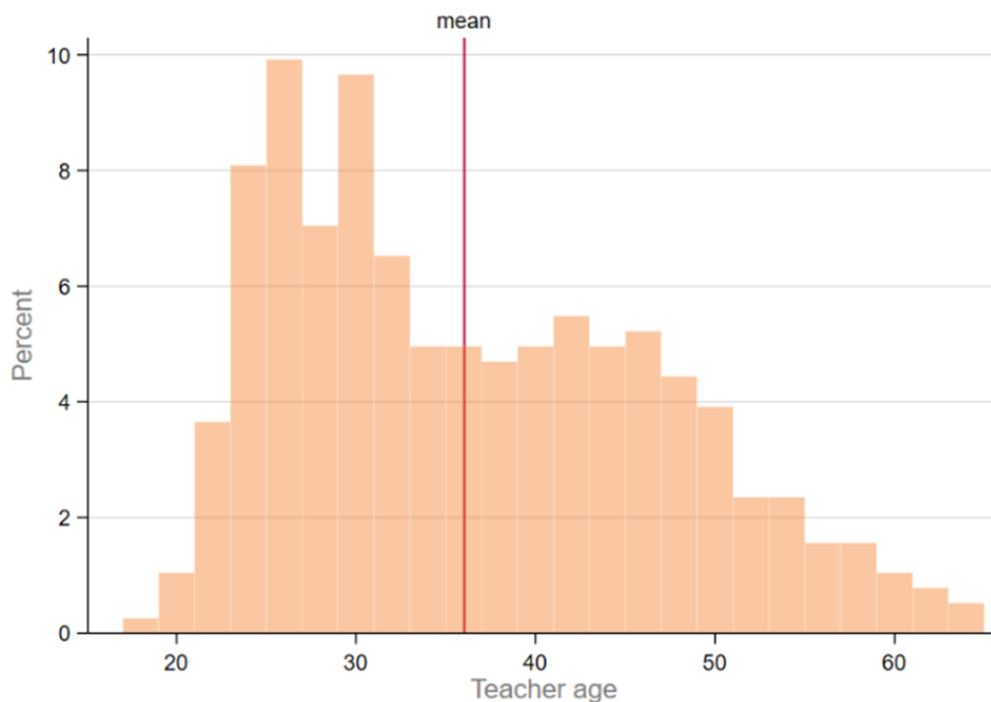
Listing Data

In this section we present the findings from the listing exercise. First, we present the background characteristics of listed teachers (gender, age, subjects taught). We then outline their access to electronic devices, previous experience of online training and previous experience of Learning through Play training.

The listing data includes 383 lower primary teachers (P1 to P3) in 24 schools spread across four districts.

P1 to P3 teachers are of majority female and of all ages. Women make up 74% of the sample. About 1/3 of teachers are from urban sectors (25% men; 38% women). Their average age is 36 years old, although the distribution is wide and includes ages from 18 to 65 years old (see Figure 5).

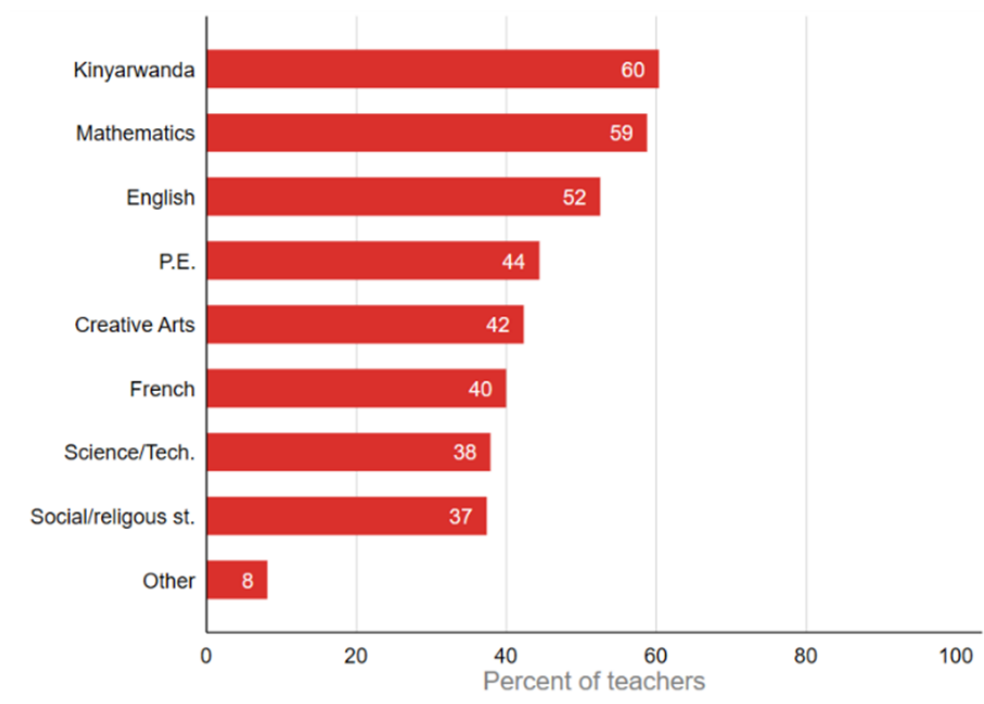
Figure 5. Age distribution of teachers in listing data



Most teachers teach multiple subjects. While most teachers (84%) only teach one class of P1, P2 or P3, 12% teach two classes, and 4% teach all three classes. Most teachers teach multiple

subjects, with an average of 4 subjects per teacher. As shown in Figure 6, the most commonly taught subjects are Kinyarwanda (60%), Math (59%) and English (52%).

Figure 6. Frequency of subjects taught.

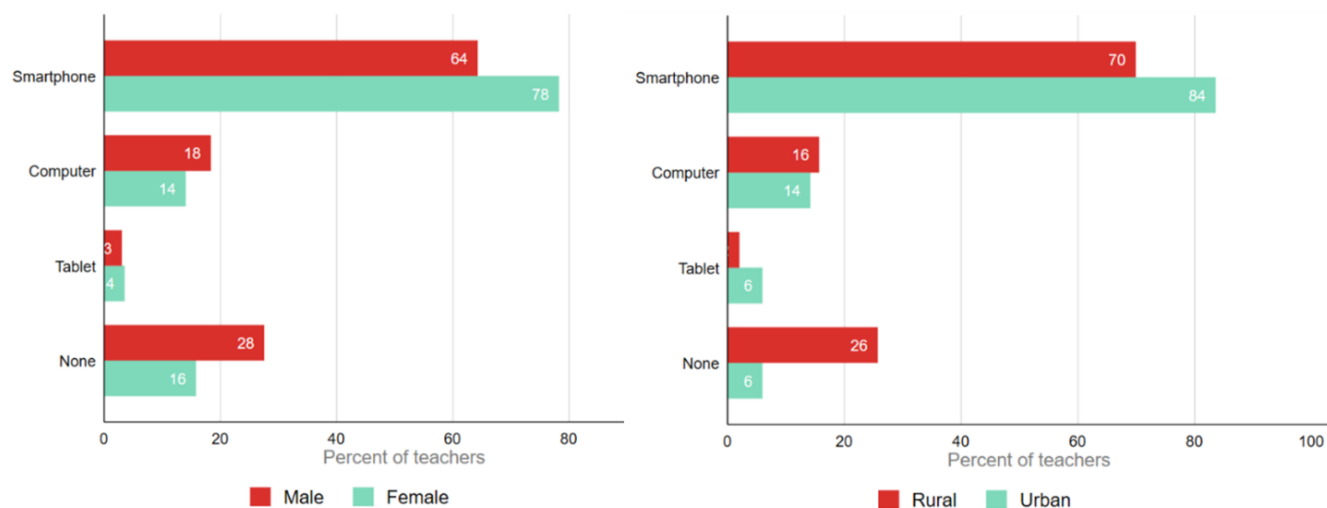


Females and urban teachers tend to have more access to smartphones, but not computers.

19% of the whole sample does not have access to any electronic device. The devices most commonly accessed by teachers are smartphones, with 75% access, followed by computers (15%). Only 3% of listed teachers have access to tablets.

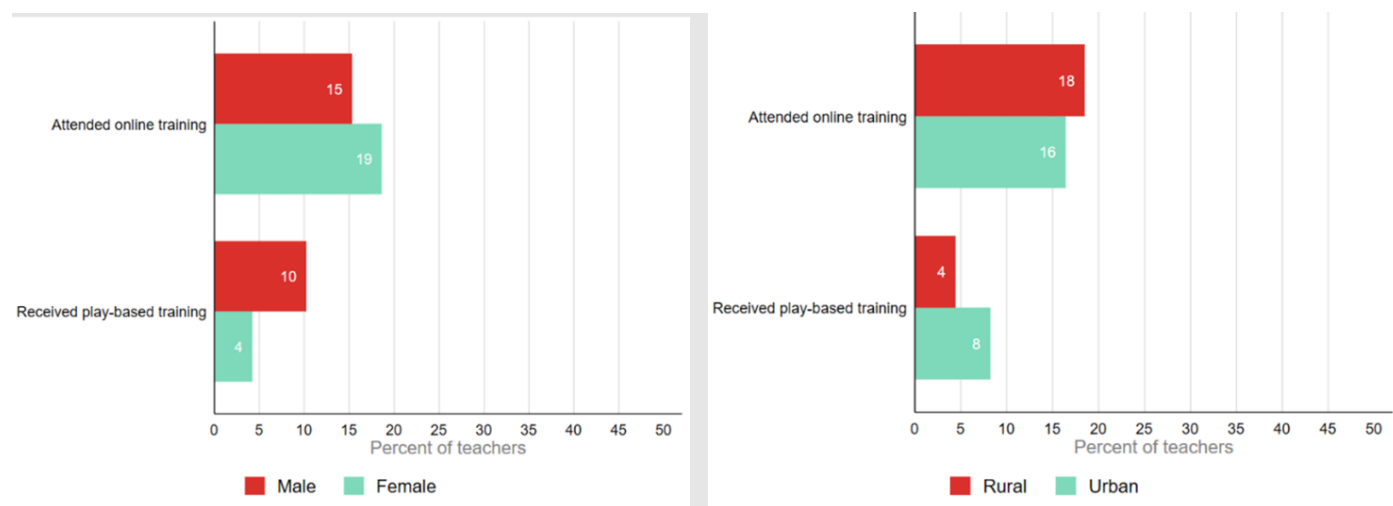
It is much more common for male teachers to not have access to any gadget (28%) compared to female teachers (16%); and for rural households (26%) compared to urban ones (6%). The difference is mainly driven by access to smartphones: 78% of women have access to smartphones, compared to 64% of men; 84% of teachers from urban households have access to smartphones, while only 70% of teachers from rural areas do (see Figure 7). Both differences are statistically significant. On the other hand, when it comes to access to computers, there are no large differences by gender group or urban/rural status.

Figure 7. Access to electronic devices, by gender and urban/rural status.



There is no clear pattern on who attended online training and who received training in play-based learning. While 18% of listed teachers had attended online training before, only 6% of the sample received play-based training in the past. As shown in Figure 8, attendance to online training does not vary significantly across gender groups nor urban/rural status. Attendance of training on play-based learning is slightly higher for male teachers (10%) and teachers in rural sectors (8%).

Figure 8. Previous attendance to online and play-based learning, by gender and urban/rural status.



Districts differ widely in their access to devices and to online training. While 83% to 90% of teachers in Musanze, Rwamagana and Nyanza have access to at least one electronic device, only 56% of teachers in Ngororero have access to smartphones, computers or tablets (see Figure 9). This is reflected by online training attendance patterns by district: teachers in Ngororero reported the lowest online training attendance (4%). Teachers in Musanze reported the highest

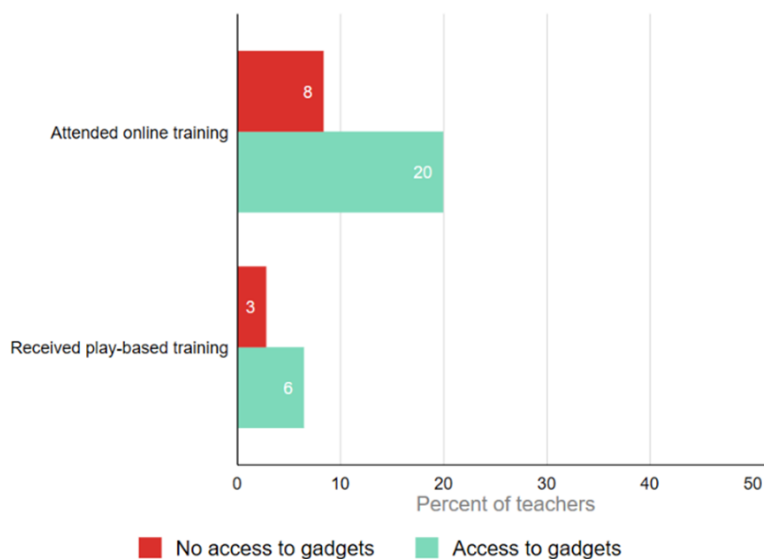
attendance to online training, with 40% of teachers having received it in the past. Nyanza is the district where the highest share of teachers received play-based training (12%).

Figure 9. Access to any electronic device and previous attendance to online and play-based learning, by district.



Online training appears to be more accessible to those with devices. About 20% of teachers with access to any electronic device received online training in the past, compared to 8% of teachers without access to gadgets (see Figure 10). The difference between the two groups is statistically significant.

Figure 10. Previous attendance to online and play-based training, by access to electronic devices.



Focus Group Discussions

Based on the qualitative FGDs, we analysed the factors that would make teachers interested or excited to participate in online training. Themes in Focus Group Discussions are reported in terms of how frequently they were mentioned over all FGDs.

Factors that would encourage teacher participation

Making training accessible is the main factor to encourage participation. For online training, access to technology is essential. The most commonly mentioned reasons for attending teacher training are receiving timely and good reimbursements for participation (11/12), the learning opportunity that teacher training provides (10/12), and provision of teaching materials as support to training (7/12). For online training, groups mainly focused on receiving IT tools, including internet and electricity (11/12), reimbursements for time spent in online training (10/12), and training seen as a learning opportunity (6/12). Overall, the focus was mainly on accessibility through reimbursements, materials and devices, and training seen as a learning opportunity for teachers.

Having a consistent schedule and organizing training during weekdays and in a central location would help participation. In both the teacher training and the online training group, participants generally focused on quality of training, accessibility and technology access and familiarity (see Table 1). On quality, some teachers suggested providing a clear and consistent schedule of classes to encourage participation. Others wished for a training certificate to help them feel more accomplished at the end of the training. On accessibility, apart from reimbursements, many groups stressed the importance of the timing of the training to ensure participation – to be held outside of working hours, during weekdays – and of the training location. If training is to be in-person, proximity to school is an important factor to consider. On technology access, some groups suggested providing preparatory ICT training to ensure that all teachers will be at the same level of familiarity with technology before accessing online training; other participants mentioned that a visual component in online training (such as being able to interact with the teacher in-person) would make content easier to digest.

"It makes no sense to train someone on the use of technology in teaching, for instance, and ask them to go and implement it when they don't have laptops...but if you train them and give them computers and projectors, then they will have no excuse for not implementing what they learned."

School Leader - Nyanza

Table 1. Main reasons that would encourage teacher participation.

Quality of training	Teacher training (/12)	Online training (/12)	Total (/24)
Learning opportunity	10	6	16

Clear agenda/organization	2	3	5
Provision of training certificate	1	2	3
Sharing ideas/experiences with peers	2	0	2
Relevance of content	2	0	2
Quality of facilitators	1	0	1
Participatory approach	0	1	1
Accessibility	Teacher training (/12)	Online training (/12)	Total (/24)
Reimbursement	11	10	21
Provision of teaching materials	7	0	7
Scheduling during working days, outside of working hours	2	3	5
Proximity to school	2	0	2
Time flexibility	0	1	1
Inclusive environment and location	1	0	1
Technology access and familiarity	Teacher training (/12)	Online training (/12)	Total (/24)
Provision of IT tools (including electricity, internet)	0	11	11
ICT training before online training	0	5	5
Exciting/new to attend online training	0	2	2
Use of visual aids	0	2	2
Facilitating teachers meeting in the same place	0	2	2

Factors that would discourage teacher participation

Late reimbursements, lack of access to IT devices and an inconsistent schedule would hinder teacher participation. Teachers in the teacher training group often mentioned insufficient or late reimbursements (11/12), poor time management or inconsistent scheduling (9/12), and training being scheduled on weekends (8/12) as main barriers to participation. As for barriers to online training, teachers mainly mentioned a lack of electronic devices, including internet or electricity (12/12), and insufficient or late reimbursements (8/12). The main reasons mirror what was mentioned as motivating factors to participate in training.

Training conducted only in English would prevent older teachers from participating. Setting up a central location at the school or sector level for online training could make attendance easier for some. Barriers to online training can still be grouped under quality of training, accessibility and technology access or familiarity (see Table 2). Poor time management or an inconsistent schedule is seen as the main barrier to high-quality training (either in person or online). For accessibility, many groups stressed the importance of a language barrier when conducting training. Teachers from different generations might be more familiar with English or French as a main foreign language, meaning that training purely in English could create a barrier for older teachers to participate. Some groups additionally mentioned preferential treatment by school leaders as a barrier to being selected for training, with school leaders giving preference to teachers they have familiarity with⁵. On the point of technology access and familiarity, many groups mentioned the lack of interaction with both trainers and peers as a significant barrier to being engaged in online training. Their suggestion was to set up central locations at the school or sector level for collective attendance of online training.

"[...] not all teachers from the same sector need to meet in one place, but at least teachers from the school can choose a place where they can meet to attend the sessions together. Through this, they can help each other by opening links so that they all go at the same pace. When they are in the same place, multiple teachers can also use one device to access the class materials."

School Leader - Ngororero

Table 2. Main reasons that would discourage or stop teachers from participating in training.

Quality of training	Teacher training (/12)	Online training (/12)	Total (/24)
Poor time management/organization	9	2	11
Non-engaging training methodology	1	3	4
Unskilled trainers	3	0	3
Lack of follow-up after training	2	1	3
Lack of information about training (content, duration)	1	1	2
Not meeting training's goals	1	0	1
Insufficient ICT knowledge by teachers	1	0	1
Non-participatory approach	0	1	1
No certificate provided	0	1	1

⁵ While this calls for attention to the selection process, if that is to be managed by Right To Play or any of the partners, selection for training will not be biased by preferential treatment from school leaders. This is why this point is not referenced in the conclusions and recommendations section.

Accessibility	Teacher training (/12)	Online training (/12)	Total (/24)
Insufficient or late reimbursements	11	8	19
Scheduling during weekends	8	2	10
Language barrier	4	5	9
Scheduling during class hours	3	4	7
Far away location	4	2	6
Nepotism in selection/no support by school leaders	3	3	6
Lack of provided materials	5	0	5
Conflicting commitments at home	0	4	4
Scheduling during holidays	1	0	1
Conflicting with training from other organizations	1	0	1
Lack of inclusivity for teachers with disabilities	1	0	1
Lack of food/refreshments during training	1	0	1
Weather disruptions	0	1	1
Technology access and familiarity	Teacher training (/12)	Online training (/12)	Total (/24)
Lack of IT tools (including internet, electricity)	0	12	12
No ICT knowledge	0	5	5
Lack of interaction (with trainers, teachers)	0	5	5
No support for ICT preparation	0	2	2
No chance to practice	0	1	1
Lack of supervision because of online training	0	1	1
Disabilities that impede technology use	0	1	1

Factors that would help men and women benefit from the training

Answers were more scattered for inclusive training. Providing support to teachers with caring responsibilities and tailoring content for both men and women were the main suggestions. When addressing the point of more inclusive training for both men and women, many focus groups still brought up general barriers or suggestions instead. When prompted on factors that are gender-specific and could improve inclusivity, participants in both teacher and online training groups mainly mentioned supporting trainees who are mothers with young children (7/24), having an inclusive methodology with content tailored to both men and women (7/24), and ensuring that training is mixed and men and women are not separated (6/24).

Supporting teachers with caring responsibilities, specifically mothers with young children, could be done through childcare and a clear and consistent schedule. Ensuring more time flexibility for mothers and providing additional childcare and resources were mentioned as concrete solutions to help them attend training. Additionally, ensuring a consistent schedule was brought up as a way to avoid disruptions at home for women, in case they come home later than planned from training. Other points raised in the discussions centered around inclusive participation (ensuring that both gender groups attend training without discrimination) and inclusive content (see Table 3). On the latter, participants suggested to make sure that both the content and trainer methodology will appeal to interests of both male and female teachers, without a clear preference for any of the two groups.

“We also saw mothers carrying their children. They should plan something to eat for them, and have maids that keep their kids outside for them.”

Teacher (Male) - Musanze

Table 3. Main reasons that would help male and female teachers benefit from the training.

Participation	Teacher training (/12)	Online training (/12)	Total (/24)
Scheduling mixed training (non gender-specific)	5	1	6
Imposing gender balance in trainees	5	0	5
Consider both gender groups when scheduling	1	4	5
Equal provision of IT tools	0	1	1
Content	Teacher training (/12)	Online training (/12)	Total (/24)
Inclusive methodology	4	3	7
Supporting women	Teacher training (/12)	Online training (/12)	Total (/24)
Support for trainees who are mothers	4	3	7
Flexibility for women-specific disruptions (e.g., pregnancy)	0	3	3
Not assuming women are less competent/will not attend	3	0	3
Address unequal ICT familiarity for women	0	2	2

What does Learning through Play mean to teachers and school leaders?

The analysis broke down responses into keywords which were used to describe the activities constituting Learning through Play, descriptions of the outcomes of Learning through Play, and conditions or perquisites for successfully delivering Learning through Play (see Table 4).

Keywords used to describe Learning through Play

The most commonly used ways to describe Learning through Play were teaching through games (19/24), songs (14/24), through the use of learning aids to make classes more tangible (12/24), as well as through sports or physical activities (9/24). Within these categories, there are some examples of what kinds of games/activities constitute Learning through Play (see the quote below), but largely they are quoted as categories rather than specific activities.

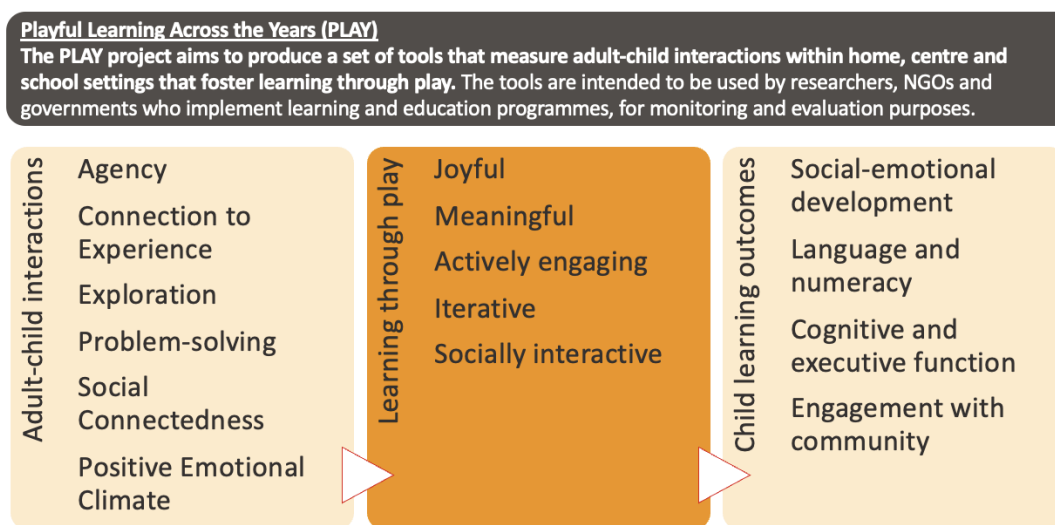
Less frequent responses detailed different “play” activities such as role plays, stories, and audio-visual materials, which could be used to introduce a playful element into the classroom.

“If for example you’re teaching English and you say ‘jump’, you’ll also jump. You are not going to say it while standing still, if you want to say ‘To laugh’ you will also laugh, you cannot teach them to laugh while you’re angry.”

Teacher (Male) - Musanze

For reference, Figure 11 shows the conceptual model for Learning through Play developed as part of LEGO Foundation’s PLAY programme. It outlines the adult-child interactions that establish Learning through Play within educational settings, the distinguishing features of Learning through Play and the child learning outcomes purported to be supported by play-based learning.

Figure 11. Playful Learning Across the Years (PLAY) conception model for learning through play interactions, learning and outcomes (RTI 2022).



Key outcomes for Learning through Play

Although it was not specifically asked, a large proportion of groups gave responses which focused on the outcomes for Learning through Play, as well as its constituent activities. The two most common outcomes that were cited were improved learning or retention (13/24), as well as improved enjoyment or student motivation (8/24). On the latter, one respondent mentioned that if they use songs to teach, the learners will continue singing in the house, which

is something reported favourably to them by parents. This shows not only student enjoyment of learning, but that it is something with a potential positive influence on home-school relations.

Less frequent responses focused on improved inclusivity, relationships or collaboration. These respondents suggest that games or play-based activities are a way to break down social barriers between students, for example boys and girls, or to create an inclusive environment for everyone to take part in, including learners with disabilities.

In the FGDs one teacher mentioned that they believed that Learning through Play negatively impacted students' willingness to complete written tasks. This shows that consensus on the value of Learning through Play is not necessarily universal.

Requirements for successful implementation of Learning through Play

The most commonly cited pre-requisite for successful adoption of Learning through Play was that play should be aligned to the curricular material (5/24). This was a reminder given by several participants that Learning through Play is not just play but should be linked clearly with a learning objective covered in the curriculum. It should be noted that this was not a specific question asked of the groups⁶, but rather something that was reported incidentally by groups through their discussions.

Table 4. Categorized teacher responses to the question “what does Learning through Play mean or include?”

Keyword	Total (/24)
Games	19
Songs	14
Learning aids/making learning tangible	12
Sports/physical activity	9
Role Plays	7
Arts	3
Combining subjects	2
Dances	2
Audio visual materials	2
Stories	1
Outcomes/Aims	Total
Improved learning/development	13
Improved enjoyment/motivation	8
Improved inclusivity/relationships	3
Easier/more enjoyable teaching	3
Increased laziness/unwillingness to write	1

⁶ The question reported on here was “In your view, what does Learning through Play mean or include?”

Improved collaboration	1
Requirements for LtP	Total
Linked to subject matter	5
Age appropriate	1
Inclusive	1

Do teachers feel ready to deliver Learning through Play in their classrooms?

The overwhelming response to the question of whether teachers feel (or are felt to be) ready to deliver Learning through Play in their classrooms is no (20/24). As shown in Table 5, the remaining responses were either indistinct (neither saying yes or no) or gave a qualified response, such as saying that they would feel ready if they had the right resources and training. This suggests that an opportunity to deepen their pedagogical knowledge of learning through play will be useful.

A lack of resource (21/24), a lack of capabilities/knowledge (16/24), and a need for training (8/24) are the mostly commonly cited barriers to adopting LtP. Regarding the lack of resources, respondents stated that Learning through Play requires learning aids to support games or activities, which are not available in their schools. Some of the responses which mention a lack of capabilities/knowledge point to a feeling among some respondents that the lack of training is more important than the lack of resources. It was cited in several groups that teachers should be supported to be more resourceful and to find ways of using easily available materials to deliver play-based activities, rather than relying on materials for which budgets are not available.

“Suppose that I am a math teacher and want to teach my students integers. It involves students going left and right. If we do not have ropes in school to use, it will be a challenge. If I want to teach them about degrees and there are no materials that would help me to show them, it will be a problem. Additionally, we also agreed that teachers have not been trained to apply Learning through Play.”

Teacher (Male) - Ngororero

As a counterpoint to this, it was suggested in two focus groups that school leaders are not prepared or not motivated to support teachers with the materials they need for activities. This shows that there is no consensus on what exactly the provision for supporting Learning through Play should be, and whether it should be teachers’ responsibility to work with materials they have in their environments.

Finally, two focus groups pointed to a specific knowledge gap in how to support children with disabilities during play-based activities. Consideration of disability was not part of the question as asked, and as can be seen for the responses to the question regarding gender- and disability-related barriers, the challenges faced in developing disability inclusive learning environments are much more widely recognised than is suggested here.

Table 5. Do teachers feel ready to deliver Learning through Play?

Feel able	Total (/24)
Yes	0
No	20
Not sure/mixed	4
Key Reasons/Themes	Total
Lack of resources/teaching aids	21
Lack of capabilities/Knowledge	16
Need for training	9
Lack of space	6
Adequate capabilities/knowledge	3
Lack of tools for Children with Disabilities (CwD)	2
Lack of training to support CwD	2
Need for training for school leaders	1
Lack of awareness/motivation	1
Adequate resources/teaching aids	1
Schools are not motivated to support	1

Barriers to adopting Learning through Play in Rwanda

The most commonly cited barriers to adopting Learning through Play were overcrowding in classrooms (15/24), a lack of resources in schools (15/24), a lack of teacher knowledge regarding Learning through Play (12/24) and a lack of space in schools (8/24) (see Table 6). While these reflect the responses given under the question of teachers' readiness, the inclusion of overcrowding as a cause is new. Within this category, responses focused on overcrowding as either limiting the ability of teachers to have one-to-one interaction with students or creating logistical challenges in terms of sharing learning aids or organizing activities.

A less frequently mentioned barrier was a lack of teacher motivation (7/24). This was not something that was mentioned frequently during the discussion of teachers' readiness but comes out more strongly here. The data within this category refers to teachers having attitudes related to teaching that are perceived to be old fashioned or unwilling to accept new approaches. It is notable that out of the seven groups that mentioned this as a factor, five were groups of school leaders. This means that this data is largely not a self-perceived motivation from teachers, but an external perception of their motivation by those in administration. It may be that more in-depth engagement with teachers through Key Informant Interviews or Semi-Structured Interviews may raise some of the same issues. It is important that future studies continue to look at this question of motivation to adopt new approaches, as a lack of motivation will undermine participation in training as well as the link between training and the adoption of Learning through Play in classrooms.

Finally, there were several structural issues mentioned by teachers. These included teachers being overworked (7/24) and therefore not having free periods in which to plan for more engaging activities, as well as Learning through Play not being well supported by the curriculum (3/24) leading to teachers having to choose between play-based activities and covering all of the curricular content. These structural issues are essential to consider during the design of the e-course as they sit outside of teachers' control. If teachers feel that there are factors preventing them from using new skills, it is likely to influence their motivation to take part in training.

Table 6. Barriers to adopting learning through play

Key Barriers/Challenges	Total (/24)
Overcrowding	15
Lack of resources	15
Lack of teacher knowledge	12
Lack of space	8
Lack of teacher motivation	7
Overworked teachers	7
Not supported through the curriculum	3
Not supported by school leaders	2
Supporting Children with Disabilities	1
Contradictory/short term project support	1
Double shift schooling	1

Gender- and disability-related challenges with Learning through Play

The responses to whether there are barriers based on gender which prevent boys and girls from equally participating in Learning through Play are mixed. As shown in Table 7, a small majority (13/24) of groups reported that they do not perceive there to be any barriers. The minority (10/24) reported a number of structural and social barriers that impacted girls or boys differently. This lack of consensus may be a genuine lack of consensus on the question, or may be related to teachers understanding of what activities constitute Learning through Play, and thus what gender barriers may exist.

The main barrier given was that teachers do not always consider gender related issues when planning activities (6/24). This could be linked to a number of practical issues but highlights the understanding of teachers that gender dynamics should be integrated into classroom planning. The main practical barrier (5/24) given was related to girls' clothing, and the fact that uniform policies or poverty may mean that girls do not have clothes in which they feel comfortable taking part in games or other movement-based activities in.

Other responses covered a range of social issues, such as boys feeling uncomfortable singing in front of groups (3/24), that students perceive there to be "boys'" games and "girls'" games (2/24), that girls are not confident to take part in games (2/24), and others.

To note, of the ten groups which answered yes to this question, four were groups of female teachers, two were groups of male teachers, and four were mixed gender groups of school leaders and SEOs. From the data available, it is therefore not possible to say if there is a gender bias in the perception of gender related barriers.

Respondents were much more unanimous in their response to the question of disability related barriers to Learning through Play. In the discussions, 23 of 24 groups responded yes, and the final group gave no clear response.

The responses as to what barriers exist can be broadly categorized into barriers related to the school environment and the classroom activities. On the former, respondents mentioned the built environment in schools not being accessible (9/24), as well as there not being enough assistive devices to support learners with disabilities (8/24). For activities in the classroom, respondents highlighted that many common games or play activities are not inclusive (13/24) as well as the fact that teachers do not generally think through how to make activities inclusive when they are planning (12/24). This was largely highlighted as being due to a lack of training (8/24), with no groups mentioning any unwillingness by teachers to support learners with disabilities. While stigmatization of learners with disabilities was mentioned, it was only mentioned in one group⁷ without more detail being given on what exactly that stigmatization entails or how teachers are prepared to deal with it.

"Teachers do not have knowledge of how to support children with disabilities. For example, we don't know how we would teach a child with a sight disability. We do not have any students with such disabilities at our school but what if they enrol another time? It would be hard for me or my colleagues to figure out how to teach them."

Teacher (Female) - Nyanza

Table 7. Gender and Disability Related Barriers

Key Responses	Total
Gender	
Yes	10
No	13
Need for teachers to be thoughtful and prepare	6
Poor families can't provide adequate clothing for girls	5
Boys lacking confidence to sing	3
Distinction (by students) between "boys'" games and "girls'" games	2
Girls lacking in confidence to take part in games	2
Teachers selecting boys only for games	1
Girls and boys not wanting to play with each other	1

⁷ Interestingly, although it was not asked, one group volunteered the feedback that overage students often felt stigmatized by play based activities that may be perceived as being "childish".

Disability	
Yes	23
No	0
Many games not disability inclusive	13
Teachers not thinking through how to include CwD	12
Lack of training on approaches to inclusion	11
Structures/school environment not disability inclusive	9
Lack of assistive devices/materials for CwD	8
Exams/curriculum are not designed inclusively	2
Stigma/shame felt by CwD	2
Communication challenges between teachers and CwD	1
Variable challenges depending on disability	1
Overcrowding/lack of individual attention	1
Benefits of LtP for supporting CwD	1
Lack of special care service for CwD	0
Other	
Overage students feeling stigmatised	1

5. Conclusions and Recommendations

The purpose of this study was to build our understanding of:

- a) Who are the teachers who Right To Play will target with the e-certification programme?
- b) What are their intrinsic and extrinsic motivations for taking part in in-person or online training?
- c) What are the barriers and opportunities for teachers to take part in a blended training programme?
- d) What is their understanding of, and readiness to adopt Learning through Play in their classrooms?

To answer these questions, we presented data both from the quantitative listing exercise, as well as 12 Focus Group Discussions conducted with teachers, school leaders and SEOs in four districts. From that data we can draw several conclusions, here grouped by the four questions above. Where relevant we have included recommendations, based on these conclusions, for Right To Play to consider when developing the pilot design.

Who are the teachers we encountered in this study?

Conclusion A. The sample skewed towards rural and female teachers.

A large majority (74%) of the 383 sampled teachers were female, and about a third were from urban areas. The gender distribution of teachers broadly reflects the one in Rwanda, where almost 80% of primary school teachers are female. Looking at the age distribution, the sample skewed towards younger teachers, with the average age being 36, although all age groups were represented. At this stage, it is not possible to draw any significant conclusions from this data, nor to provide recommendations for the design of the e-certification programme based on this demographic data. One potential point for consideration will be on how men and women are sampled for participation in the pilot. Right To Play will need to decide whether to use a representative sample (e.g., roughly 75% female), or whether they will over-sample male teachers to find a gender balance.

What are teachers' intrinsic and extrinsic motivation to participate in teacher training through EdTech?

Conclusion B. Teachers' extrinsic motivation is strongly related to how easily they can access training.

The majority of teachers mentioned accessibility in terms of reimbursements for travel, teaching resources, language, location and timing as motivating factors. Teaching materials and a language that all participants speak are essential factors to be able to understand the training content; while timely reimbursements, a close location and scheduling training outside of working hours and weekends were mentioned as necessary to access training in the first place.

Teachers felt that teachers with disabilities and those with specific commitments such as pregnancy and childcare should be specifically cared for when making training accessible. This

has implications for the location and timing chosen for training, and the types of services that are provided while attending training, such as assisted childcare for mothers.

Recommendation 1. Features that make training accessible for all groups should be prioritized when planning and emphasized when presenting training to teachers.

Estimating accurate costs of attending training (in terms of time spent and distance travelled) will be important to determine what a fair reimbursement for attendance consists of.

In addition, attendance will be boosted by ensuring that the training language can be understood by both older and younger teachers (who have been trained in either English or French), that the location is not far from the school and that timing does not overlap with class hours, holidays or weekends.

Consultations with teachers with disabilities will also be useful to determine which features make training most accessible for them.

Conclusion C. Teachers' intrinsic motivation has to do with quality of training and how much they perceive they can benefit from it.

Teachers are motivated by trainings with a clear and consistent plan and by competent trainers who follow-up with participants beyond classes. Good organization and time management help avoid disruptions when planning to attend trainings and give teachers a clear expectation of what they will learn in the process. Having trainers that follow up with teachers beyond main classes was also seen as a motivating factor. All of these were mentioned as signs of high-quality training according to teachers.

An engaging methodology implies addressing both men and women, through a gender-balanced choice of trainers and content that can appeal to both groups. It also implies using visual aids in online training to make content more interesting and accessible for those who are not familiar with technology.

The importance of the perceived learning potential of training is confirmed by the literature. A systematic review by Akyeampong and Berrell (2007) mentions self-perceived incompetence of teachers as a major intrinsic motivation barrier in low- and middle-income settings, which implies that focusing on the learning potential of training could greatly boost motivation. This implies emphasizing the potential of applying the concepts learned outside of training and putting focus on the satisfaction and value of completing the course.

Recommendation 2. Training content should put emphasis on a clear and consistent lesson plan and what the application of the concepts learned could be.

Ensuring a rigorous and gender-balanced selection of trainers will make sure that content is delivered at high quality for all attendees, while providing a training schedule in advance will support the perception that teachers will not waste their time due to delays or disorganization.

Providing a completion certificate could also be a way to motivate complete attendance and to foster a sense of pride for completing the course.

What do teachers need to attend blended or online training?

Conclusion D. Access to online training must be ensured by bridging the resources and knowledge gap of some teachers.

Since access to electronic devices is unequal across districts and gender groups, this must be addressed to ensure inclusive attendance to training. The listing data shows clear differences in access to electronic devices across districts, and differences in access to smartphones across gender groups and urban status. In addition, access to computers is generally uncommon, which implies that many teachers are not able to access online training or do not have experience with doing so.

With many teachers asking for ICT resources to access online training, many also raised the need for preparatory training, or support by peers in case they face any challenges. This might help bridge the gap between those who have already attended online training and have familiarity with electronic devices, and those who could fall behind.

Recommendation 3. Ensure that training plans accommodate for teachers' access to, and comfort in, using technology.

The blended nature of the e-certification provides an opportunity for flexibility in how teachers individually or collectively access course materials for the online portions. This flexibility should be used to allow for a range of different access modalities. These range from teachers individually accessing material using their own device, to collectively accessing content using shared devices in a school (or other) setting. This can be defined as part of a pre-training readiness assessment, to look at availability of and comfort with technology in the target school/training cluster.

In addition, the programme could look at including an element of support and upskilling with the use of technology. This could be in the form of an optional introductory module, or through the assignment of a technology focal point in each school/training cluster, whose role it is to support teachers who are less confident in the use of technology to access training.

Conclusion E. Replication of some in-person training dynamics is essential to keep training engaging.

Although online training is seen as an exciting opportunity for some, some dynamics of in-person training can help make content easier to digest and more enriching for teachers. Many groups stressed the importance of actively interacting with peers for the training to be engaging. This is confirmed by the literature on EdTech and online training. A systematic review by Hennessy et al. (2022) mentions blended learning and video-stimulated reflection as factors to maximize effectiveness of online training, as well as maintaining the interpersonal dimension of teacher learning.

Recommendation 4. Strategies to make training more interactive and facilitate in person or online encounters between teachers should be put in place while keeping the flexibility of online training.

Strategies could include introducing a video component in online training and setting up central attendance locations to facilitate meetings and exchange of ideas with peers. This would leave teachers the flexibility to attend from a location of their choosing, without eliminating the chance to connect with others and learn.

What is teachers' understanding of and readiness to deliver learning through play in their classrooms?

Conclusion F. While teachers are familiar with the concept of learning through play, their understanding is focused on 'gamification' elements.

The most common responses to the question of what is Learning through Play focused on using games, songs, role plays and teaching aids to deliver content. Less commonly cited were the outcomes of Learning through Play, that it could improve learning, motivation, participation and inclusivity in the classroom.

When we look at how the LEGO foundation conceptualizes Learning through Play (LEGO, 2017) we see a more nuanced framework. The core tenets of playful learning are that it is iterative, actively engaging, socially interactive, joyful and meaningful. To deliver this kind of learning there is a continuum of approaches, with teacher-led instruction at one end (not considered playful learning), and teacher-led games, guided play and free play constituting playful learning. In addition, support for problem solving and exploration, and student autonomy are core elements of Learning through Play.

The responses of teachers captured some of these characteristics of playful learning. For example, teachers responded that Learning through Play can be used to make classes more meaningful (e.g., though using teaching aids to make course material more meaningful), as well as more joyful. However, the only 'method' of playful learning given is games designed and delivered by teachers. The question of promoting independent learning or learner autonomy was not reported for example. Similarly, problem solving and exploration were not mentioned by teachers. This may be because teachers are not aware of the evidence on these approaches, or it may be because they do not believe it to be important. Understanding these teacher positions will be crucial for building buy-in for the e-course.

Recommendation 5. Give careful thought to how training materials present play-based learning to ensure shared, deep understanding.

It is important that there is a shared understanding of what is meant by play-based learning throughout the training. It is equally important that there is consensus on this shared understanding, and that teachers agree with the suggested approach to play-based learning.

Time should therefore be dedicated at the beginning of the course to aligning teachers' understanding of Learning through Play with what the research and evidence suggest as being important.

Conclusion G. A combination of a lack of resources, a lack of training, and curriculum restraints leave teachers feeling unprepared to adopt Learning through Play in their classrooms.

Our findings show that, overwhelmingly, teachers do not feel prepared to adopt Learning through Play in their classrooms. This is seen evenly across regions, genders and roles within the school system. The reasons given were evenly split between a lack of resources to deliver Learning through Play, as well as a lack of training on how to deliver Learning through Play. In addition, overcrowding and overwork for teachers is cited as preventing adoption.

What this shows is both a need for more training, but also that training alone is not the solution. While a blended training programme has the potential to support teachers in feeling more prepared to adopt Learning through Play, it may not be the entire solution. If teachers feel that there are external barriers such as a lack of materials, or a lack of room in the curriculum for play based learning, a training programme may not lead to greater adoption of learning through play.

Responses in this domain showed some disagreement between teachers and school leaders, which may impact the effectiveness of training. There were some, limited, opposing views on whether teachers had the resources they needed. School leaders in some cases felt teachers should be more resourceful in using what is available, while teachers felt that they didn't get the support they needed from school leaders. It is important that a training programme can foster a shared view of what is needed across schools.

Recommendation 6. Ensure that training recognises the external factors that may limit adoption of Learning through Play.

The training designed by Right To Play should recognize that there are factors outside of teachers' control that may limit their adoption of play-based approaches. For example, the training can focus on how to deliver Learning through Play for large classrooms and with limited resources. It should also involve not just teachers, but also sensitise school leaders and SEOs to ensure that those who are supporting teachers are aware of what is required.

In parallel, Right To Play should look at the broader policy context, and how Learning through Play is facilitated by the curriculum. If more emphasis is placed on playful learning it is more likely that teachers will be able to adopt it in their classrooms. This includes, for instance, incorporating playful learning indicators in the tools used for school inspection, to ensure that assessments of teaching and learning systematically include Learning through Play.

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Annex A: Research Instruments

Listing Data Survey

Question	Answer
Please enter your enumerator ID	
You have entered the enumerator ID of [enumerator_name]. Please confirm that this is correct.	1 Yes 0 No
At which level are you collecting information from?	1 Sector Level 2 School level
(13): SEO survey Greeting, my name is [enumerator_name]. I work for Laterite, a research company located in Kigali. We secured a stamped letter from the district office, and want to inform you of our coming research activities and request permission to visit schools in your sector. But we would also like to invite you for a group discussion that will bring together SEOs and headteachers, and another primary teacher discussion. We would like to collect your personal information first.	
(14): Province visited	
(15): District visited	
(16): Sector visited	
(17): Do you consent to take part in our FGDs scheduled potentially next week?	1 Yes 0 No
(18): What is the sector education officer's name?	
(19): Write the SEO's phone number	
(20): Is ther another number of which we can reach [seo_name]	1 Yes 0 No
(21): Write another number on which [seo_name] can be reached	
(22): How old are you?	
(23): What is their gender?	0 Male

Question	Answer
	1 Female
(26): Please enter the school code	
(29): [To the Enumerator]: The school code you entered does not belong to the sample. Below is the school code you entered: School code entered: [school_code] Please correct it to continue, otherwise talk to your supervisor.	
(30): You have entered the school code of [school_name]. Please confirm that this is correct.	1 Yes 0 No
(34): [umushakashatsi] : Is the school you visited located in [loc_district] district; [loc_sector] ; sector?	1 Yes 0 No
(36): Province	
(37): District	
(38): Sector	
(42): Enumerator: Though this survey targets the Head Teacher of [school_name], we also want to collect information about the Director of Studies to be present in the interview (if possible) because s/he might complement the Head Teacher on some questions. In a situation where the Head Teacher does not consent to take part in the study but allows you to work with one of the subordinates, you can have this interview with the Director of Studies alone.	
(45): Thanks for making time to speak with us. We would like to collect information about teachers who teach from primary 1 to primary 3. But first, we will collect information about you and your DoS	
(46): Do you consent for you and your school (teachers) to take part in this short survey, and in the upcoming focus group discussions?	0 No 1 Yes
(50): What is the name of the head teacher for [school_name] ?	
(51): What is his primary phone number? <i>Please do not include a zero; write -99 if no phone number available</i>	
(52): Is there another phone number on which the Head Teacher of [school_name] can be reached?	1 Yes 0 No

Question	Answer
(53): Please specify other number	
(54): How old are you?	
(55): What is your gender?	0 Male 1 Female
(57): Does the school have a Director of Studies?	1 Yes 0 No
(59): What is the name of the director of studies at [school_name]	
(60): Enter the phone number of the Director of Studies of [school_name]	
(61): Is there another phone number on which the Director of Studies of [school_name] can be reached?	1 Yes 0 No
(62): Another phone number of the Director of Studies of [school_name]	
(63): How old are you?	
(64): What is their gender	0 Male 1 Female
(66): We are now going to ask you a few questions about the Primary level teachers at your school (from P1 to P3)	
(69): We want you to tell us the number of teachers that teach from P1 to P3	
(70): How many teachers does this school have from P1 to P3?	
(71): Thank you for providing this information. We would like to speak to these teacher, but if any of them is currently not available, we would like to collect a few information about them from you. It would be helpful to have one teacher at a time. But we can't start with you sharing information about those teachers.	
(74): Teacher introduction to the study Greeting, My names are [enumerator_name]. I work for Laterite, a research company based in Kigali. We are inviting teachers, school leaders, and sector education officers. We also intend to collect information on teachers from P1 to P3. It is in this case, that I would also like to invite you for a group discussion scheduled in a week or two.	

Question	Answer
(75): Do you agree to take part in the survey, where we will ask you a few personal questions?	0 No 1 Yes
(76): What is the name of the #:1 teacher?	
(77): What is your gender	0 Male 1 Female
(78): what is your age	
(79): What is the phone number for #:[teacher]?	
(80): Is there another phone on which we can get #:1?	1 Yes 0 No
(81): type #:[teacher]'s other number?	
(82): Which classes do you teach? Select all that are relevant	1 P1 2 P2 3 P3
(83): Which subjects do you teach? select multiple.	1 Mathematics 2 Kinyarwanda 3 English 4 Social and religious studies 5 Science and Elementary Technologies 6 Creative Arts (Music, Fine Art, and Craft) 7 Physical Education 8 French 77 Other (specify)

Question	Answer
(84): Have you done an online training course for teacher professional development before?	1 Yes 0 No
(85): Have you received play-based learning training before?	1 Yes 0 No
(86): Which of the following gadgets do you have regular access to? You can select all that you have access to	1 Smartphone 2 Tablet 3 Computer 4 None
(93): Interview end. Thank the respondent and carry on.	
(94): Record the GPS location <i>GPS coordinates can only be collected when outside.</i>	
(95): To enumerator: Is there any additional information you would like to add?	1 Yes 0 No
(96): Please enumerator fill in any remark/observation	

Focus Group Discussions Interview Guide

Consent form for all participants

RESEARCH COMPANY: Laterite Ltd.

AFFILIATED ORGANIZATION: Right To Play

AFFILIATED GOVERNMENT INSTITUTION: Rwanda Education Board

INTRODUCTION

Hi, my name is _____. Welcome to this Focus Group Discussion and thank you so much for making the time to join us today, we really appreciate it. We are from Laterite, a data collection and research company based in Kigali, and we have been asked by the NGO Right To Play to write a report about teacher training through education technology. If you have been able to share an email address or whatsapp number, we would be happy to share the final report, although it will be in English.

Right To Play would like to build a teacher training programme with an e-learning element to it, for primary school teachers in grades P1 to P3, about how to do more to incorporate “learning through play” into their classroom practices. The goal of this focus group discussion is to understand the context in which Right To Play seeks to build this programme.

RISKS

There is no risk of harm to you during your participation in the research.

BENEFITS

There are no direct benefits for participating in this study, but your opinions and insights will be used to help Right To Play develop or improve its programme to create an e-learning course delivered through both online and in-person means, to foster the use of learning through play in the classroom.

AUDIO RECORDING, VOLUNTARY PARTICIPATION AND RIGHT TO WITHDRAW

We take your consent to participating in this Focus Group Discussion seriously. We would like to record the session; this is for transcription and translation purposes only and will be kept confidential. If you do not consent to participating in the Focus Group Discussion or to it being recorded for transcription and translation purposes, you are free to leave the session at any time.

Participation in this research is entirely voluntary. You do not have to agree to be in this study and there will be no consequences to you if you refuse to participate. You will also have the right to withdraw from the study at any time, for any reason, if you so decide, or can choose not to answer any or certain questions that you do not want to answer. Any personal information or views you share here will be kept strictly confidential.

PRIVACY AND CONFIDENTIALITY

In order to respect your privacy and keep your answers confidential, we will not share any personally identifiable responses with persons who are not members of the research team. No personally identifiable information or any information that can be identified with you will be published. The information you will share will be safely stored on Laterite’s secure servers and only professional research staff from Laterite Ltd. and programme staff from Right To Play will have access to this information.

CONSENT FOR PARTICIPATION IN FOCUS GROUP DISCUSSIONS

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily to participate and understand that I have the right to withdraw from the study at any time without any penalty.

Respondent - Print Name:

Respondent Signature:

Date (Day/month/year):

My signature below shows that I voluntarily agree for the audio-record of the FGD guides.

Respondent Signature:

TEACHERS FGD GUIDE

1: Introduction

20 minutes including consent form reading and filling

Before we dive into our discussion, could we please do a round of introductions? Please tell us your name, position and school (or district).

[If names, schools, and positions are not clearly and fully typed up already during introductions, hand out a sheet of paper and pen to register names; this should later be typed up onto a computer. If a piece of paper is used, a photo of the original list should be sent to the data team]

2: Teacher training and education technology

25 minutes on participatory exercise

25 minutes reporting back and discussing

Now we will split into 2 groups. We will ask you to go to a table, allocate a writer in the group to take a marker pen, and discuss answers to the two questions written on the A1 sheet of paper. An enumerator will join each group to observe and occasionally stimulate discussion if needed. After this we will come back to the group and talk about our responses. Please think about them from both your own perspective and that of a typical teacher in your school:

[The questions to be written on each sheet of A1 paper are as follows.]

Group 1 should focus on the following 3 questions on teacher training:

1. What factors would make teachers in your school interested or excited to participate in teacher training or professional development?
2. What factors, barriers or challenges would discourage or stop teachers in your school from participating in teacher training or professional development?
3. What factors should be considered and what type of support might be provided to help both men and women to benefit from teacher training?

Group 2 should focus on the following 3 questions on education technology:

1. What factors, if any, would make you interested or excited to participate in a digital or online teacher training course?
2. What factors would discourage or prevent you from participating in a digital or online teacher training course?
3. What factors should be considered to help both men and women to benefit from teacher training when done online?

Back to plenary: the 2 groups report back on each question, others add as they see fit, and the moderator facilitates a discussion on each question

3: Learning through play

25 minutes on participatory exercise

20 minutes reporting back and discussing

This is the final section of the discussion and will be about learning through play.

We now split back into our groups. We will ask you to take a marker pen, go to a table, and answer the question written on the A1 sheet of paper. After this we will come back to the group and talk about our responses. The questions are:

1. In your view, what does “learning through play” mean or include?
2. Do you feel equipped or able to facilitate learning through play in your classroom? Why or why not?
3. What barriers or difficulties do you see to the adoption or strengthening of learning through play in classrooms in Rwandan schools in general?
4. Do you perceive there to be particular difficulties for boys, for girls or for children with disabilities in relation to learning through play, and if so, what might those be?

Back to plenary: the 2 groups report back on each question, others add as they see fit, and the moderator facilitates a discussion on each question.

4: Any other issues

5 minutes, if there is time left

1. Are there any other issues in relation to teacher training whether in-person or online, or learning through play, that anybody would like to raise?

SCHOOL LEADERS AND SEOs FGD GUIDE

1: Introduction

20 minutes including consent form reading and filling

Before we dive into our discussion, could we please do a round of introductions? Please tell us your name, position and school (or district).

[If names, schools and positions are not clearly and fully typed up already during introductions, hand out a sheet of paper and pen to register names; this should later be typed up onto a computer. If a piece of paper is used, a photo of the original list should be sent to the data team]

2: Teacher training and education technology

30 minutes on participatory exercise

25 minutes reporting back and discussing

Now we will split into 2 groups. We will ask you to go to a table, allocate a writer in the group to take a marker pen, and discuss answers to the two questions written on the A1 sheet of paper. After this we will come back to the group and talk about our responses. Please think about them from the perspective of a typical teacher in your school:

Group 1 should focus on the following 3 questions on teacher training:

1. What factors do you think make teachers in your school(s) interested or excited to attend or participate in teacher training or professional development?
2. What factors, barriers or challenges discourage or stop teachers in your school from participating in teacher training or professional development?
3. What factors should be considered to help both men and women to benefit from teacher training?

Group 2 should focus on the following 3 questions on education technology:

1. What factors, if any, do you think would make teachers in your school(s) excited or interested to participate in a digital or online teacher training course?
2. What factors would discourage or prevent teachers in your school(s) from participating in a digital or online teacher training course?
3. What factors should be considered to help both men and women to benefit from teacher training when done online?

Back to plenary: the 2 groups report back on each question, others add as they see fit, and the moderator facilitates a discussion on each question.

3: Learning through play

25 minutes on participatory exercise

20 minutes reporting back and discussing

This is the final section of the discussion and will be about learning through play.

We now split back into our groups. We will ask you to take a marker pen, go to a table, and answer the question written on the A1 sheet of paper. After this we will come back to the group and talk about our responses. The questions are:

1. In your view, what does “learning through play” mean or include?
2. Do you think that teachers in your school or schools in your sector are equipped or able to facilitate learning through play in the classroom?
3. What barriers or difficulties do you see to the adoption or strengthening of learning through play in classrooms in Rwandan schools in general?
4. Do you perceive there to be particular difficulties for boys, for girls and/or for children with disabilities in relation to learning through play and if so, what might those be?

Back to plenary: the 2 groups report back on each question, others add as they see fit, and the moderator facilitates a discussion on each question.

4: Any other issues

5 minutes, if there is time left

1. Are there any other issues in relation to teacher training whether in-person or online, or learning through play, that anybody would like to raise?