

# QUALITY TEACHERS FOR EFA

## Capacity Development for Quality in Pre- and Lower Primary Teacher Education in Namibia



2015



United Nations  
Educational, Scientific and  
Cultural Organization



UNESCO-China  
Funds-in-trust



UNAM  
UNIVERSITY OF NAMIBIA

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## Capacity Development for Quality in Pre- and Lower Primary Teacher Education in Namibia

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**National Report of Action Research initiative in 28 case-study schools in Namibia focused on the pre- and lower primary grades**

### **Part II: Intervention Phase**

UNESCO/China Funds-in-Trust (UNESCO CFIT)  
University of Namibia (UNAM)  
Ministry of Education, Arts and Culture (MoEAC)  
Ministry of Higher Education, Training and Innovation (MoHETI)

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**The success of this study relied heavily on the efforts and contributions from all involved researchers affiliated with the University of Namibia, Ministry of Education, and teachers from all 14 regions.**

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## Summary

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A multi-disciplinary research project brings together Namibian educators to create a shared vision for improving primary education. The project is part of a framework that aims to accelerate progress towards the attainment of quality Education for All and the education-related Millennium Development Goals by enhancing the capacity of the teacher education system to train adequate numbers of qualified teachers in beneficiary countries. The project brought together the entire education community to create a sense of responsibility for establishing an agenda to meet the goals for high levels of academic success. Educators from different sectors of society often work in isolation; this project minimized such isolation by drawing on the shared expertise of various stakeholders to build a stronger, more unified foundation for educational achievement in Namibia. Multiple stakeholders learned from each other as they participated in the research process, analysis of data, and recommendations for change.

Guided by findings from an initial research phase in 2014, which identified highlights and challenges in the Namibian pre- and lower primary classrooms, an intervention toolkit was developed and subsequently implemented in 2015. This strategy for intervention reflected a continuation of the inter-institutional collaborative lecturer-teacher action research, seeking to strengthen teachers' and lecturers' self-reflection while empowering them to transform their practice, all towards the long term objective for improvement of quality teaching and learning in the classrooms. By connecting teaching interventions with sound evidence, the education community involved in this project standardized a research-based approach towards the solving of problems, a powerful and impressively dynamic blueprint for professional development.

## Introductory Project Background

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On March 2, 2012, UNESCO and the Government of the People's Republic of China signed a Funds-in-Trust agreement. The agreement's main goal is to support the capacity development needs of eight African countries in relation to teacher education and professional development. The project aims to accelerate progress towards the attainment of quality Education for All and the education-related Millennium Development Goals, by enhancing the capacity of the teacher education system to train adequate numbers of qualified teachers in beneficiary countries. Namibia is one of the initial three countries to benefit from this support.

Following a thorough needs assessment conducted in Namibia, a national team of education experts, steering the design of the project, agreed to focus the interventions on improving the capacity of teacher educators to train students and teachers in teaching literacy and numeracy in the pre - and lower primary grades.

The following are the specific objectives of the project:

1. Strengthen the capacity of Pre- and Lower Primary teacher educators, key personnel of the Ministry of Education and students of the Department of Early Childhood and Lower Primary Education in:
  - Action research and applied studies in literacy and numeracy acquisition;
  - Development of learning materials to be used in the acquisition of literacy and numeracy skills in Namibian languages;
  - Integration of ICTs in the development of instructional materials.
2. Strengthen the capacity of the Ministry of Education and UNAM to develop advocacy materials to create awareness and recruit more students for pre- and lower primary.
3. Improve systems of Ministry of Education (including the Directorate of Planning and Development, NIED, and Regional Education Offices) to manage the demand and supply, recruitment and deployment of teachers.
4. Establish a virtual forum of Namibian lower primary teachers and lecturers. The forum is facilitated by staff members of UNAM, NIED and regional offices of the Ministry of Education, who have been trained for this purpose.

The project was officially launched in February 2014 in Windhoek. Responding to the first objective, a country-wide collaborative action research initiative in 56 Namibian pre- and lower primary classrooms was conceptualized and implemented.

This 2015 national research report follows the 2014 national research report. The latter serves as a consolidated outline of the research conceptualization and methodology, with detailed discussions of the main findings of the first research phase, followed by recommended strategies for intervention. This report summarizes the research approach and methodology and focuses primarily on the 2015 action research intervention phase. This national report is informed by themes, conclusions and recommendations from all 28 school reports and discussions held during five campus consultative meetings. In order to illustrate evidence from both data sets, citations from researchers and teachers are incorporated in the report.

## Research Background and Intervention Methodology

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The action research project brought together the entire education community to create a shared vision and sense of responsibility for establishing an agenda to meet the goals for high levels of academic success. To develop personal ownership and commitment, the project involved multiple stakeholders throughout the country to play an integral role throughout the entire process of the project.

The framework guiding this project is a “capacity development model” that includes the major educational institutions in the country as well as teachers and administrators from all fourteen regions in Namibia. The specifics of the project were discussed and conceptualized by the National Coordinating Committee consisting of key personnel from the University of Namibia (UNAM) Faculty of Education; the UNAM Continuing Professional Development Unit; the Ministry of Higher Education, Training and Innovation; the Ministry of Education, Arts and Culture; and UNESCO. Inclusion of these varied sectors of the educational community set the stage for a country-wide collaborative endeavour.

In February 2014, an initial training workshop was held in Windhoek that brought together relevant stakeholders. During this workshop, participants developed a research protocol for an action research study in 28 selected primary schools in all regions of Namibia. The action research sought to inform the type of intervention needed in Namibian classrooms. Twenty eight teams of four to six researchers gathered data in 28 case-study schools. Each team included a combination of two teachers (Grade 0 and Grade 1), Ministry and UNESCO key personnel and at least one faculty member from the Lower Primary department at the University of Namibia. A data collection toolkit to standardize and ensure uniform procedures throughout the stages of data collection was developed. The researchers and teachers involved were also provided with a tablet to facilitate the data collection and to advance the use of technology throughout the research in particular and in the classroom practice in general. The overall research sample comprised 56 pre- and lower primary classrooms. A process of thorough data analysis resulted in a comprehensive national research report, highlighting effective practices and challenges in Namibian pre- and lower primary classrooms. This report was officially validated during the ‘National platform on the delivery of quality education in the lower primary grades in Namibia’, hosted by UNESCO, UNAM/FoE-CPD, MoE/NIED in December 2014 in Windhoek.

The action research methodology, an informed approach to problem-solving in education, was deliberately selected for this study. The research intended to portray the Namibian classroom practices in the lower grades and represent the institutional capacity to conduct action research. In addition to informing the future activities of the overall project in terms of intervention, the action research also served as a capacity building exercise for the UNAM Department of Early Childhood and Lower Primary Education and MoE key personnel. The focus is on strengthening the capacity in action research to analyse teaching practices and circumstances concerning the acquisition of literacy and numeracy with the view of informing the curriculum and teaching/lecturing practices.

### **2014 first research phase**

The details of the first phase research process are elaborated in the 2014 national report.

Before making changes in classroom practice, it was considered vital for educators to know and understand existing practices; the first phase of the research therefore sought to inform the type of intervention needed. Conclusions from the three-stage analysis process (school, regional, and national) of last year's research phase address capacity for improving pre- and lower primary education from a teacher education and a classroom perspective.

In examining the data regarding teacher education, which reflects the capacity of researchers, it was clear that many researchers found the collaborative process energizing and beneficial to understanding more deeply the connections between theory and practice. Some researchers felt challenged by the time and writing demands of the project. The 2014 reports illuminated various strengths and capacities of the researchers. Recognition of the various skills among faculty provides a window of opportunity to rely on specific strengths of colleagues when collaborating in the field. Furthermore, this research reinforced the value of this type of collaborative initiative and demonstrated the importance of making time for field-based research to become integral to professional practice.

The data from a teacher perspective revealed that the majority of teacher participants connect with their learners and are passionate about their work with young children. Teachers care deeply about supporting learners and providing meaningful and relevant education but are not equipped with the skills and background to facilitate deeper learning at a foundational level in literacy and numeracy. Five main areas of particular challenge in the Namibian pre- and lower primary classrooms were identified: (1) Questioning strategies, (2) Effective use of teaching aids in numeracy, (3) Reading and storytelling, (4) Management of the learning environment and (5) Formative assessment. Teachers reported, and were reported, to be challenged by the implementation of the five abovementioned areas.

In order to address both the teacher education and the classroom perspective, the stakeholders steering the project opted for an intervention implementation strategy, which stands as a continuation of the inter-institutional collaborative educator-teacher action research. The latter is a choice that addresses both layers of capacity strengthening: researchers as well as teachers. The research intervention piece sought to strengthen teachers' and researchers' self-reflection while empowering them to transform their practice.

### **Toolkit of Strategies**

Based on the identified classroom challenges, the process of developing a toolkit of strategies, intended to elevate practices and improve quality education provision, was initiated. In December 2014, a group of researchers met for three days to start the development of the toolkit. The 46 toolkit developers included researchers from the UNAM Faculty of Education, the National Institute for Educational Development (NIED), Senior Education Officers in the regions and teachers and principals from the case-study schools. The toolkit developers were divided into five teams allocated to the different toolkit focuses based on the five identified challenges in the 2014 research phase. During the first three-day material development workshop, the teams received material development guidance from NAMCOL, ICT training to support integration of technology in the toolkit and had time to collaborate and plan toolkit materials in their teams. The five teams completed this training and work time during the December meeting with plans to gather and work on creating materials before meeting again in February 2015 to finalize strategies for the five selected areas of the toolkit.



In February 2015, the toolkit developers gathered again for a follow-up material development workshop to receive feedback from other teams, and finalize the contents of the toolkit. Creating teacher-ready materials with clear guidelines was a large task, and the teams finished the workshop with specific plans for material completion by the middle of March. However, this deadline was eventually postponed to the middle of May based on the National Coordinating Committee's belief that additional time would allow for the development of quality materials.

After submission of all materials by the five teams, the materials were organized in a way that provided a similar format for each toolkit component. Each of the five components were developed against the following objectives:

<b>Formative Assessment</b>	To provide strategies to make assessment a consistent part of classroom instruction to support learning.
<b>Effective Use of Teaching Aids to Support Numeracy Instruction</b>	To provide strategies for using manipulatives effectively to support the pre- and lower primary math curriculum.
<b>Managing the Learning Environment</b>	To address issues of classroom management, varied group instruction and strategies to support a variety of learners' academic and social needs that include reducing idle time for learners.
<b>Questioning Strategies</b>	To provide awareness and specific strategies for enhancing the quality of questioning to promote thinking and learning for young children.
<b>Reading and Storytelling</b>	To provide a range of strategies and creative methods to enhance the curriculum through storytelling and reading in the pre- and lower primary classroom.

The written materials included informational booklets that provided a theoretical and practical discussion of the content, supportive teacher materials such as word cards, questioning examples and activities for learners who finish early. There were separate packets for numeracy strategies and reading that included a set of teaching aids or storybooks. In addition to the written materials created by the different teams, the toolkit contained other materials the group had identified as necessary. These materials included a balance scale and large abacus for Effective Use of Teaching Aids and ten books to support Reading and Story Telling. All of the materials became part of a large toolkit contained in a plastic storage box. Additional materials that became part of the toolkit included copies of the 2014 National, a laptop, two 3G USB devices to support internet connectivity, and ICT literacy and integration modules from the UNAM CPD unit.

The foundational idea of the toolkit is to provide practical hands-on strategies to support teachers in addressing challenges faced in the teaching and learning in their classrooms. Therefore, the teaching aids come with guidelines, ideas and examples. The toolkit concept is not a quick fix for all classroom challenges but rather a guided first step, a start.

**“The toolkit was nicely arranged and everyone who saw it wanted one. The teacher was ecstatic about all that she saw and all the teaching aids, blank flashcards, story books, etc.”**

### **Action Research Intervention Phase**

The developed toolkit was reproduced for each of the 28 case-study schools involved in the research process. At the same time, the necessary research tools were developed: a questionnaire for the

opening meeting with the teachers, an observation checklist and research guidelines. As a next step, and to pursue comprehensive preparation for the research intervention phase, all researchers gathered in Windhoek in May 2015 for an ICT literacy and integration Training of Trainers and preparation meeting for Phase II of the research. During the meeting, the 28 toolkits and laptops were distributed to the 28 research teams and the teams were prepared for the two main components of the intervention phase: the toolkit support and the ICT support.

After the preparation meeting, all 28 research teams revisited their case-study schools for one week to implement the research intervention phase. The research teams stayed at the school for five days of research and training. The intervention phase required five steps from the research teams: (1) Informing the principal, (2) Conducting an opening meeting with teachers, (3) Supporting toolkit implementation, (4) Training on ICT literacy and integration in teaching and learning, and (5) Writing school reports.

It is important to note that of the 56 teacher participants that the research started out with in 2014, 8 teachers moved schools with the start of the new school year in January. Forty eight teachers participated in the 2015 intervention phase.

The teams travelled on the day prior to the research and arrived at the school site on Monday morning to discuss the research project with the school principal and Head of Department. They presented the national report, shared the overall findings and highlighted the five identified areas of particular challenge in the pre- and lower primary classrooms. The research team also shared the research design, as well as the toolkit contents.

After the meeting with school management, the research team met with the teachers. Through a structured interview, teachers made individual decisions about which strategies to choose for implementation during the four observation days. Each teacher was requested to choose two of the five strategies for which they believed they needed extra support.

During the four research days, the teachers were requested to pay specific attention to the two chosen areas in their classrooms. The research team supported the teachers in the implementation and use of the toolkits through a gradual release model, in which researchers provided coaching and modelling.

The research teams are inter-institutional and were therefore encouraged to observe as a team. The observation forms were completed in mutual agreement: after observing, the team discussed, reached consent and completed the forms together. The inter-institutional character of the teams was considered beneficial to enhance objectivity of the research outcomes. Observing as a team also contributed to insightful discussions and reflections.

The research team observed the teacher participants four times (once per day). During/after each observation, the team completed an observation checklist, which also included a daily debriefing with the teacher. At the end of the research period, the teams had four completed forms per teacher.

In addition to conducting research, the teams were also responsible for delivering training on ICT integration that aligned with the training they had received during the May meeting. ICT integration elements included using word processing software to create flashcards, puzzles and other teaching

aids; creating digital stories to support storytelling in the language of instruction and learning basic internet skills.

Each of the five university campuses met as a group to share research experiences among the different teams located in the proximity of the campus, to discuss and clarify the report writing process and to identify the major highlights to be included in this national report that consolidates the data and the entire process of the action research intervention phase.

After completion of the research period and the campus meetings, the teams completed their written school reports. The reports relied on information from the completed research tools. Teams described in detail the implementation process and analysed the influence of the toolkit and ICT training throughout the research week. A guiding question framed the writing of the research school reports: “Does the toolkit, as an intervention strategy, influence teacher practices in the Namibian classrooms?” Themes, conclusions and recommendations from all 28 school reports informed the contents of this national report.

## Limitations

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The main focus of the intervention phase was related to the toolkit development and implementation. The toolkit development relied on the expertise of selective participants who capitalized on their individual knowledge and skills related to the specific content area. Therefore, the elements in each toolkit component reflect the background, knowledge and professional bias of the team members. This limitation was partially addressed by creating inter-disciplinary teams that included both practitioners and academics.

The development and production of the toolkits was a time consuming process, and considering that the toolkits were designed as a pilot intervention strategy, all elements in the toolkit are in the English language. A monolingual toolkit does not align with the Language policy for schools in Namibia, which recognizes the use of local languages for educational instruction in pre- and lower primary classrooms.

The support that the teams provided to the teachers for the implementation of the toolkit relied on the individual understanding and expertise regarding the use of materials and strategies in the toolkit. This particular research design assumed that all teams are at similar levels of expertise related to content knowledge and ability to coach teachers. The limited training that was provided was not able to bring all researchers to the same level of knowledge and skills for supporting implementation.

The ICT intervention component relied on a “training of trainers” model, which is based on the assumption that all participants have a similar understanding of the targeted content. In the ICT area, however, skill levels are varied among the researchers and the limited training time did not allow all participants to gain a level of expertise needed for effective training of teachers at the selected schools. Additionally, the software used during the training of the research teams did not match the software on the laptops provided to the schools. These factors influenced researchers’ ability to train teachers.

## Action Research Process: Institutional Capacity Building

Researchers were influenced in a variety of ways through their participation in the intervention phase of the research process. Working alongside teachers, researchers increased their knowledge of classroom practices and discovered ways to apply that knowledge in their endeavours to support students in the university classroom. Additionally, they gained greater confidence about their own practice, learned from team members and developed new perspectives related to teaching and research.

**Knowledge** – This research opportunity allowed researchers to spend an extended period of time in lower primary classrooms, benefitting all researchers and especially those who never taught at this level. By spending time in the classrooms and participating in the instructional process, researchers developed knowledge related to classroom realities and gained a picture of the circumstances that occur daily in the field. It made the lower primary issues real and provided a clear understanding of the relationship between theory and practice.

**“I was trained in secondary education. Being in the classroom gave me the opportunity to understand the little ones. The realities of theory manifested in front of me.”**

**“We were not trained as lower primary teachers and we never had experience in those classrooms. It was good to go to the schools and know what is happening on a grassroots level. It helped understand how teaching and learning takes place and enriched our practice.”**

**Application** – Researchers articulated a variety of ways in which their teaching practices were influenced by spending time in the classroom and being active participants in the research process. Researchers described the need to be more explicit when lecturing in order for their student teachers to gain necessary skills to effectively reach young learners. Gaining a sense of the realities in the classroom and interacting with teachers gave researchers insight into essential elements to be emphasized in their teaching and strengthened in their students. Spending time in the classroom generated a repertoire of examples that lecturers have incorporated into their own teaching to benefit students’ professional development.

**“It helped me to be more aware of the reality on the ground: So when I teach, I now have a picture of what the circumstances are and what is going on. It directed and redirected the way I teach. I adjusted the way I deliver my classes. I have seen the reality on the ground and I now use it in my teaching.”**

**“I observed that I have to do things differently especially with questioning and Bloom’s taxonomy. Teachers do not do that in the classroom. My students will have to model the questions. We really know the challenges now, we really know what is lacking and we can now advise our students accordingly.”**

**“I teach math and I began to understand why it is so important to use different teaching aids and how it plays out in a real setting. I will be able to help my students better.”**

**Empowerment** – Conducting research, working collaboratively with colleagues and implementing a full action research cycle strengthened the feeling of belonging in a community of practice. The participation and sense of ownership and responsibility to the project facilitated feelings of confidence and empowerment. The researchers developed connections to their own practice, which translated into a feeling of efficacy for contributing to the educational profession and the process of teaching and learning.

**“To the researchers, this process was once again an empowerment as theory and practice were brought closer. It was a ‘live performance’ for them that gave them an opportunity to experience teaching and children in a real life situation. The process of modelling, guiding and experiencing action research was felt!”**

**“Being involved in material development gave me the opportunity to be very reflective and change my teaching approach. I started to explore more on discussion and getting students engaged and involved, because I realized: How can I do formative assessment if I’m doing the talking all the time. I felt empowered to change from a lecturing approach to a very learner centred approach and at the end of the class, my students’ performance on exams reinforced that style. My teaching style didn’t affect my students negatively but enhanced their learning.”**

**Perspectives** – Through researching alongside teachers in the classroom, researchers developed a wider perspective of the role of teachers in delivering quality education. They developed a broader image of the effective teacher and recognized that qualifications are not the sole indicators of quality teaching; enthusiasm, compassion and commitment also contribute to effective classroom practices. Going through the process of modelling effective practices in a real-life classroom stimulated additional insights about the realities of schools in Namibia. The significant role of multiple variables including background of learners, language development, previous school experiences and contextual factors was reinforced during the research experience. Researchers gained a recognition that teachers and their instructional skills are only one of several factors that influence learning in the classroom.

**“Initially, I thought learners were not able to read and write because of teachers. Now I know there are many variables involved. It has been an achievement, we went to the bottom of it and we found a solution.”**

**“The teacher was unqualified but being in her classroom shifted my mind. It is not just about qualifications, it is about experience and passion. The unqualified teachers need support because they are good assests.”**

**Collaboration** – Being part of a large-scale national research project generated learning opportunities while interacting with a variety of stakeholders in education. Over 70 researchers collaborated during the two year research process. The inter-institutional and inter-disciplinary character of the research teams afforded multiple learning opportunities for all team members. Researchers shared their own skills and knowledge during the research process, which contributed to a culture of learning and reinforced a dynamic collaborative learning environment.

**“I was exposed to the practical part of research for my own growth. Many of the classroom areas became realistic to me because I was there. In the process, we were a team. I picked up a lot of**

skills on how to evaluate my students when they are out for practice. I picked them up from listening to my colleague from NIED when she was providing feedback.”

“I learned about networking and learning from other people from different educational institutions. There was such team effort during the material development and the research. [Furthermore] the pre- and lower primary department really got to know each other’s strengths and we benefitted from that. The lecturers have become closer and more of a team.”

**Research** – Throughout the two year research cycle, researchers were involved in all aspects of a national research project. They were part of the research protocol development, participants in action research trainings and key players in the research implementation including data collection, analysis, and report writing. Additionally, a group of researchers developed materials for the intervention phase. By engaging deeply in this research project, researchers reinforced their research skills and recognized the importance of research as a vital mechanism for keeping current in their profession.

“I learned about research. I never did such kind of research and report writing. It was all very new and a real learning experience.”

“I learned about research skills. I realized the importance of having a good data collection tool to base your report on as it makes it easy to provide evidence in the report.”

## Action Research Data: Intervention Phase

### Toolkit Selection

After learning of the five challenges described in the 2014 research report, the teachers identified their personal teaching challenges to guide their selection of two toolkit elements. The two self-selected areas became the teacher’s toolkit focus for the research intervention phase. Teachers provided evidence for their selection from the toolkit. Most teachers provided a clear rationale of their need for support in the selected areas, although some teachers chose the toolkit area based on a personal interest in a specific content area.

The following chart provides an overview of the toolkit selection and corresponding number of teachers choosing each element.

<b>Reading and Storytelling</b>	29 teachers
<b>Effective Use of Teaching Aids to Support Numeracy Instruction</b>	24 teachers
<b>Questioning Strategies</b>	20 teachers
<b>Managing the Learning Environment</b>	11 teachers
<b>Formative Assessment</b>	10 teachers

The greatest number of teachers selected the **Reading and Storytelling** element of the toolkit. The main reasons for this toolkit choice included a desire to elevate storytelling skills, to increase their repertoire of follow-up instructional activities and strategies to support the curriculum, and to share new stories with their learners. **29 teachers chose this strategy.**

**“I have a challenge with reading and storytelling because I am not always sure what activities to give after reading. I don’t know if I should repeat the story that I did in the language period when it comes to the reading period.”**

Teachers chose to focus on the strategies for **Effective Use of Teaching Aids to Support Numeracy Instruction** because they felt insecure about using teaching aids effectively to support conceptual development of numeracy concepts. They stated they were uncertain about maximizing learning through the use of available materials. Furthermore, they were unclear how to use specific teaching aids such as the abacus and balancing scale. **24 teachers chose this strategy.**

**“I use counters, number charts and buttons but my learners still struggle. I am not sure whether the problem lies with me or with the learners.”**

Teachers chose the **Questioning Strategies** focus to elevate questioning approaches with their learners. They found it difficult to elicit responses from their learners and easily reverted to a pattern of asking questions that only required a choral response or single word answers. Teachers wanted to develop probing strategies to encourage learners to respond with more depth. They also recognized they did not provide learners with the opportunity to ask questions. **20 teachers chose this strategy.**

**“I think my problem is that I do not probe enough. I struggle with asking questions because learners’ backgrounds are limited which makes it hard to ask challenging questions. I want to focus on this area because I want to find ways to help my learners answer even easy questions.”**

Teachers who selected to focus on **Managing the Learning Environment** shared challenges related to learner engagement, group work, skills support and time management. Other teachers felt overwhelmed by learners’ lack of attention, noisy classrooms and discipline. **11 teachers chose this strategy.**

**“I need to increase learners’ time on task so that learners can complete the task meaningful in the 30 minute period.”**

When selecting **Assessment**, teachers identified a limited repertoire of strategies for assessing learners during instruction. Additionally, teachers chose the assessment element of the toolkit because they found it difficult to assess large groups of learners and be consistent with recording assessment results, as expected from the new assessment tool. **10 teachers chose this strategy.**

**“I have limited assessment skills and want to know more in order to benefit my learners.”**

### **Implementing a gradual release model**

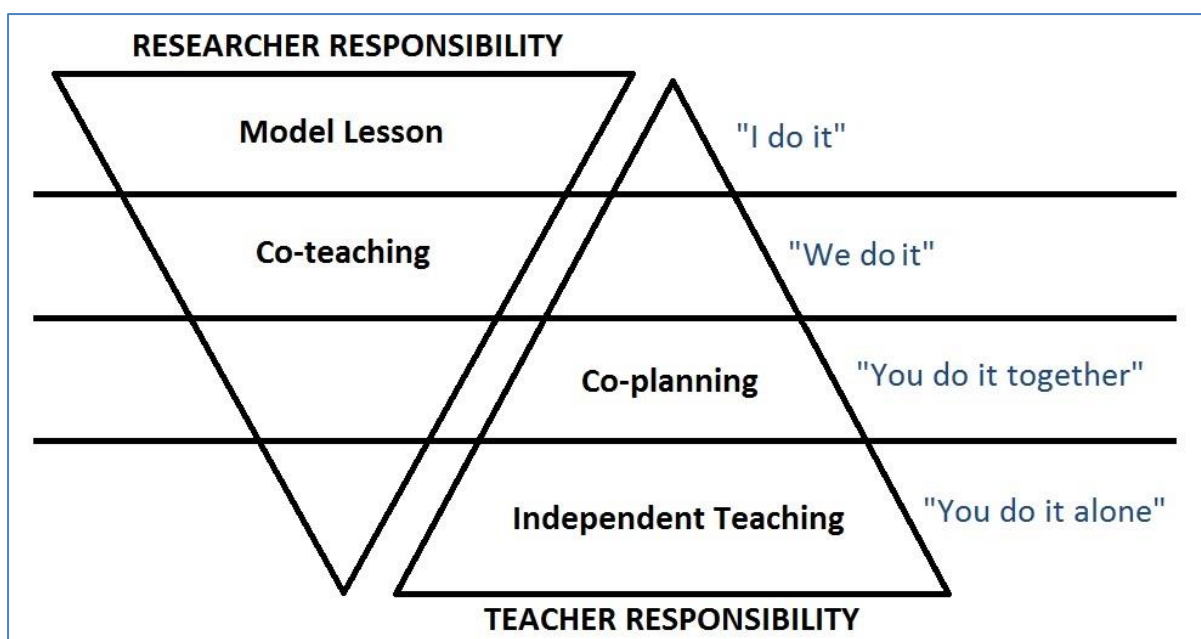
The intervention phase of this research is based on the concept of a gradual release of responsibility, framed by the research of Douglas Fisher and Nancy Frey (2011).<sup>1</sup> The gradual release of responsibility approach initiated a shift from researchers taking temporary responsibility for modelling and supporting effective classroom practices guided by the toolkit to teachers assuming full responsibility for incorporating these practices into their teaching. The approach provided

<sup>1</sup> Fisher, D. and Frey, N., *The Purposeful Classroom*, Alexandria, VA: ASCD, 2011.



research teams with an instructional framework for moving from knowledge to understanding, reflection and application. The gradual release of responsibility model ensured that teachers were supported in their acquisition of the toolkit skills and strategies necessary for success.

### Gradual Release of Responsibility Model



*Adapted from source: Better Learning Through Structured Teaching (p.4), by D. Fisher and N. Frey, 2008, Alexandria, VA:ASCD, 2008.*

The visual image represents the four interrelated major elements of this model and identifies sequential developmental stages. The action research intervention phase followed this collaborative process during the five days of research.

The aim of relying on this particular professional development approach was to provide adequate support in order for teachers to become independent in using the elements of the toolkit.

It is important to recognize that a gradual release of responsibility is not a linear approach. Teachers and researchers moved seamlessly between each of the elements, reflecting their background and knowledge and skill levels.

The following discussion summarizes each model element separately while providing examples of how the implementation of each element looked like in the 28 case-study schools.

**Model Lesson** – This component allowed the researchers to model their thinking and understanding of effective classroom practices connected to the chosen toolkit element. Researchers capitalized on their background knowledge and experiences when modelling specific strategies. The ability of the researcher to model was inherently influenced by individual experience, understanding and background.

**“For the Grade 1 teacher, the UNAM educator modelled a story-telling lesson, with different levels of questions and application activities such as talking about the story. The learners all sat down on the mat and listened to the story Handa’s Surprise, which was read from the laptop display and**



learners were able to watch the story. After modelling the teacher came up with ideas to stimulate learners in reading and writing activities that were an improvement on the usual “reading” of memorised text and simply copying from the board.”

**Co-teaching** – During co-teaching, the researchers prompted, facilitated and guided teachers through participation in the lesson delivery. The co-teaching allowed the teachers, who were unfamiliar with the toolkit strategies, to develop a stronger understanding of the intended approach from the toolkit element and provided opportunities for researchers to clarify misperceptions and knowledge gaps.

“During co-teaching, one of the researchers demonstrated the use of letter cards to engage in playful group activity while learning to identify letter sounds. Learners took turns to request from each other various letter cards. Through this activity they started talking to each other and working as groups, even going beyond the activity by starting to identify similar letters in their names that were pasted on the desks.”

“The coaching started with storytelling where the teacher was coached on planning an activity which all the learners can do together. The researchers encouraged a strong language phonic usage as the learners were found reading without a Khoekhoegowab click. Learners usually read out of the blue without the teacher noticing, so the team coached the teacher on ways to ensure that learners are fully paying attention and reading where they are supposed to read.”

**Co-planning** – Co-planning generated a collaborative learning opportunity for researchers and teachers to apply their knowledge and understanding of the toolkit strategies while interacting with each other. The co-planning ensured accountability for incorporating a toolkit strategy to match the learning objectives, ensuring alignment between the toolkit and the curriculum.

“Later that day we looked at the syllabus again to co-plan for language lessons and she decided to use Handa’s Surprise for the story telling. We sat with her and went through the manual on how to tell stories, by showing and asking questions, etc. before actually telling the story. My partner read in English and translated and gave example for each of the things that needed to be done before storytelling. In addition, she assisted in making the Oshikwanyama translation available and put on the slide show.”

“Here I told the teacher that I can assist where possible in the class. We looked into managing the classroom so that it is friendly and enjoyable. We watched the videos in the toolkit (usb stick) on managing learning environment and that excited the teacher.”

**Independent Teaching** – Teachers selected a relevant toolkit strategy, designed instruction and taught independently. Researchers observed and recorded information that allowed them to provide constructive feedback during a collaborative post-lesson reflection. This opportunity allowed teachers to synthesize knowledge, consolidate their understanding and transform their teaching.

“On the fourth day, both teachers taught very well as they worked on the challenges identified in their previous lessons. The most interesting observation on the last day was the ability of the teachers to integrate the elements from the toolkit and how everything else began to fall into place, despite the fact that each of them concentrated on the two elements of their choice. The teachers realised the importance of incorporating the five elements in their lessons with less support from our side and this made the teaching and learning more effective.”

“The final observation of the pre-primary teacher was of a lesson he planned on his own with a story telling focus. The teacher told a story that matched the theme of family. He wrote different vocabulary words from the story and passed out letter sets to pairs of children. He had laminated the letter sets from the toolkit. The lesson was highly interactive and developed a game like atmosphere as learners tried to find the matching letters before others. He also created a handout with missing letters from the vocabulary words. The teacher was animated with his feedback to learners. The entire class, teacher and research team were caught up with the excitement of the activity.”

### Changes in classroom practices

The majority of researchers, 26 of the 28 teams, reported observing changes in teacher practices and learner responses after the one week intervention period. One team reported no observed changes throughout the week and another team reported a neutral response to the influence of the intervention process.

“95% of the materials in the toolkit are readily available at the school. Since the teacher has these materials already, there was not much difference in the teaching strategies and approaches.”

Research teams relied on a comparison between data from last year’s research and observations made during the intervention phase – particularly the differences between the first and last days of the research period. They also incorporated self-reported information from teachers about their instructional practices.

The following chart articulates broad categories of observed teacher and learner responses to the intervention process.

	Teacher Response	Learner Response
<b>Attitude</b>	Feeling of empowerment Perception of learners’ potential Excitement towards teaching	Feeling of empowerment Perception of own potential Eagerness towards learning
<b>Management</b>	Increased time on task for learners Acceptable noise levels Establishment of routines Reinforcement of rules	Increased levels of involvement Team work Cooperation Adherence to rules
<b>Skills</b>	Learner-centred teaching Integration of local context Technology integration	Learning through self-discovery Increased conceptual understanding Increased comprehension levels

**Attitude** – Although the intervention period was short, the appeal of the materials in the toolkit and the opportunity to work intensively with the research team influenced the teachers’ motivation and confidence to try new strategies throughout the week. The strong alignment between the toolkit materials and the curriculum, along with the provided support from researchers contributed to an easy toolkit implementation. Teachers became more confident in their ability to reach learners with strategies that promoted a learner-centred environment. Increased positive learner responses reinforced the teachers’ desire to provide stimulating learning opportunities, and shifted their perception of learners’ abilities and potential to learn, while bolstering a feeling of successful

teaching. This cycle of increased learner response and teacher confidence, augmented by the research team's support and feedback, facilitated a clear sense of empowerment.

**“Her confidence regarding her own teaching practice really increased throughout the week. Last year, it was clear that the teacher really held on to order in her classroom because that was her way to keep control: learners had to sit quietly and follow instructions. At the end of this intervention week, the class atmosphere was completely different: learners were actively engaged in activities and group work was regularly used. During the last debriefing, the teacher indicated that, even though it is a different kind of control, she feels more in control of her classroom and the learning process now.”**

**“The learners enjoyed working with number cards and word cards, as well as working with the abacus and dice. The learners were used to telling stories during daily news, but the time lacked planning and creativity. After the intervention they liked creating their own stories, asking related questions and do problem solving.”**

**“After his final lesson that involved having learners make words with the letter cards, he reflected that getting learners involved changed learners' participation. He said that activity got his two students who never participate involved in learning and he realized that one of the students can identify and match letters. Without that activity he would have never known.”**

**“The use of teaching aids created a lively atmosphere for learners and the teacher. This was evident when we came the next day and a boy made his own model of a scale which was so wonderful to see such an enthusiastic learner and so creative and original.”**

**Management** – Teachers' shift to a learner-centred approach generated a parallel shift to learners' active involvement in the classroom. Learners transitioned from being passive and unresponsive to becoming cooperative and collaborative participants. When learners engaged in meaningful tasks, they worked cooperatively and at appropriate noise levels. Teachers reinforced rules and expectations rather than reprimanding learners for inappropriate behaviour. Throughout the week, teachers developed an orderly sense to their teaching. Another notable change was a shift in teachers' perspective of controlling the classroom. Throughout the week, teachers recognized other ways of managing the classroom that involved group work, learners' interaction and varied work activities. Even though learners were not sitting silently, teachers recognized they still had control and could manage the learning environment.

**“We observed an increase in positive feedback to the learners, and multiple opportunities for the learners to demonstrate their understanding of the number three. The teacher was also intentional in providing opportunities for learners to support each other by having them work in partners and verbally encourage learners to help each other.”**

**“It appeared that the teacher's notion of teaching was limited to the classroom physical setting. However, through taking the learners outside, a different learning environment, learners freely engaged each other in a playful way to learn this academic activity through modelling it to each other. This in a way modified the teacher's approach to teaching and widened the horizons to use the local environment more meaningfully for learning.”**

**“The teacher mentioned three things about her teaching namely, the lesson was successful, there**

**was teamwork going on, and there was minimal shouting at learners. In case of learning the teacher mentioned that slow learners were engaged.”**

**Skills** – Changes in teachers’ skills varied and were dependent on the selected element of the toolkit.

Regarding the Reading and Storytelling component, teachers became proficient storytellers and integrated learning activities that aligned with the curriculum and matched the story. Many teachers applied newly acquired technology skills and the laptop to project story pictures, and when relevant, translated into mother tongue. Vibrant images and animated storytelling positively influenced comprehension levels in learners.

**“Her comments about the story telling are that: because of the teaching aids, storytelling was so nice. Learners were able to see the pictures and it was visible to them, they enjoyed. She also enjoyed the lesson when the pictures were shown while she was telling the story. She noticed that the learners were attentive, participating actively, listening. She was surprised that learners could answer very challenging questions. They gave some answers that the teacher didn’t see or expect. Teacher revealed that she used to underestimate her learners by asking only questions at low level.”**

**“The Grade 1 teacher showed clear progress during this intervention phase. She showed great strides in improving reading instruction using word wall words and incidental reading of text words, using the story to promote vocabulary and language building in English (the medium of instruction) as well as adapting a story to match the theme and syllabus requirements. She demonstrated that it was possible to integrate the toolkit resources into the usual lesson planning for enrichment of the learners’ learning experiences.”**

With modelling and guidance from the research team, teachers increased their ability to incorporate math materials to develop learners’ understanding of numeracy concepts. Learners became active participants during the math instruction, handling materials such as the balance scale, abacus and counters.

**“The pre-primary teacher made use of more manipulatives to make her learners comprehend number four (4) in that lesson. Learners counted their fingers, the number of times they jumped and clapped, counted the corners of their tables and chairs, the dried fruits found at a nearby tree, bottle tops as well as beads of the abacus. The teacher said: ‘Making use of the strategies from the toolkit made her teaching much easier. Learners learned through self-discovery and comprehending the number 4 was easy’.”**

**“When debriefing the lesson after using the balance scale, the Grade 1 teacher said: ‘My teaching was successful; learners compared different objects on the scale. Learners participated in the lesson. They were able to touch and compare objects. They put objects on either side to see which one was heavier than the other. I use this to explain the concept of mass. I can effectively deliver and create an understanding in learners’.”**

The other three focus areas from the toolkit were integrated in multiple subject areas. Teachers progressed in asking higher level questions and probing for deeper responses. They increased their awareness and practice of using wait time as a strategy for elevating learners’ thinking. The level of questioning increased in a manner that encouraged thinking and allowed for learners to engage and speak more. A few of the teachers were able to get their learners to ask each other a question.

**“Both teachers became more aware of how their questioning and instructions influence learning. The Grade 0 teacher was quite pleased when she could reflect that she gets a better idea whether the learners grasped something when she assessed them in smaller groups rather than getting a choir response.”**

**“The involvement of learners to ask questions to one another was also one thing that amazed the teachers. One teacher said that: ‘I thought that these learners were too young and did not have the ability to ask questions to one another as well as to the teacher.’ They said that they will definitely try these strategies during their own teaching.”**

Regarding Managing the Learning Environment, teachers developed lessons that required group work and collaboration. They recognized the benefit of providing independent activities such as puzzles as a way to enrich learning, while giving teachers the opportunity to provide additional support to selected groups of learners. Teachers initiated strategies such as providing signals for attention and explicit rules for group work that effectively managed noise and participation levels. Additionally, many teachers made use of word cards to label classroom objects increasing exposure to a print rich environment.

**“For this lesson his seating arrangement had changed and learners were in groups of four and able to work together to support learning. This change was a result of discussions from the previous lesson related to learners having opportunities to learn from each other.”**

**“The teacher made a calabash shaker to get attention of her learners. She also made puzzles for learners who finished their writing activity early. The learners were so happy to work with the puzzles. Instead of running home at the ringing of the bell, the learners wanted to work with their puzzles until they were finished.”**

In the Assessment area, few changes were reported by those teams where teachers selected Assessment as a toolkit focus. In a few instances, teachers applied a formative assessment strategy, such as “show me” or “point to” as a way of determining learners’ understanding. However using formative assessment strategies in different subject areas was not universal or consistent.

**“Although the overall presentation of the lesson went well, the major problem is the assessment part. The teacher finds it difficult to move from one learner to another and those who finish first start shouting and give the answer to others.”**

**“The learners were correcting one another and helping each other when doing this activity. Her comments on the first day were that the learners understand better and the use of teaching aids simplified their understanding. She stated that before when she wanted to teach balance she was looking for ‘clothes hangers’ or other materials but the scale made it easy to do. She added that the scale gives accurate picture and measurement. They were engaged in active learning and really learnt with understanding, as they manipulated objects, measured them and were able to interpret the results. The teacher’s probing questions enhanced learners’ critical thinking and application.”**

## Integration of technology

The research teams were also responsible for delivering a training on ICT integration, that aligned with the training they had received during the May meeting. In addition to the tablets distributed during last year's research, each case-study school received a laptop and two internet connectivity devices to support integration of technology in the classroom. As part of the toolkit, each school also received six ICT literacy and integration modules, developed by the UNAM Continuing Professional Development Unit.

During the May meeting, the UNAM ICT integration team trained the researchers in using word processing software to create flashcards, puzzles and other teaching aids, creating digital stories to support storytelling in the language of instruction and learning basic internet skills.

The ability of mirroring this training to teachers in the schools varied among the 28 research teams. In some instances no training was provided, at other times research teams provided training in basic ICT literacy or were able to further the training by integrating ICT skills and practice. Although 20 schools received some level of ICT training, the data shows that in only five of 28 schools teachers integrated knowledge or skills from the training into their classroom practices during the research week.

The following chart displays the character of the training and the corresponding number of schools.

<b>No training provided</b>	8 schools
<b>ICT Literacy training provided</b>	8 schools
<b>ICT Literacy and integration training provided</b>	12 schools

<b>ICT training applied to classroom practice</b>	5 schools
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**No training provided** – In nine schools, various factors impeded researchers' ability to transfer ICT skills through a structured training. Some research teams reported that there was no need for training because the teachers already had the skills. Other research teams found difficulty in transferring ICT skills using a laptop that operated differently from their personal device. In some schools, teachers were fearful about technology and lacked the desire to acquire new skills.

**“We did not do ICT training for our teachers because they indicated they had no problem with ICT and that they had enough basic ICT skills to access teaching aids online. This could be attributed to the fact that both teachers are former Basic Education Teacher diploma graduates and did computer literacy and integrated media technology at the former Caprivi college of Education.”**

**“The training session did not go well because the research team was unable to operate the new laptop. The research team also did not succeed in training the teacher on the applications inducted during the ICT training week due to lack of ICT skills. Because the research team failed miserably in this aspect, it would be a good idea if training is provided by people that are really ICT literate.”**

**ICT literacy training provided** – Eight research teams encountered teachers with limited knowledge about computers and technology concepts. Researchers recognized the need to provide skill development and training of fundamental ICT knowledge, such as turning on the laptop, using a

password and accessing programmes. The time spent supporting computer literacy detracted them from the ability to enhance technology integration skills that mirrored the ICT training. A basic training was a pre-requisite for further skill development, related to integrating the technology in classroom practices.

**“ICT training was a challenge thus it is worth sharing that this training did not reach its goal as planned. This is because according to the teacher, she had no knowledge about ICT except using her own cellphone. The teacher indicated she never uses any computer unless she asks her colleague to help with typing. Therefore we had to start with the basics, like opening the laptop. Sometimes the teacher forgot what she did on the previous day so we had to repeat the training.”**

**“It was impossible to transfer the skills taught at the ICT training of trainers since both teachers lacked most of the basic knowledge. The research team supported the teachers in setting up an e-mail account, the basic use of the laptop, the use of the internet dongle, browser and search engine, and the development of worksheets.”**

**ICT literacy and integration training provided** – The combination of researchers with strong ICT skills and teachers with adequate computer knowledge and an excitement for innovation fostered a conducive learning platform in 12 schools. Researchers mirrored the May training of trainers, with some teams intentionally selecting a few elements matching their skills as well as the teachers’. Others followed the full training sequence and provided a comprehensive training. Some researchers focused their training examples on content that connected ICT to the selected toolkit element and aligned with the week’s theme and the overall junior primary curriculum.

**“The ICT training was very succesful as we had the opportunity to go through most of the exercises learnt at the training of trainers, but also because the teachers were motivated on practicing the excercises. Even when the power went off during one of our training sessions, the teachers used cellphone flashlights to continue with the training. The excercises of the training were chosen in relation to the selected areas of intervention. In the case of storytelling, the exercise chosen was to elaborate the powerpoint of the book Handa’s Surprise.”**

**ICT training applied to classroom practice** – During the research week, a limited number of schools (4/28) progressed and were able to apply the skills acquired in the training to integrate technology as a way of enhancing their instructional practices. These teachers were receptive and excited about innovating their instructional practices through technology. Research teams capitalized on this eagerness by encouraging teachers to apply these skills to current themes and subjects. Most of the application occurred with storytelling where teachers read the story while projecting the pictures in a powerpoint format.

In the majority of schools, teachers were not able to apply the skills of the training independently in the course of the one research week. Factors such as limited skills and experience, confidence levels with technology and perceived interruption to pre-planned instruction contributed to a difficulty with conceptualizing the added instructional value of technology integration to support learning.

**“At the end of the intervention, participating teachers had gained enough knowledge and confidence in the use of ICT to the extent they were able to present a demonstration lesson to other staff members. This boosted their confidence and eagerness to start a new initiative of acquiring these support tools for the school.”**



**“Teachers were trained on how to make flashcards, shapes, puzzles and storytelling with powerpoint. It was a difficult training as some teachers have never used a computer and some were reluctant to even touch it. The teacher stated that it is hard and she is uncomfortable to use the laptop during her lessons and decided she will only use it when she practices more with it.”**

### Research follow-up

Ten to twelve weeks after the implementation of the action research intervention phase, the research teams conducted a structured follow-up interview with the teachers and principal or head of department at their case-study schools.

The questionnaire included separate sections on the use of the toolkit and the integration of ICTs in teaching and learning. The purpose for these questionnaires was to get an initial indication of the sustainability of the interventions undertaken. All the data is self-reported.

#### Use of the toolkit

The questions included in this section related to the influence of the toolkit on lesson planning and teaching, as well as learners’ involvement. Teachers were also asked to share what contributed to their decision to continue using the toolkit elements.

Out of 48 teacher participants, 40 teachers responded to the follow-up questionnaire. All 40 reported to continue using the toolkit elements. The main reason for continuation highlighted by the teachers is the observed change in learners’ involvement and participation. Teachers reported that the use of toolkit elements and strategies keeps the learners interested. The learner-centered approach to teaching reinforced by the toolkit strategies transformed their learners from passive to active participants in the classroom. Many teachers also reported that teaching has become ‘easier’ through the use of the toolkit.

**“Things have been going quite fruitful; your last visit has brought so many changes in my life. I have more confidence due to the attention I received from outside and the interest shown. That is the same interest and attention I now put in my preparation, teaching and attention I give to my learners.”**

**“My learners are very active in class. They have also learnt how to ask questions. In the past, they used to be passive listeners. For example, some learners have started asking ‘why’ questions because they want to know more.”**

**“I continue to use the toolkit because I have noticed change in the way my learners participate in the lessons when I use materials from the toolkit. The toolkit content provides hands-on activities because they use manipulatives and match numbers to contents and number names.”**

**“I am continuing to use the content as discussed. I have shared the knowledge with all the teachers at our school and we have improved our classroom management through the use of signals and puzzles. We are using flashcards written with ABC Junior font. We have added new puzzles and word cards.”**

**“My learners have become different from all the learners I have taught all these year. They are more active during lessons, they discuss actively and their thinking abilities have become very**



high compared to how they were.”

Quote from HoD: “I have noticed positive changes especially in the pre-primary teacher. She keeps her learners quite busy. Every afternoon, she is busy with preparations and these teachers are occupying all the PCs in the staffroom to such extent that we are not getting a chance to work on them anymore. Also I have seen that the pre-primary teacher’s self-esteem has sky rocketed ever since.”

Quote from HoD: “Yes, I have noticed that the class displays have changed. The teacher is pasting different pictures and wordcards on the wall. Children are also seen engaged in a variety of activities. The teacher is observed printing and making copies of teaching and learning media. The teacher is also observed delivering lessons using different approaches.”

### Use of the laptop

The questions included in this section related to the influence of the laptop on lesson planning and teaching, as well as learners’ involvement. Teachers were also asked to share what contributed to their decision to continue using the laptop.

Of the 40 teachers who responded to the questionnaire, 24 teachers reported to continue using the laptop in their teaching and lesson planning. Multiple teachers used the laptop to search the internet for additional information, pictures and text; to play songs and rhymes; or for storytelling, as was demonstrated by many of the research teams. Teachers indicate a desire for more equipment, such as additional laptops, scanners, printers and projectors.

The teachers who reported they do not use the laptop experienced difficulty in operating the equipment. They indicate a need for more training and support.

“I use ICT when planning my lesson. I type my lesson plans. I use ICT to get more information on the lesson topics. During language lessons, I normally play rhymes on the laptop for learners. I have also used ICT in storytelling. I record myself telling a story which I play for learners in the classroom.”

“The use of ICT makes our work easier because you can save your documents in the laptop and they do not get lost. Letters can be printed from the laptop using the ABC Junior Font and they will not confuse learners because it looks like the one they write.”

“After your recent visit, we bought a photocopier machine and a printer for producing hard copies, which enables every learner to have his/her copy of pictures during the lesson. We wish there was a projector available which will project slides onto a screen or wall in order for learners to see the pictures on the big screen.”

“I am not computer literate and I do not have time to explore and learn how to use the laptop.”

### Sustainability

Through the follow-up questionnaire, the research teams provided their recommendations for sustaining the effects of the intervention. Most teams highlighted the importance of institutionalized follow-up and continued support. Especially in the area of ICT integration in teaching and learning, researchers recognized the need for strong technology training.

“Based on the teachers’ responses, there is need for follow-up visits to maintain the momentum that was established through the last visit.”

“Many teachers fear technology, or perhaps the ‘know-how’ deficit, and are therefore reluctant to incorporate it into their lessons. We need to find a way to expose teachers more and to encourage them more.”

“We feel that we will definitely keep in touch with our teachers and follow-up on them on a regular basis. We plan to organize visits where we can have time to do mini action researches with our teachers on areas that are still challenging to them, then write and publish articles on them. We also want to invite the teachers to do mini-demonstrations in our classes at the university. We will set up a WhatsApp group with our teachers and principal so that we can share ideas and stay in constant touch.”

“We should try for our own students to get a good basis of preparation of resources so that they leave UNAM ‘armed’. However, the toolkit idea was splendid, which gave teachers a blueprint on how to do this, or get an idea of how to go about being creative and resourceful.”

## Conclusion

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The UNESCO/China Funds-in-Trust project provided a platform to bring together UNAM Faculty of Education, classroom teachers, government officials and other stakeholders to engage in a two year countrywide collaborative action research process. The aim of the intervention phase was to address the identified challenges and influence professional practices for improving pre- and lower primary education from a teacher education and a classroom perspective.

This research opportunity created a conducive environment to learn about and participate in the research process, work collaboratively and learn from the experience and expertise of professionals. Feeling empowered, the researchers refined their skills, re-examined their perspectives of teaching and learning and adjusted their professional practice.

The intentional design of combining the toolkit concept with a collaborative support framework and participants' ownership of the process bolstered the efficacy of the intervention phase and created a dynamic blueprint for professional development in the Namibian education community. The structure, format and materials of the toolkit facilitated the ease of implementing a learner centred approach. The gradual release model provided research teams with an instructional framework for moving from knowledge to understanding and application. The model ensured that teachers were supported in their acquisition of the toolkit skills and strategies necessary for success.

When it comes to integrating ICTs in the classroom, the outcomes of the provided trainings varied. In order for teachers to successfully integrate technology in the classroom, teachers' access to equipment as well as support is crucial. Equally important is their openness for innovation and related understanding of the instructional value of ICTs. The ICT challenges encountered throughout the project reinforce a need to pursue an institutionalized way of making technology more accessible and familiar, for its integration to become natural and innate to classroom teaching and learning, with the aim of supporting and enhancing the learning experience in Namibian classrooms.

The descriptions of the observed classroom changes are highly positive. They reflect what occurred during the one week period influenced by the novelty of the introduced materials and the accessible strong support from the research teams. The two year project approach of identifying the needs of classroom teachers, designing hands-on strategies to address the analysed challenges and collaborating with multiple stakeholders to conceptualize and implement the intervention, has proven to be powerful in affecting various layers of different stakeholders' professional development. The observed positive influences of the intervention provide evidence for the potential of this professional development model and reinforce the importance of sustaining the created momentum.

Observing the abovementioned, the research process has encountered achievements and challenges in an intertwined manner. It is therefore important to keep moving forward to strengthen classroom practices, the use of research to inform teaching and learning and the conception of an education community of practice, to contribute to Namibia's efforts in accelerating the progress towards the provision of high quality education, in the framework of the new post-2015 education agenda and the goals set out for 2030.

