

Internet Free Education Resource Bank (IFERB) Project

July - December 2021

Submission Date: March 8, 2022

Submitted by: Nancy Gikandi



Table of Contents

Executive Summary	4
I. Introduction	5
Mode of Implementation	5
Student Learning Enhanced	14
IV. Key Learnings	17
Recruitment of teachers / schools:	17
Sustainability	18
Annex II Links to the Project reports	19
Annex IV Photographic evidence of implementation	
.....	201



Acronyms and Abbreviations

APBET	Alternative Provision of Basic Education and training
CBC	Competency Based Curriculum
COP	Community of Practice
IFERB	Internet Free Education Resource Bank
LOL	Leaders of Learning
MOE	Ministry of Education
TOT	Trainer of Trainers
TSC	Teachers Service Commission



Executive Summary

Dignitas is a leading, award-winning education development organization. We use an innovative training and coaching approach to empower schools and educators in marginalized communities to transform students' opportunities. We imagine a world where schools are a vibrant place for all children to develop the skills and strength of character to thrive and succeed.

Dignitas implemented IFERB project in Nairobi, Kenya, during the period July – December 2021, as the global Covid19 pandemic continued to unfold and put unprecedented pressure on education systems globally. In her pilot phase conducted in the year 2020, the Organization had realized that an overwhelming percentage of the school leaders acknowledged that the projects provided valuable support for learning at home. On the other hand, majority of learners demonstrated learning gains with many of them demonstrating improved mastery of 21st Century Skills aligned to Kenya's Competency Based Curriculum: Given the foregoing, IFERB became an important resource to add to the Year 2022 learners' menu.

This report documents the implementation process through its winding stages at project selection and contextualization, through capacity building for teachers, project delivery in the schools and coaching support up to evaluation. Having described the context, the selection and contextualization processes are explained. The factors considered for selection are explained with the accompanying supplementary resources revealed. This opens the implementation page where the MEL framework described. The focus areas are listed and structure of project team is spelt out with the accompanying roles discussed. The project locale and magnitude is described alongside the demographics of project beneficiaries. The document explains how reflection meetings were conducted for the team learning.

Further on the document reveals the project outcome. It gives evidence of the 21st Century skills demonstrated by the learners during the project period. Collaboration was highly evident through the project 'Setting up a shop', where they practiced pricing, budgeting, buying, selling and giving balance. Doing this practically was hailed for making learning fun.

Indicators of IFERB adopted as a low resource learning solution are tabled and discussed. Evidence of increase in teacher capacity for project –based learning is



demonstrated. Among the key insights gathered through the PBL is the fact that IFERB is a very rich learning resource which helps extend learning beyond the classroom and facilitates acquisition of 21st century skills such collaboration, creativity and imagination. However, it adds value for EAA to provide future projects in all the three subject areas across all the three levels.

I. Introduction

Dignitas is a leading, award-winning education development organization. We use an innovative training and coaching approach to empower schools and educators in marginalized communities to transform students' opportunities. A leader in supporting Education for the marginalized, Dignitas imagines a world where schools are a vibrant place for all children to develop the skills and strength of character to thrive and succeed.

Dignitas implemented Internet- free Education Resources Bank (IFERB) project- based learning in Nairobi, Kenya in July - December 2021. Having completed her pilot phase in December 2020, the Organization was better prepared to plough back the lessons learnt so as to sustain the gains made as documented in the [End of Pilot Report](#).

During the implementation period, Covid19 lock down in Kenya had been lifted and schools were opened. On the flip side, learning in the classrooms was experiencing a crash program with shortened learning periods per school term and very short holiday sessions. With learners more available at school than at the households, it was more prudent to implement the projects at school. This would also allow teachers the opportunity to explore how the projects complement the new Competency Based Curriculum, CBC, which applies inquiry- based learning. Working with all partner schools would also facilitate setting up of systems for remote/blended learning as may be required by future disruptions.

To propel this goal to actualization, the following project outcomes;

- Teachers gain new competencies that allow them to integrate project-based learning into ongoing curriculum delivery
- Learners show improvement in assessment scores pre and post pilot
- School Leaders have tools and resources to sustain their future use of project-based learning.



II. Pilot Overview

Dignitas partnered with thirty (30) Alternative Provision of Basic Education and training (APBET) schools located in three urban informal settlements of the capital city, Nairobi, namely Kawangware, Dandora and Huruma. Although these low-cost community schools are generally characterized by high learner population and inadequate resources, they provide access to education to a significant percentage of the residents. The projects were a very welcome addition to their inadequate learning resources.

Mode of Implementation

At school level, the implementation team largely comprised of teachers and learners. The IFERB program was delivered in 30 (thirty) schools through specific subject teachers. Among the teachers were 10 (ten) champions, assigned the role of Peer Coaches and charged with supporting 3 (three) schools each in which 3 (three) teachers handled the project. In total, there were 90 (ninety) teachers engaged in the project. In each school, the Head Teacher assigned a lead for their school team, who represented the school in training, monitoring and other consultations with Dignitas.

With the project focus areas being English, Mathematics and Science, the three target teachers were those charged with instructing any of the three subjects. The projects were contextualized by the Dignitas team and teachers implemented these during their regular Lessons. However some of the teachers covered the projects in a different lesson outside the regular lesson time. Through this, the program supported 2,522 learners from across Grade 4, Grade 5, Class 6 and Class 7, picked from 30 schools. The 30 schools were also part of IFERB Phase I in 2020. These teachers used the contextualised IFERB teaching resources during their regular lessons that were held during school hours; a strategy for uptake and sustainability. Through this strategy, the program supported 2522 learners drawn from across Grade 4, Grade 5, Class 6 and Class 7 (Age 9-12 years).

Implementation Team

The technical personnel included the Director, Dignitas, who was the overall team leader. She marshaled a team comprising of the Project Lead, Leadership Coaches and the Monitoring, Evaluation and Learning (MEL) team representative, and Program Officer for operational support. This team rallied the support, and built the capacity of School Heads and Peer Coaches. An education development consultant, was hired to support project selection, contextualization and develop the additional supplementary learning materials needed. The two Leadership Coaches,, were also trained to facilitate the project dissemination sessions. This technical team met for weekly check-ins throughout the course of the project.

Project Contextualization.



Selection and contextualization of the 12 (twelve) projects was done in collaboration with EAA with Dignitas taking lead so as to align the projects with the national curriculum. Further, project selection was determined by the topics/ strands schemed by the target schools for the term. The selected projects were contextualized for alignment with the Kenyan curriculum designs. The necessary supplementary resources such as the ones listed on the next page were identified and developed. Monthly 2-hour virtual training sessions for TOTs were held on how to use the contextualized projects. These were two program staff whose mandate included training and coaching support for teachers.

Based on these, each was charged with training teachers in a specific subject area. As a result, a total of 88 (eighty-eight) teachers were trained and commissioned to implement the projects across the grades 4-7. The targeted number of teachers was 90, however we worked with two teachers (instead of three) in some of the schools. In the meantime, each teacher was facilitated with airtime to enable their participation in weekly check-ins held through WhatsApp Community of Practice (COP) where they deliberated on emerging issues and raised concerns for support. In the meantime, Dignitas Leadership Coaches supported the Peer Coaches who in turn supported the teachers to implement the project-based learning.

A key project goal was to use the projects to complement the lessons going on in the classrooms hence extend learning. This called for accurate alignment of the projects to the classroom content being learnt during the term. To achieve this, the task required;

- a) Teachers to identify the strands they would teach during the term
- b) Browsing the IFERB bank in search of similar content
- c) Use of filters to zero in on the content aligned to each level
- d) Limiting the scope to the level
- e) Ordering the strands to match the order determined by the teachers' schemes of work

Although the strands earmarked by the teachers for the term were generally similar, there was significant variation in the way they were sequenced in various schools. Therefore, the project attempted a harmonized sequence that would benefit all learners. A table in Annex 1 shows the 4 Maths, 4 English/literacy and 4 science projects which were selected.

To reinforce learning supplementary resources were developed. These include;

- a) Learning log: it is a simple matrix where learners document what they know about the target sub-topic, what they desire to learn from it. After the lesson they summarize what they learnt.
- b) Audio recordings: short audio scripts for use by teachers were recorded to complement the power-point presentations.

- c) Lesson plan: To strengthen the capacity of teachers to integrate the project work into their regular lessons, sample lesson plans were developed and tabled for their learning.
- d) A story map: A diagrammatic representation which was developed to guide the capture of a story map and enhance listening and reading comprehensions. The teachers guided the learners on how to use the story map to summarize comprehension passages.

Fig 1: a story map



- e) Documents for the learning circles: These are weekly reflection sessions for teachers implementing the program. At least a week before the training, a communication was sent to the teachers in the main whatsapp group to remind them of every learning circle. These were held online through zoom and were combined with the teacher training. During each training, the first hour was dedicated to the learning circles. We allowed the teachers to reflect on the previous project, specifically on what went well and what needs to improve. We always began with what went well and we leveraged the chat section so that all teachers could share their views. We also allowed a few teachers to share in detail during whole group debriefs. We did the same for what needed to be improved and we discussed possible solutions so that we could incorporate the learning in the subsequent project. The PDF version of the projects, a powerpoint presentation, a summary of all the upcoming projects were prepared for TOTs and teacher training sessions. These were later uploaded on the organizational online resource-pack.

Challenges experienced during contextualization include inconsistency of project language. Project instructions were not consistent in terms of whom they were addressing and would switch between addressing the educator and learner. To resolve this, the customized projects adjusted their language to address the teacher for the purposes of this project.



Some projects failed to spell out the learning objective for the session which challenges effective session planning and makes it difficult to focus learning eg. *Our House rules to keep Covid away*; *Setting up a store*.

Majority of the projects are too wordy for easy reading. While it is important to explain both the content and procedure of the project, there are too many explanations running over many pages which take the reader too long and also escalates the printing costs. Contextualization sought to address this through summarizing content without losing the quality of learning.

While all the projects were easily adaptable to our context, it was noted that EAA had conceptualized, *Growing up*, for literacy. In the meantime, our teachers anticipated to teach a topic, *Growing up*, in science, whose content included body systems and their functions. To meet this need, our team worked with EAA to create a new science project, *Growing up*. A 30-minute online meeting was held to explore some ideas after which EAA developed a 5-day generic structure. Our staff then customized this into a Grade 2 and 3 project. The diagrams necessary for these were sourced from the internet. the outcome was reviewed and firmed up by EAA.

Learning circles

During the period, 3 monthly learning sessions were held for Peer Coaches and participating teachers with each lasting 2 hours. Evaluations revealed significant successes highlighted by teachers' key among them being positive learner involvement and enjoyment in the activities. Teachers hailed the alignment of the projects to the lesson content they were handling which facilitated integration into the regular lessons. Lilian Owino, a teacher in Faulu school said that her learners were writing better compositions after going through *The Grandmother's tale* project.

Through the projects, learners developed their power of imagination as they created materials such as comic books and tales. In the science project, *Why all the Plastics*, many learners stretched their imagination to develop creative ways to manage waste. A good example is the use of plastic bags as dustbins. In order to get some space for the 'dustbin in their crowded houses, some learners hanged the plastic bag on the walls. Mathematics project, *Less is more*, benefited their families as they designed ways to avoid wastage of food. Teachers also reported that most parents were appreciative of the practical application of profit and loss calculations while working on the project "Setting up a store". Another parent was also amazed at how much learning can happen outside the classroom.

By its nature, PBL catalyzed collaboration and communication skills among learners, a set of target competencies in CBC.



Learners from Faith Junior Education Center school participate in a science project, *Why all the plastics?*

The evaluation also revealed a few challenges which included little parental involvement. Baseline data showed that only 45.1% are **always** involved in the learner's schooling. After programming, there was increased parental engagement, as this increased to 51.5%. Focus Group Discussions with parents also revealed high parental involvement and highlighted PBL allows for more involvement than with traditional schooling.

As Covid19 continued ravaging the economy, there was increased economic and social burden on parents and teachers thus education suffered less attention. Given the foregoing inadequate teacher preparation also worked against smooth implementation of the project with some going without adequate materials. Learner absenteeism constrained the very precious resource, time. Some other important school activities such as Grade 3 - 5 national assessments competed for time hence compounding the situation.

Inadequate foundational skills conspired to challenge learning. Usawa agenda 2021 revealed that only 40.7% of Grade 4 learners can appropriately read a grade 3 text while 49.5% of them are unable to solve Grade 3 numeracy. This contributes to the reason why a significant percentage of learners were noted to struggle with basic operations while others had difficulties writing content in English such as letters and comic strips.

III. Results

Guided by the [IFERB M&E Framework](#), Dignitas tracked the following;

- Number of projects contextualized and implemented
- Number of learners enrolled and completing projects
- Number of trainings and learning circles
- Number of teachers attending trainings and learning circles
- Change in learner assessment scores and 21st century skills



- Ease of projects implementation
- Learner satisfaction with projects

To collect the above data, the following tools were used:

1. **Pre and Post learner assessments** - These captured questions on the 12 projects and we administered before and after project implementation. The same learners assessed at baseline were given the test at endline to establish the change in learner performance and 21st century skills.
2. **Teacher Survey** - The teacher was administered pre and post programming to at least 50% of the teachers. This included questions on teacher facilitation techniques as well as project implementation feedback.
3. **Learner Survey** - The learner survey was administered to approximately 600 learners pre and post programming. This survey established the learners' attitude and perceptions towards learning, mindsets and life aspirations. The endline survey also sought learner feedback on project implementation.
4. **End of Project Feedback Report** - At the end of each month, teachers filled an online end of project report. The report established the number of learners given projects, completion rate, satisfaction with project resources and support from Dignitas team, as well as successes and challenges of project implementation.

IFERB Adopted as a Low Resource Learning Solution

The project enrolled a total of 2522 learners for the PBL. Of these, 1989 (78.8% were drawn from level 2 (Grade 4, Grade 5, and Class 6) while 533 (21.1%) belonged to level 3 (Class 7). However, in terms of gender, boys almost equaled girls save for a small difference of 56. Table 1 below explains more enrolment details.



Table 1: Number of students enrolled

Location	Level 2 (grades 4, 5, & 6)		Level 3 (grade 7)		Total
	Female	Male	Female	Male	
Dandora	365	346	96	80	887
Huruma/Kiambiu	117	128	20	29	294
Kawangware	524	509	167	141	1341
Grand Total	1006	983	283	250	<u>2522</u>

Baseline data showed that 89.3% of the parents have access to a smartphone whereas 73.8% of the households have access to the internet. Additionally, 56.6% of the parents are at college and university level, 19.0% primary & 21.2% secondary level while 3.3% have no formal education.

Project evaluation sought to find out the percentage of learners who completed the projects and remained enrolled for the whole pilot. It was interesting to note that although 2,522 learners were enrolled at the start of the project, the numbers that enrolled and completed the projects were much higher for set 1, 2 and 3. Table 2 shows the completion rates per project.

Table 2: Students enrolled per project

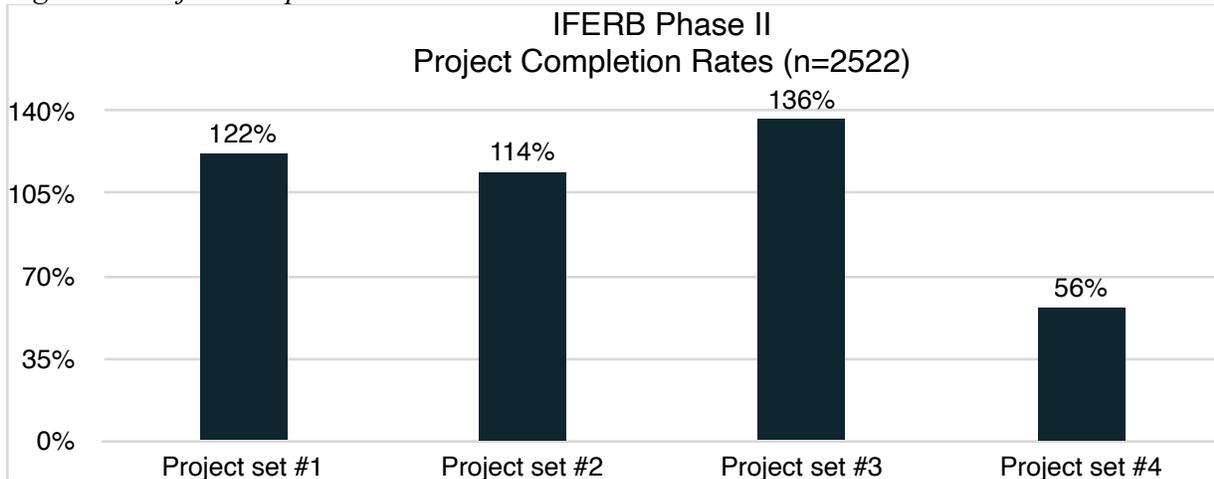
Students Enrolled per project									
Which Project was completed	Level 2 (grades 4, 5, & 6)			Level 3 (grade 7)			Total		
	Total	Female	Male	Total	Female	Male	Total	Female	Male
Grandmother's tale; Setting up a store; Our house rules to keep Covid away	2501	1311	1190	698	403	295	3199	1714	1485
Develop your own comic book; Population census; Water is life	2477	1264	1213	662	362	300	3139	1626	1513
Write an issue letter, Less is more, , why all the plastics	2915	1492	1423	745	385	360	3660	1877	1783
Growing up, Journey around the globe, My encyclopedia	1170	615	555	304	173	131	1474	788	686

Project set 1, 2, and 3 enrolled over 2,800 learners as the schools recorded an increase in the enrollment during the implementation period. Project set 3 enrolled the highest



number of learners at 3,435. The teachers' reporting rate for project set 4 was lower compared to the other projects. This is because the project was implemented towards the end of the term (term 2 2021) and during the reporting week, the teachers prioritized syllabus completion and end of term examinations. Figure 1 shows the completion rates for each project set.

Figure 1: Project completion rates



The endline evaluation sought to establish learner satisfaction. Overall, 61.93% of the learners reported they enjoyed the projects a lot. This information is shown in table 4 below.

Table 4: Learner self-reporting they enjoyed the projects

How was your enjoyment of project-based learning?				
Level	Gender	I enjoyed the projects a lot!	The projects could have been more fun.	The projects were okay.
Level 2 (grades 4, 5, & 6)	Female	64.42%	15.38%	20.19%
	Male	56.41%	15.90%	27.69%
Level 2 Total		60.55%	15.63%	23.82%
Level 3 (grade 7)	Female	66.67%	4.55%	28.79%
	Male	66.10%	5.08%	28.81%
Level 3 Total		66.40%	4.80%	28.80%
Grand Total		61.93%	13.07%	25.00%

Based on learners self-reporting, it was noted that an overwhelming majority learnt a lot. An average of 76.89% confessed having learnt much while a paltry 6.06% did not learn much at all. Further, 17.05% appreciated that they could have learned more. From the focus group discussions conducted with learners in December 2021, one learner



mentioned that they were happy that learning could take place at home as well. Another student stated that they learned things that they usually didn't learn about while in class. Learning was practical to most learners. Find more information in table 5 below.

Table 5: Learners self-reporting they learned from projects

How was your learning with the projects?				
Level	Gender	I could have learned more.	I did not learn much at all.	I learned a lot from the projects!
Level 2 (grades 4, 5 & 6)	Female	17.31%	5.29%	77.40%
	Male	23.08%	6.67%	70.26%
Level 2 Total		20.10%	5.96%	73.95%
Level 3 (grade 7)	Female	6.06%	9.09%	84.85%
	Male	8.47%	3.39%	88.14%
Level 3 Total		7.20%	6.40%	86.40%
Grand Total		17.05%	6.06%	76.89%

A learner survey was administered pre and post programming. At end line learners were required to respond to questions on the level of clarity of instructions. An impressive 75.19% agreed that instructions were clear and easy to follow. However, the rest mentioned some level of struggle. Although the evaluation did not find out the exact reasons for their struggle. One key challenge highlighted was acquiring resources for the projects. This was highlighted during the focus group discussions with learners. Teachers also reported this especially with the project 'why all the plastic', it was difficult to acquire protective gears.

This information is summarized on table 6 below.

Table 6: Learners self-reporting instructions were clear and easy to follow

How were the instructions for the projects?				
Level	Gender	The instructions were clear and easy to follow.	The instructions were hard to follow.	The instructions were not clear enough
Level 2 (grades 4, 5, & 6)	Female	75.48%	13.94%	10.58%
	Male	69.74%	13.33%	16.92%
Level 2 Total		72.70%	13.65%	13.65%
Level 3 (grade 7)	Female	84.85%	3.03%	12.12%
	Male	81.36%	5.08%	13.56%
Level 3 Total		83.20%	4.00%	12.80%
Grand Total		75.19%	11.36%	13.45%

The evaluation sought to find out whether the projects can be implemented with easily accessible resources. Majority of the respondents, 63.64% declared it is possible. While 12.31% thought it is impossible, a significant 24% were of the view that it is possible with some adaptations. When working on the project ‘Our House Rules to keep Covid19 away,’ majority of the learners from Dandora used **homemade face masks**, an adaptation which saved them money. Given the foregoing, the projects were hailed for their relevance to real life situations. Table 7 below gives more details about this.

Table 7: Learners self-reporting that projects can be implemented with easily accessible resources

Were you able to find all materials you needed to complete the projects?				
Level	Gender	No	Yes	Yes, with some adaptations or substitutions.
Level 2 (grades 4, 5, & 6)	Female	11.06%	66.83%	22.12%
	Male	8.72%	69.23%	22.05%
Level 2 Total		9.93%	67.99%	22.08%
Level 3 (grade 7)	Female	25.76%	48.48%	25.76%
	Male	13.56%	50.85%	35.59%
Level 3 Total		20.00%	49.60%	30.40%
Grand Total		12.31%	63.64%	24.05%

The evaluation also sought to know the teachers’ view of the learning which took place. As if to confirm the learners’ views in Table 3 above, 92% said that the learners actually



learnt a lot. The remainder was optimistic that the learners could have learnt more. This data can be found in Table 8 below.

Table 8: Teachers reporting students learned from the projects

Did your students learn new things with the projects?	
Option	%
They could have learned more	8.00%
Yes, they learned a lot from the project	92.00%

The evaluation found out that 84% of the teachers found the instructions clear and easy to follow. While 14% thought that the instructions were not clear enough, a paltry 2% found them hard to follow. Table 9 below confirms this information.

Table 9: Teachers reporting projects were easy to implement

How were the instructions for the projects?	
Option	%
The instructions were clear and easy to follow	84.00%
The instructions were hard to follow	2.00%
The instructions were not clear enough	14.00%

With regard to the level of satisfaction with the resources, only 6% were not. However, 54% responded in the affirmative while 40% somewhat satisfied. This information is captured in Table 10.

Table 10: Teachers reporting satisfaction with IFERB resources

How satisfied were you with project resources?	
Option	%
Not satisfied	6.00%
Somewhat	40.00%
Very satisfied	54.00%

Asked whether they were satisfied with the projects' abilities to help them meet challenges in life, 22% of the teachers were unsure while 78% confirmed that they were. The details are found in table 11.



Table 11: Teachers satisfied with the program's ability to meet challenges

Are you satisfied with the ability of the projects' to help you meet life challenges?	
Option	%
Somewhat	22.00%
Yes	78.00%

We also established teacher practices in learner engagement, differentiated instruction, facilitation of discussion, effective questioning, creation of supportive learning environment, feedback giving, role of an educator and attitude towards learning. There was an increment in majority of the practices except for a five under role of an educator, types of questions, supportive learning environment and feedback.

See Table 12 below.



Table 12: Teachers self-reporting on classroom practices

Category	Timeline	Baseline	Endline
Learner Engagement	My students are actively engaged in their learning.	5.45	5.61
	My students show curiosity.	5.60	5.65
	My students want to learn more about introduced topics on their own.	5.06	5.30
	My students are able to learn independently.	4.82	5.26
Role of Educator	I am curious inside the classroom	5.65	5.76
	I show my students that i am learning alongside them	5.29	5.20
Differentiated response to need of learners	I am aware of the needs and interests of my students.	5.75	5.94
	I am flexible to the changing needs and interests of my students.	5.57	5.69
	I adapt my lesson plans based on the needs and interests of my students.	5.56	5.71
Facilitation of discussion	I let student generate their own questions and ideas.	5.32	5.46
	I include diverse perspectives in classroom discussions	5.50	5.72
	I create opportunities for learners to listen to one another.	5.75	5.87
	I refer to actions and suggestions already made by student classmates.	5.29	5.36
	I allow students to find answers on their own before providing them with an answer.	5.71	6.11
Types of questions	I ask my students open-ended questions.	5.72	5.47
	I create opportunities for my students to make connections to prior ideas, knowledge, and experiences.	5.47	5.58
Supportive learning environment	I use positive language in the classroom.	6.01	6.04
	I actively challenge stereotypes.	5.58	5.49
	I encourage students to challenge things that I say.	5.07	5.11
	I know that my students can do many things without me doing it for them.	5.53	5.44
Feedback	I provide specific comments to students about their successes.	5.75	5.70
	I provide specific comments to students to clarify their misunderstandings.	5.55	5.64
	I guide my students to self-assess.	5.45	5.61
	I guide my students to peer-assess.	5.40	5.64



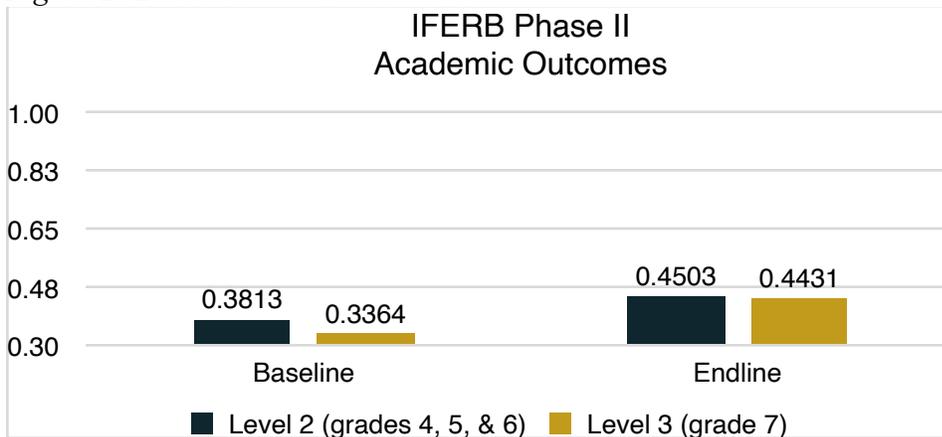
Attitudes towards learning	I set high expectations and communicate them to all students.	5.58	5.84
	I acknowledge positive behavior or work	5.98	6.00
	I redirect misbehavior by focusing on the expected behavior	5.66	5.82
	I actively listen to the things my students say to me.	5.75	6.05
	I redirect work by focusing on the expected learning outcomes.	5.62	5.82

Both teachers and Dignitas Staff observed an **increase in teacher capacity** as a result of participation in the IFERB program. During the Focus Group Discussions, teachers expressed excitement to gain new skills, notably the evaluation methods. *“I improved my critique of learners”* said one teacher. Another teacher said *“I could assess all types of learners, including those who were not great writers.”*

Student Learning Enhanced

Pre and post assessments were administered to learners to measure student learning after PBL. The same learners assessed at baseline were given the test at endline to establish the change in learner academic outcomes. Both levels recorded growth in academic outcome. Level 3 recorded higher growth compared to level 2. See Figure 1 below.

Figure 2: Learner academic outcomes



A key project outcome was enhancement of 21st century skills. Project evaluation found out that majority of learners had progressed to higher levels. While a major 67.97% of level 2 learners were rated at level one in creativity during baseline, only 34.74% were still at this level by endline evaluation while all the rest had progressed to higher levels.

None of the learners was rated at level 4 in Critical thinking at baseline. Nevertheless, 0.5% of them managed to get to level 4 at endline. See Figure 2 for more information.

Figure 3 confirms that level 3 were no different. A paltry 0.68% managed level 4 at baseline in both critical thinking and communication. However, these figures rose to 2.4% and 6.4% respectively. More details are found in Figure 3.

Figure 3: Change in level 2's 21st Century Skills

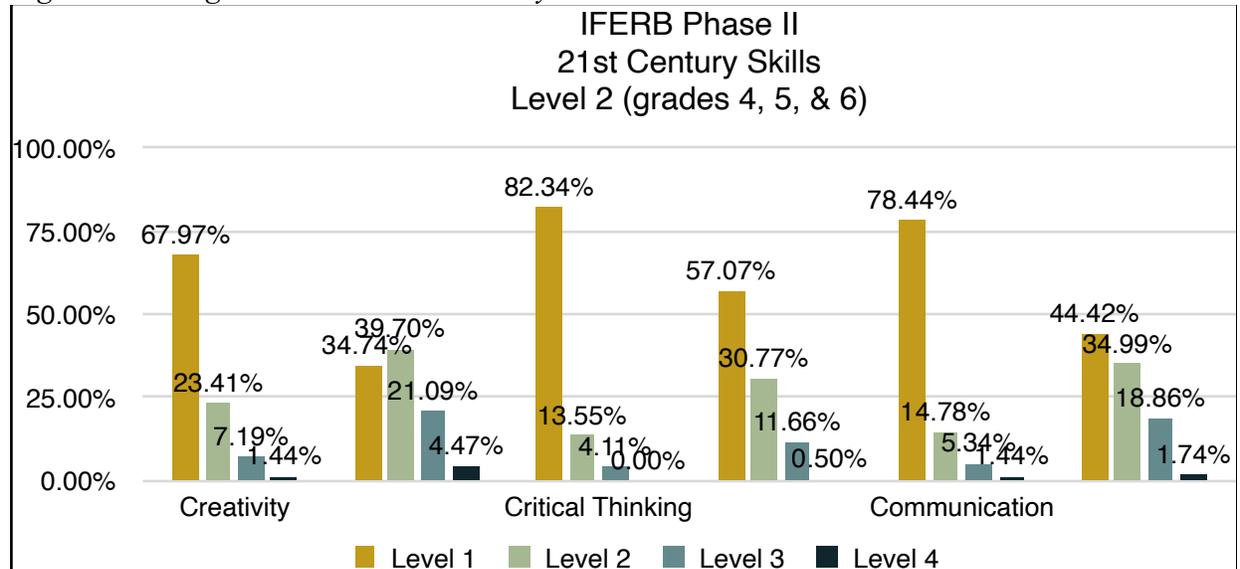
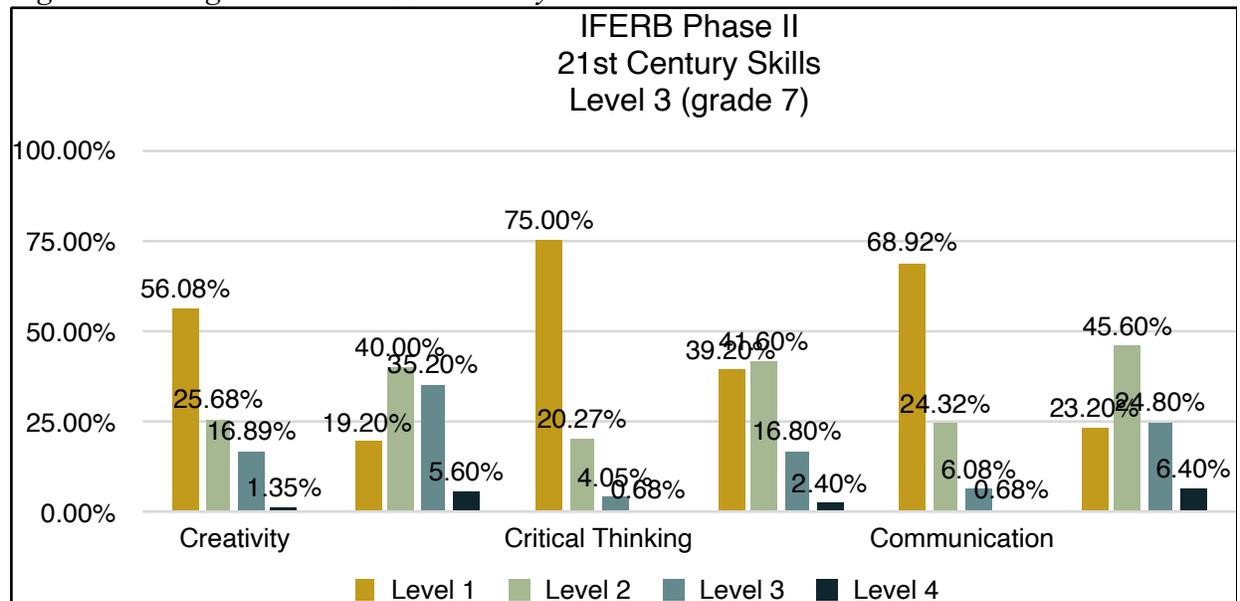


Figure 4: Change in level 3's 21st Century Skills



A key aspect of 21st century skills is the change in attitudes towards life aspirations. Data recorded in Table 13 reveals a general increase for both level 2 and 3 learners.



While 50.41% and 69.66% of level 2 and 3 learners agreed that they wanted to complete high school, it is worth noting that these figures increased to 57.07% and 78.4% respectively.

Table 13: Change in attitudes towards life aspirations

% of learners who strongly agree				
Statement	Baseline		Endline	
	Level 2 (grades 4, 5, & 6)	Level 3 (grade 7)	Level 2 (grades 4, 5, & 6)	Level 3 (grade 7)
I would like to finish elementary school.	42.83%	47.59%	45.66%	48.80%
I would like to complete middle school.	39.55%	51.72%	44.42%	53.60%
I would like to complete high school.	50.41%	69.66%	57.07%	78.40%
I would like to attend and complete college or university.	59.43%	81.38%	62.03%	80.00%
I am excited when I think about my future.	46.52%	55.17%	46.65%	52.00%

The final indicator studied is the change in attitudes towards learning. Unlike all others, this one did not increase. For level 2 learners, 60.66% liked learning new things at baseline but only 54.09% of them agreed with the same at end line. Level 3 learners were no different. Evidence gathered proved that 66.21% liked learning new things at baseline but this fell to 60% at endline. More details about this unique aspect are recorded in Table 14.



Table 14: Change in attitudes towards learning

% of learners who strongly agree				
Statement	Baseline		Endline	
	Level 2 (grades 4, 5, & 6)	Level 3 (grade 7)	Level 2 (grades 4, 5, & 6)	Level 3 (grade 7)
I like learning new things.	60.66%	66.21%	54.09%	60.00%
I look forward to going to school.	43.85%	61.38%	41.19%	59.20%
I can learn anywhere!	18.85%	16.55%	15.88%	17.60%
School is interesting.	52.66%	66.90%	49.63%	55.20%
I like being in school.	58.40%	63.45%	53.85%	51.20%

Focus Group Discussions with teachers, parents and learners also revealed that student learning was enhanced. All respondents felt strongly that students **learned more** with PBL than with traditional teaching methods. All parents felt that children remembered concepts with PBL, whereas with theory-based learning, they tended to forget their learning. One learner said *“I remember more with projects.”* and another said *“I learned a lot!”*

Several students commented that PBL was **practical**. The IFERB program *“connected learning to life and reality”* according to Dignitas Staff. One female student commented that she learned things that they did not usually learn in classrooms. Another stated *“I enjoyed learning about real things.”*

Teachers commented that the engagement of students and highly participatory nature of the program resulted in **cooperative learning**. One young learner said that he could *“help other learners who are struggling”*.

Teachers and staff noted an increase in **21st century skills**, particularly among learners who participated in the program. Teachers stated that oral communication greatly increased. One staff person stated that PBL promoted curiosity.

Additionally, **change in student mindsets towards learning** was another benefit mentioned by teachers and parents. Students became enthusiastic about and interested in learning and attending school according to both teachers and parents. Learners were *“looking forward to learning”* according to one teacher. Learners also reported this. One learner said *“it is fun to learn!”* *“I didn’t like coming to school before,”* said another. *“Students*



went from a fixed mindset to a growth mindset” said one female teacher. One Dignitas Staff attributed this to student-driven questions and learning. Students echoed this sentiment: “Practice makes perfect” said one girl; and “we can!” said another student. One parent said that PBL “widened his mind and he can now learn without the classroom”. “Even at home we can learn” said one student. IFERB had a positive impact on learner attitudes towards the future. One teacher stated “students realized the possibilities!”. All learners expressed desire to attend university. One learner said she was “confident about the future.” Another said “I can achieve my dreams!”

IV. Key Learnings

Involvement of parents:

It was noted that parents who had the chance to understand their role before the project started, supported the learners better. This came out from the learning circles discussion with the teachers who were implementing the projects.

Recruitment of teachers / schools:

While recruiting teachers, it would be great to orient an extra teacher concerning the projects who will replace any teacher in that particular school who may leave the school or can stand in for a teacher, should there be any eventualities during project implementation. This was something we learnt during the phase 2 implementation. One challenge we faced was implementing teachers transferring from their school in between terms, which left a school with less teachers to implement the project. We therefore learnt that having an extra teacher trained at the beginning would help fill this gap.

Teacher / facilitator training:

A pre-implementation session for teachers and facilitators is a critical stepping stone to successful project implementation. It offers an opportunity to walk together through the project overview, rationale and proposed implementation model. It orients the participants into the project and explains the target project outcomes, roles and responsibilities. Both teams leave the forum with agreed action areas and timelines.

Sustainability

Having experienced the alignment of projects to curriculum designs and classroom content, teachers have learnt to integrate projects thereby catalyzing uptake and sustainability.

For future programming, there is need to;



- Train teachers/project implementers in the selection, contextualization and development of projects to increase school buy-in and ensure projects selected complement learning and subjects at hand.
- Sensitize and involve parents more actively to ensure children are supported with project implementation even beyond school.
- Use model schools to showcase IFERB projects implementation and display learner work, including lesson planning.

Insights / lessons learnt:

IFERB is a very rich learning resource with lessons organized to flow sequentially. For reference, a learner would find it more convenient if the lessons were all recorded in a specific exercise book. They need an exercise book for every subject area. Where possible, leaders of learning are advised to request parents to buy 3 exercise books before the project begins.

Being the second phase, interactions with teachers showed that Project Based Learning is gradually being embraced among teachers and learners. Parents, teachers and learners also shared the same during the focus group discussions. However, schools are better equipped to support PBL than households. Besides availability of teaching staff, a school offers opportunities for peer- support which breeds more 21st century skills such as responsibility and leadership.

IFERB is hailed as highly versatile. Its adaptability to varying contexts and activities culminates in extending learning for many living among the marginalized. To a large extent, the availability of parents to support PBL was lacking. A specific objective targeting parents would have catalyzed more involvement.

With regard to the level of clarity of instructions reported on table 4, the evaluation found that about a quarter of the learners reported that they struggled. The evaluation limited itself to the numbers without finding out the factors/reasons for their struggle.

Recommendations:

Literacy and numeracy have been recognized as critical skills for 21st Century. EAA has integrated literacy and numeracy into the IFERB projects and it would be commendable for EAA to continue integrating these two competencies across all subject areas.

There is significant re-working of the projects to achieve contextualization. Besides aligning to the curriculum, customizing the language and length to make it user appropriate also took significant time. It would be prudent for Dignitas to advocate and educate her networks about the contextualized projects for expanded impact as well as offer training on how to select, contextualize and create projects.



There was unprecedented low support from schools during round four: An investigation into this should include teachers’ views shared at the end line evaluation, analysis of the role of the heads of institutions; role and capacity of classroom teachers; Organizational support and the effect of the shortened school term vis a vis the project implementation period.

With regard to the level of clarity of instructions reported, it is important that future implementation of the project considers investigating the factors/reasons for the learners’ struggle.

V. Appendices

Annex I: Summary of Projects

A summary table of all the projects implemented:

Round	Mathematics	English	Science
Round 1	Setting up a Store	Grandmother’s tale	Our house rules to keep Covid away
Round 2	P o p u l a t i o n Census	Design your own Comic book	Water is life
Round 3	Less is more	Write an issue letter	Why all the plastic?
Round 4	Our Big Earth	Make your own Poem	Growing up

Annex II: Links to the Project reports

Training materials developed for TOTs training and teachers learning circles:
<https://drive.google.com/drive/folders/1kvIoPxx38TPvBBkQIkAbZcZN0dlwR7ud>

End of Project Report: <https://docs.google.com/spreadsheets/d/1T898qiZ3Llj216f2wxCUT3GEwT190UCb/edit?rtpof=true#gid=1395028451>

Teacher Training Report: <https://docs.google.com/spreadsheets/d/17GHifOKy7DMYBVaStL8fqyZMMxph6Gdp/edit#gid=1056002606>

Learning Circle Report: https://docs.google.com/spreadsheets/d/1qX7HSGImInthGcasOKOTaGE-hsp1_3Ur/edit?rtpof=true#gid=1009453032

Annex III: List of implementing schools

School	School
1. Affinity learning centre	1. Kid's Empowerment Centre
2. Angels of mercy	2. Lenana Junieur Community School

3. Bethany Education Centre	3. Lucky Junior School
4. Blessed Heart Centre	4. Faith Junieur Academy
5. Brightburn Education Centre	5. Pecular Community Centre
6. Chemichemi ya tumaini	6. Pendo D
7. Daystar Junior Educational Centre	7. Raven Transform Education Centre
8. Dr. Stanko Education Centre	8. Rehema Education Centre
9. Excel school	9. Revival Sanctuary School
10. Faulu Educational Centre	10. Takrima
11. FPFK Philadelphia School	11. Tender Heart Educational Centre
12. The Glorious Educational Centre	12. The Ark Community Educational Center
13. Good Hope school	13. Vision Achievers Preparatory School
14. Green Light Educational Centre	14. Wama Education Centre
15. Hollywood Glory Education Centre	15. Zeal covenant

Annex IV: Photographic evidence of implementation



Grade 4 learners of Brightburn Junior school display the outcome of their science lesson '*Water is Life*'.



Faith Junior School, a Grade 4 learner conducts her assignment during the Mathematics Project, '*Setting up your own Store*'.



A comic piece designed by a grade 5, Faith Junior School learner during their English project, '*Design your own Comic Book*'.

Annex V: New Science Project Growing up

Please find the growing up project in [this folder](#)