Education 2.0

Chronicles of Technological and Cultural Change in Egypt

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14. Discovery Education and Private Sector Partnerships: Interview with Emily Waters

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Abstract

When the Education 2.0 reform was initiated in 2017, Discovery Education worked as a partner with the Ministry of Education and Technical Education for textbooks, Teacher's Guides, digital content, and teacher professional development. Emily Waters was involved at all stages of the work. She describes the fast-paced reform efforts to build teams with Egyptian counterparts and deliver books. During the COVID-19 pandemic, her team also supported the Ministry with online and blended learning solutions. She reflects on the challenges, and how being involved in such an historic reform brought her a sense of purpose and a deep appreciation for her Egyptian colleagues.

Keywords

blended learning, curriculum development, digital resources, discovery education, early childhood, interdisciplinary, multidisciplinary, professional development

1 The interview took place on 7 December 2020 via Zoom. This interview was done as part of an education research training and collaboration between the Education 2.0 Research and Documentation Project led by Linda Herrera, and a group of MEd students in 2020 from the Harvard Graduate School of Education (HGSE). That group included Nariman Moustafa, Ebtehal Elghamrawy, Claire Hao, and Katherine King.

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1. A Career at Discovery Education

EE How did you get involved with the company Discovery Education?

EW[2] I have been with Discovery Education since 2009. It is the first job I got straight out of university. I was working in the Silver Spring, Maryland office as their customer support team member. I fell in love with the company, especially the mission and vision of having digital resources in the classroom to help students learn. I had multiple positions within Discovery as I was trying to find my area of interest. I worked on their content team but felt it was more of an individual role, and I like working with people. I switched over to our textbook team which launched the first digital textbook in the US. We were working with school districts across the country to implement digital resources and help Professional Development (PD) specialists, teachers, curriculum departments, parents and students learn how to use digital resources. I was in that position for a couple years when my husband who was born in Ethiopia and raised in the US, found an opportunity to work and live in Ethiopia. We moved across the pond, if you will, to Africa, and I had to leave Discovery. I was really nervous about not having any work or finding career opportunities in Ethiopia.

EE When did you become involved with the education reform work in Egypt? Did that happen after you moved to Ethiopia?

EW In November 2015, the company signed a deal with the Specialized Presidential Council for Education and Scientific Research for the Egyptian Knowledge Bank (EKB) (launched in January 2016). The leadership team at Discovery Education reached out to me to be project manager on that project. I was on the content team responsible for finding and creating content for the EKB. I had also worked with our professional development teams in the US and knew a lot of the people that we were pulling together to work on the EKB. I was living

2 Emily Waters serves as International Senior Project Director (2019 to present as of 2025) at Discovery Education International. See her LinkedIn profile for more information: https://www.linkedin.com/in/emily-waters.

in Ethiopia, which is the same time zone as Egypt, so it was a good fit. I was really excited about the role.[3]

Since then, we have grown from basically a team of two people to currently a team of twenty in the international offices, with forty-five local team members in Egypt. Thanks to the success of the Egypt project, we have expanded into several other countries across the world, and our reach is way beyond where we were five or six years ago. That is a little bit about the history of my career at Discovery and how I became involved in Egypt. I am very fortunate and very thankful. The stars aligned, especially with my career, so it has been great.

2. Providing Content for the Egyptian Knowledge Bank

EE The EKB started with serving university students and post-graduate researchers. It later expanded to include KG to Grade 12. Can you describe Discovery Education's contribution to the K-12 portal of the EKB?

EW The Egyptian Knowledge Bank is the world's largest digital library. I have never seen anything like it. It pulls together world-class publishers and content from around the world to provide access to information and learning materials for the whole country. Every citizen can have access to it. The research departments at universities or just anyone who has a love for learning can access books, resources, and other materials. Our special area was for K-12. The presidential Specialized Councils (overseeing the EKB) needed to have publishers that addressed the schools, the students, teachers, and parents. We did a lot of focus groups and interviews with teachers and made many school visits to understand how these resources were going to be used. We found that teachers were only going to use resources that aligned to the national curriculum and were approved by the Ministry.

3 See the Discovery Education website page about the Egyptian Knowledge Bank. It states that 'In late 2015, Discovery Education was selected by the government of Egypt as a primary partner for providing dynamic Science, Technology, Engineering, and Maths (STEM) focused educational media content to the Egyptian Knowledge Bank (EKB) for primary, preparatory and secondary school students and teachers. […] Available to 23 million teachers and students, the Discovery Education – EKB partnership spans across the whole of Egypt' (https://web.archive.org/web/20171020014034/http://en.discoveryeducation.ekb.eg/about).

We have been providing content for the K-12 students and teachers in three different forms. The first is a searchable database of content. There are currently about 14,000 English assets and 14,000 Arabic assets making for 28,000 resources total across K-12 science and math. The second is WebEd TV for streaming. This is an extracurricular resource for students, teachers, and parents to use in the areas of science, math, STEM (Science, Technology, Engineering, and Mathematics), career skills, and world topics. It generates three hours of content a day, five days a week, released one hour at a time for each of the grade ranges (primary, middle school, and high school). We release that content every school day of the year, hoping that teachers and students can access it in the classroom for science and Math lessons, or outside the classroom for their own learning. We also launched 'Summer Adventures' with WebTV to use over the summer or during the winter while students review and refresh for their exams.

We worked with Dr. Tarek to come up with the third bucket of products for the EKB through Curriculum Connects. This product matches our best content to the national curriculum. Initially, we were working with the old curriculum 1.0. Any student or teacher, instead of going into the EKB and searching for something like cells or cell theory and finding millions of resources, could now go to Curriculum Connects inside the EKB and be able to search for their lesson. They would see the best content from Discovery Education associated with that subject. So, we provide three services in digital resources: the searchable database; Web TV; and Curriculum Connects.

EW How did teachers get training on all this new content and technology?

EW We partnered with the Specialized Council to do professional development for a pilot of 200 schools in the greater Cairo area on how to maximize the use of the EKB in the classroom, learn about STEM, and some best practices and 21st century skills. Those activities took place during the first two years of the EKB (2016-2017). And then, Dr. Tarek became the Minister of Education and took his big initiatives over to the Ministry of Education and Technical Education. He was planning to roll out a new Education 2.0 curriculum starting with the early grades KG1, KG2, and Grade 1, and then each year afterwards, roll out the new curriculum and content onwards. We shared with Dr. Tarek what

we have done in the States. Based on our track record, he thought we would be a great fit to support the curriculum content and professional development for Education 2.0 in those early grades. So, that is the evolution from where we were back in 2015 until 2018 with the start of the new education system.[4]

3. Working in the Egyptian Context

LH Some people think that this reform brings education content from the US and just transplants it into Egypt in a copy-paste way. Can you explain the process of adaptation of curriculum frameworks and books to the Egyptian context?

EW We do not just work in the US. As a company, we are specialized in creating digital content as core curricular resources all over the world. We also do that in the UK with our coding products, in Chile, Egypt, and other countries. Our curriculum team is equipped to understand international best practices. We were able to pull together a team led by Marty Creel, our Chief Academic Officer.[5] We have experts of science and math and multi-disciplinary learning to work with the Ministry of Education in their curriculum department. They reviewed the new Education 2.0 framework to make sure it met international best practices in terms of rigor, focus, coherency, and clarity, and met the Ministry's goals for a new education system 2.0. The framework was checked against certain criteria, like would it allow students to score highly on the international assessments PISA (Programme for International Student Assessment), TIMSS (Trends in International Mathematics and Science Study), or PIRLS (Progress in International Reading Literacy Study)? We went

4 According to the Education Sector Plan of 2023, 'The digital illiteracy of most teachers is one of the most important bottlenecks hindering the efficient integration of technology to facilitate the educational process and increase its competitiveness. The actual use of computers appears to be limited: 62% of grade 8 maths teachers and 47% of grade 8 science teachers never or rarely used a computer to support learning during their lessons. In 2019, only 36% of preparatory schools used an online learning management system to support learning while 67% provided access to digital books. Concerning students, among grade 8 students only 39% had access to computers during maths lessons and 58% during science lessons' (MOETE 2023: 46).

5 For more information on Marty Creel, see his LinkedIn page: https://www.linkedin.com/in/martin-creel-9320b768

through and reviewed each standard and learning objective across the early grades from KG1 to Grade 3 to make sure it had that progression. We provided recommendations to the Ministry and Dr. Nawal Shalaby's team at the CCIMD (Center for Curriculum and Instructional Materials Development)(see Chapter 13 in this volume). We also held a series of workshops with the CCIMD department called, 'Curriculum Academies' where we came together to work on the curriculum framework to meet those international best practices. That is the foundation of how we bring US international experience from Discovery Education and marry it with the local expertise and institutions.

EE To be clear, does this mean that Egypt's curriculum framework is not modeled on another country's framework?

EW No, it is completely unique. In the beginning, we analyzed the curriculums of Australia, Japan, Finland, Singapore, the United States, and the International Baccalaureate (IB) to see what those curriculums all have in common that allow their students to rank highly on the international assessments. Then we looked at where Egypt wants to go with building a high-quality curriculum. We helped to support the curriculum and professional development of the CCIMD team, but it is entirely their curriculum.

EE What was the timeframe to get the new curriculum up and running?

EW The curriculum work started in December 2017. In the first year my understanding is that Dr. Tarek had to do a lot of the selling. He was going through a lot of these political policy changes. During this time, we were talking about the framework development and looking at international standards. We started the book writing in March of 2018 and had until August 2018 to write the twelve books (needed for KG1, KG2, and Grade 1). It usually takes about eighteen months for the whole development process for our blended model of a book and digital resource. And we did that in four months.

We finished twelve books. We started with math and multidisciplinary books for the three grades in English, and then we had to translate them all into Arabic. That translation part was also a huge process because we had to do the page layouts and just make sure that the translation was correct and accurate. It was a very intense time. But the beauty of it was

that everyone in the team was very passionate about the work. Everyone came together to really support this mission and this initiative in a way that we have never seen before. Everyone was willing to make the same sacrifices and work however many long hard hours we had to work, from our chief academic officer all the way through to me in the middle of CCIMD, to Dr. Nawal's whole team and our local team as well. So, it was a very intense time.

EE How did you personally deal with the time crunch?

EW When I flew from the States to Ethiopia, I got a call within twelve hours of landing that I should be in Egypt NOW because we needed to finalize these books. I didn't even spend one night in Ethiopia. I flew to Egypt immediately and went straight to Dr. Nawal's office. I stayed with her whole team for days to try and get these books finalized and finished. When we finally finished, I collapsed and slept for a few days (laughs). Then we had to get back up and go straight back to work on Grade 2. It was very intense.

LH Discovery Education and the CCIMD have very different institutional cultures and mandates. One is a private education company based in the US, and the other is a government curriculum center with Egyptian civil servants. How was the working relationship between the two?

EW It was a challenge at first but then we started to really build the relationship. We learned a lot working with the CCIMD and its director Dr. Nawal Shalaby, who is phenomenal. She is truly a leader. She has a huge workload and gets requests all the time from Dr. Tarek. I do not know how she gets everyone together and gets all the work done. She is like the military (laughs). We made sure that the members of the Discovery team working with the CCIMD had international experience and an open mindset. We did not want to come in and say, 'You are doing this wrong' or 'This is not up to international best practice'. Through a series of workshops, we worked with the team to explain the 'why' and built consensus.

There was a lot of back and forth and need to explain and understand new concepts. For instance, we faced challenges in trying to get them to understand that in early childhood students can see numbers and understand letters because they see them everywhere around them.

We also pushed back against packing the curriculum, something that happens not only in Egypt but all over the world. There is a tendency to want to cram everything in and try to teach everything to the students. We wanted to make sure that the CCIMD would be able to continue the work and build their own skills and expertise in the future.

I have heard Dr. Nawal tell them they have to push boundaries to be better than they were before. Now (December 2020) we are working with the CCIMD on Grades 4, 5, and 6 and it is a much smoother process. Every year we have gotten better, and we have moved the delivery timetable back months at a time. The first year, we delivered the Term Two books for review in early December, a time when they needed to be printed. Now, this year (2020) we delivered Grade 3 Term Two books for review in April. It is just a much, much better process. We have more breathing space. But the Minister is going to take any opportunity that he can to give us more work if we have more time to do things (laughs).

EE The new curriculum calls for a multidisciplinary and Life Skills approach. How was this achieved in the new books?

EW The great thing is that the Minister himself wanted a multidisciplinary curriculum. Historically, science and social studies was not taught until Grade 4. We suggested bringing the multidisciplinary from the beginning. With a multidisciplinary approach, there is a lot of project-based and hands-on learning. Students can go deep into the subject areas for a lesson around science or the arts, music, social studies, and math. Then they come and pull that all together in what is called a 'share'. The model within our books is, 'discover, learn, share'. Life skills are woven throughout through the four Cs: communication, creativity, collaboration, and critical thinking. According to the Ministry, these are the skills you need to become the ideal national Egyptian citizen.

EE Up until Grade 3 there are multidisciplinary books and in Grade 4 there are subject specific books. Can you explain this?

EW Grade 4 shifts from multidisciplinary to subject specific. We are now focused on science and math. Other publishers (National Geographic, Nahdet Misr, York Press) are focused on social studies and other subject areas like Career Skills, English, Arabic, and ICT. Interdisciplinary projects pull in and tie together subjects across all the courses of the year. To complete them, students have to use the knowledge and skills that they have learned within the different subjects.

EE What are the main things you are working on this year?

EW We started with Grade 4 which is a shift from the multidisciplinary approach to a subject specific approach. Grade 4 is also the time when the model for blended learning begins. Before, the digital content was just supplemental. Videos or other digital resources could be accessed on the Egyptian Knowledge Bank. Now, the Ministry is looking at a blended approach which entails having a lot of digital resources and infrastructure in place from Grade 4. The work is still quite intense because we must think about it in a different way. Building a digital product is even more time consuming than building in print. We have to produce videos and interactive features and string them all together, create this platform where there is a whole level of user interface and user experience. And we are talking about young kids and teachers who may not have proficient skills in using computers or technology.

4. Professional Development of Teachers and Supervisors

EE With all these changes, how could teachers across Egypt, with all their differences in terms of teaching quality and resources, be prepared? How did you address that?

EW Once we finished the outlines of the books, our Professional Development (PD) team started to write the content for master trainers. That was July 2018. We engaged the Mudiriya Facilitator Officers (MFOs) and the Idara Facilitator Officers (DFOs) who worked on scheduling and other logistics.[6] We had to train 75,000 teachers within this first year and do the training while we were still writing the content. We were hoping to have the Teacher's Guide ready to print for this first round of trainings, but we could not do that, so we had to have snippets of the Teacher's Guide to use in the professional development training sessions. We started the training in August 2018 after the Eid. We got all of the master trainers to come to the Sixth of October Education City. Our teams literally had to stay there three weeks straight to train different waves of the master trainers because they only have a certain amount of capacity.

6 Egypt is composed of twenty-seven governorates (*muhafazat*). A Mudirya is a Directorate, and an Idara is a district level educational administrative zone within the district.

We used three different approaches. One, we always kept it in mind that there are differences in teacher quality and access to resources across the country. We made sure that the content was equitable, and the resources were equitable. You do not need big lab equipment or anything like that. A lot of activities involve doing something outdoors or using very basic skills in the classroom. The second thing was introducing the Teacher's Guide, which is separate from the student book. It is designed to teach the teachers on how to implement the content and the curriculum in a literally step-by-step way. It explains the unit overview, theme, and has a step-by-step approach to lessons. It is almost a script of implementing the lesson. We came up with something called, 'Teacher Says', 'Teacher Do'. We made sure that the Teacher's Guide was comprehensive and anyone who read through it would be able to understand how to implement the lesson.

The third and most important thing is that we had a local team to conduct trainings with all teachers across the entire country. We implemented a cascade model of professional development. We released an announcement saying, 'Call to arms! We are looking for 1000s of teachers who are interested in being the beacons for the new curriculum'. Within two weeks, 10,000 teachers applied. I mean, it was crazy. Our local team sifted through the applications. We had a set of criteria to make sure that these teachers were high-willing and high-able. We selected 5,000 master trainers and provided the list to the Ministry. Our local team in Egypt who have been with us since the time of our work with the EKB, were really familiar with Discovery Education, STEM, multi-disciplinary, and our philosophy. They worked alongside us while we were doing the curriculum and the content. They fully understood the new curriculum and how to talk about it. Then we developed a PD program that had face-to-face sessions and digital sessions.

EE How did you organize the training sessions for the entire country?

EW These master trainers came into Cairo, all 5000 of them. They stayed several days for their training, and then went back to their districts (Idaras) and worked with the local ministry offices there. We had MFOs (Mudiria Facilitator Officers) and DFOs (Idara Facilitator Officers)to arrange all the trainings at the local level. They had to schedule rooms and release letters. We had to provide the materials like the Teacher's Guides and ship them across the country so that everyone

had everything they needed to implement the PD. They would then go online to our Professional Learning Journey (PLJ) platform and show how they practiced or connected with other educators. Everyone along the way was absolutely critical to making sure the system worked. Without one person in the whole process, it would have fallen apart. We also trained the supervisors and modified their role to 'mentors.'

EE Were the trainings for the supervisors/mentors different from the trainings for the teachers?

EW Let me take a step back. The Ministry has the curriculum department (CCIMD), and they have subject consultants. The curriculum department sets the framework. The subject consultants implement the curriculum. The subject consultants tell the supervisors, who report to them in the hierarchy, this is your checklist of when things should be taught. When supervisors visit schools, they check to make sure that teachers are teaching a specific thing at a certain time with such and such resources. We wanted supervisors to play a different role, not just come in with a checklist and leave. Throughout the PD program, we engaged supervisors to serve as 'mentors'. We taught them about how to be a mentor, how to coach, how to ask the right questions, how to guide and support their teachers. We also made sure that we did training in the summer to prepare them before the school year started.

EE Was someone at the Ministry managing all this professional development (PD) because there were other PD trainings at the time. Were you working in collaboration with TeachersFirst, Imagine Education, and the Japanese schools who were also actively involved in PD?

EW At the time, the Deputy Minister of Teacher Affairs Mohamed Omar was coordinating the different efforts to make sure we were all aligned. The Mudiriya and Idara facilitators coordinated the scheduling for the different types of trainings. The Ministry's Teachers First Foundation was also part of the initiative with the specialized councils.[7] Every

7 In 2015, the President's Specialized Council for Education and Scientific Research partnered with Imagine Education (UK) Ltd to implement the Teachers First (TF) Program to provide teacher professional development trainings in all governorates across Egypt on learning in a knowledge society. Among other things, it was supposed to provide training, online and in-person, on the Egyptian Knowledge Bank. Using the cascade model, the Open University based the training in Egypt on the UNESCO Competency Framework for Teachers which allows each school to describe what a

teacher across the country was trained through them on foundational skills such as classroom management, assessment, lesson planning, and creating communities of practice. We then made sure together with the Ministry and Teachers First that we were enhancing what these teachers had already been through. We looked at their framework for professional development and developed a framework specific to the curriculum. We called it a Teachers First curriculum. We also trained on the Tokkatsu model at the request of the Japanese Embassy.[8] Our local team completely supported the Ministry's request to review their local content and make sure we were all aligned around the new curriculum and the new Education 2.0 system. It was a real collaboration to get everyone aligned on this new curriculum.

EE How many waves did it take to train the master trainers?

EW Maybe five waves, because the PD was a series of three to four days each at the Education City. I think we spent five weeks in total for all the master trainers. Instead of training being the standard 8:00 a.m. to 2:00 p.m. per day, we were able to do night sessions. This way they could still learn and get the content, and we could cut the amount of time they stayed at the Education City which saved the Ministry money.

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twenty-first-century, digitally literate teacher and student look like. It also facilitates a peer-to-peer support system so the teacher can develop skills of self-reflection that will lead to change at the classroom level. According to the Teachers First LinkedIn page, 'Each teacher is entitled to 4 days of face-to-face intervention over 3 months and continuous support from a national team of mentors. Teachers work in communities of practice in their school and virtually through the Teachers First collaboration website, which is available in Arabic and English. The system provides reports to show patterns of practice for both individuals and groups' https://eg.linkedin.com/company/teachersfirst. See also the Teachers First YouTube channel at https://www.youtube.com/@teachersfirst6531/videos

8 Tokkatsu refers to the Japanese educational model of holistic education. The Japanese Schools Project, is a joint initiative between Egypt's Ministry of Education and Technical Education and the government of Japan which started in the 2017/2018 school year with plans for forty-five schools distributed throughout the country. Tokkatsu activities were being implemented as extra-curricular activities 'To develop the child's skills and improve his behavior through (dialogue, discussion, problem solving, innovation, respect, and discipline)'. See the State Information Service of the Government of the Arab Republic of Egypt: https://www.sis.gov.eg/Story/163545/The-Egyptian-Japanese-School-Experience?lang=en-us

In the meantime, the MFOs and IFOs were on the ground. They started to get all their teachers and master trainers organized. We basically paired up two master trainers to a group of about twenty to twenty-five teachers. We built that community of practice and expanded on the Teachers First model. We wanted to make sure that they were paired because it is easier to train when you are supporting each other in the classroom. Also, the teachers have two people to go to if they have questions after the training session. They would basically do the same three- to five-day training period back home. It was just a constant flow of teachers getting trained over a certain period until the school year started.

They practiced and applied what they learned through the training and also using the Teacher's Guide. They would upload evidence to the PLJ (Professional Learning Journey) platform to demonstrate this progression of their learning. The supervisor/mentor would come in at certain points throughout the term to do classroom observations and check-in with the teacher to provide advice, support, or affirmation. Our local team would also go out to help support the supervisors.

We also did community events with our local team out in the field to get the parents together and have them learn what their students were doing in the classrooms. We wanted them to know about the shared activities and ask questions. For instance, at the end of primary one the students created an 'all about me' book of a couple pages. They put it up on the classroom walls. There is a gallery walk that happens. We invited parents to visit the schools and see these shared activities and ask questions. The teachers, supervisors, and local Mudiriya ministers were all there. So, everyone involved in the process was there to ask and answer questions.

Each term we did that whole cycle of training in person, cascading out to the teachers, having supervisors support the process through mentoring, our local team going out and giving that extra support, getting the community involved and having teachers upload everything to the PLJ to see how things are going. You got points based on what you did. And that is how teachers progressed in their learning from the start of the school year to the end of the school year on Education 2.0.

So, that is how it started. And now we have built a great foundation of the teachers and the master trainers. We are now in the third year. This year we trained the new Grade 1 teachers because we have a new wave of teachers not familiar with Education 2.0. It is this whole ecosystem and all parts dependent on each other.

EE Did you get feedback from the communities?

EW Yes, we heard stories about how the students were teaching their parents to read, which was pretty incredible. We also heard that students were making connections to their community based on some classroom activities. For instance, students learn about baking bread in the classroom. Then we have them write a letter about why it is so important to have a baker in the community and ask them to share it with the baker. There are all these pictures of local bakers with the kids' postcards with 'Thank You'. I mean, it is just incredible. And by the way, they also learn about how the bread you eat depends on an entire global food chain (see Fig. 14.1).

Fig. 14.1 A lesson explaining the global food chain needed to produce a loaf of bread. Grade 1, Term 2 Discovery textbook, Ministry of Education and Technical Education, 2022.

EE The Ministry is currently working on a national Teacher Professional Development framework. What is Discovery's role in that?

EW USAID is leading that initiative.[9] We have been in conversations with USAID about what we have done in the past, and how we have implemented it so that they can learn from the work we have done to inform their thoughts on a national framework for teachers. But in the meantime, this is our third year of delivery of PD. And because of the COVID-19 pandemic, and also because of the Ministry's vision to provide teacher training in a more online asynchronous way, we have shifted the delivery to be virtual. We have delivered through the virtual conference facilities and webinars instead of face-to-face like we used to. We bring together the master trainers virtually. We also emphasize getting teachers on to their professional learning journey at several points of the year. We have a whole production side with our local team doing videos and cutting those segments into digital format. Teachers can now access a library on the PLJ as refresher content, in addition to the webinars that they get throughout the school year. They are still expected to upload evidence of their work and connect with their peers and supervisors. In the beginning of November 2020, we trained 96,000 teachers virtually.

EE Do you provide incentives for teachers and supervisors to attend the PD trainings?

EW It is important to incentivize them in a way that makes them feel important. We do certificates at the end of the year. We recognize them and their efforts. Dr. Tarek held an event for them and for Dr. Nawal and her team because they have gone through so much. You need to find the right people and then reward or recognize them in some way.

9 USAID's Teach for Tomorrow project was implemented by the Education Development Center, Inc. (EDC). As stated on the USAID webpage, 'USAID supports the Ministry of Education and Technical Education to design, deliver, and monitor its teacher professional development system. Partnering with the Ministry, this program co-designed Egypt's first teacher standards that define the skills and competencies that all primary-grade teachers need to succeed. The program is also developing a teacher certification and licensure model and an incentive structure that rewards teachers based on their performance' (see https://web.archive.org/web/20250116142420/https://www.usaid.gov/egypt/basic-education). The project expanded to include school leaders and supervisors and to support the Ministry's ICT Strategy. For full disclosure, Linda Herrera served as an international advisor on this project from 2021-2023.

EE You are working with over 90,000 teachers all over the country. How do you keep track of all the outputs and impacts?

EW We are doing this based on the Ministry's request and guidance. We do pre-assessments or pre-questionnaires before a new group of teachers come in, and before every training session. Then they go through the training session and get a post-assessment. We do all that collection digitally through the questionnaires and then the progression of those points on the PLJ. They upload things to the PLJ and there is an algorithm. That is really where we get a lot of the evidence of the teachers' progression. They also have peer-to-peer points and supervisor points to be able to move from one objective of mastery to the next objective which goes deeper into that skillset. It is a progression that goes from engaged to embed to enhance, so it is kind of like beginner to intermediate and then to advanced, but that is throughout the whole school year. With the new digital delivery method, we are excited to see how much more data we can collect and gather. And we also have done focus groups, which have been very important, especially on the product side of things, to make sure that the resources we are providing are relevant. The supervisors, with their tools as mentors and coaches, upload their school visit reports. We collect all of that and when our local team goes out, they also do some observation forms and school visit reports. That is how we are able to collect a lot of the monitoring and evaluation of the program. We are always refining, modifying, and adapting it.

5. Life Lessons from Egypt

LH The team at Discovery Education has achieved a lot, but there must have been some hard challenges along the way. Do you have any stories of how you managed the challenges?

EW I have always wished that I had a GoPro on my head the whole time, there have been so many stories. I'll share one with you that is really funny. Cairo has a big ICT fair and in 2019, the Ministry was showcasing all the publishers. Every publisher had a booth. The President was scheduled to make a specific stop at the Discovery Education, York Press, and Pearson National Assessments booths. Our local project lead and I got up early to set up the booth. We had to go all the way to the venue, we reached the parking lot, got on a bus, reached the gate, and

went to go through security. I had my laptop with me and was told that no laptops are allowed. I had to go all the way back and drop off my laptop and come all the way back. Then we realized we did not have the keys to get into our booth with all the books. We did not know it would be locked. So, we are scrambling because there is no display, and the President would be coming to our booth. We needed to showcase all our stuff. We needed to break into our own booth, but we could not figure out how to do it. And as we stood there I said, alright, it is okay, we will just talk about our materials. We will be the shining point of our booth. Then we looked up and realized the booth does not have a roof. My colleague literally jumped over the roof and got into our booth and started throwing the books over to me, like five minutes before the President came by. We managed to put them all up on display. No one would have known anything out of the ordinary happened except for the two of us and a few people nearby who were watching the whole commotion. But that is an example of every single instance of our work. It is always last minute, just in time, scrambling to get it done, figuring it out, and then, it works, it is fine, it is like, perfect. I have so many stories that are like that. This work would not be as fun, I do not think, if I did not have these challenges along the way which helped me learn and grow—with myself and with the work (see Fig. 14.2).

Fig. 14.2 Emily Waters presenting the first three Education 2.0 'Discover books' for KG1, KG2, and Grade 1, Cairo, 2018. Egyptian Knowledge Bank Facebook page, https://www.facebook.com/photo/?fbid=774633686213707&set=pcb.774634782880264

LH What have you learned from your years of working in Egypt?

EW With this work I was in the trenches. I was really in the trenches. I had mentioned to Dr. Tarek once that I have learned so much about life. I have this analogy that life takes twists and turns like the streets of Cairo, and I have learned how to master them. I think because I lived in Ethiopia and converted to Islam, I am aware of different cultures. A reason why our work has been so successful is that we did not lessen our quality because of cultural challenges. We kept pushing for high quality because we know that is what Dr. Tarek wants, and that is what he is striving for. He wants to be ranked as a country that has the best curriculum, the best teachers who teach the curriculum, students who graduate and will be able to be successful in the local or international context. I always imagine Dr. Tarek like this character from the movies, this mastermind with this clear board writing out all these algorithms and things. It is all just this beautiful masterpiece that somehow works. It is very serious work and sometimes just having a smile is the best thing to do. We know we are all in it for the same purpose. The work that I have been through with Dr. Deena, Dr. Nawal, Nelly, I mean, this is never leaving me. I have a deep love and appreciation for them and for the team because of what we have been through together, no matter our differences. I feel that we are on the same team, we are all in this together.

6. Bibliography

Ministry of Education and Technical Education (MOETE). 2023. 'The Arab Republic of Egypt Education Sector Plan 2023-2027', https://www.globalpartnership.org/node/document/download?file=document/file/2023-09-education-sector-plan-2023-2027-egypt.pdf

7. Companion Video

Video 14.1 Emily Waters: 'Discovery Education in Egypt', Education 2.0 Research and Documentation Project, 7 December 2020, YouTube, https://www.youtube.com/watch?v=PE4a3L2BDxU