

Christina Boateng

► Increasing teachers' technological skills with a nationwide project

Christina Boateng, Senior Lecturer at the University of Cape Coast, and Julia Olesen, senior technical adviser and project manager at the German Office for International Cooperation (GOVET) at the Federal Institute for Vocational Education and Training (BIBB) in Germany, reflect on the impact of the COVID-19 pandemic on Technical Vocational Education and Training (TVET) in Ghana and on how digital competences of training personnel can be increased.

Julia Olesen (GOVET): Dr. Christina Boateng, you are a professor teaching at the University of Cape Coast (UCC) in Ghana and the coordinator of the UNESCO–UNEVOC Centre at UCC. In our series of bilateral workshops on the impact of the COVID-19 pandemic on Vocational Education and Training,¹ you have already presented some insights during our workshop with Ghana in April 2020. Looking at Ghana's TVET system and how it was affected by the COVID-19 pandemic, what were the short-term impacts?

Dr. Christina Boateng (University of Cape Coast): One of the most obvious short-term impacts was the loss of learning hours. In Ghana, there was a total shutdown of schools from March to December 2020. This reduction of learning hours has an impact on the progress of students, obviously. Another impact in TVET was the disruption of work-based learning or what we usually call "on the job training". Because of social distancing and other protocols that were in force, companies would not take on students, as many of them had to close down completely or run shift systems. Some students also work outside from the classroom on part-time; this also came to a complete halt. Students who were supposed to do industrial attachments or workplace-experience-learning had lost that opportunity.

1 Refer to <https://www.govet.international/de/137780.php> (Retrieved on 22.11.2021) (in German).

Julia Olesen: Did this also affect the informal sector and apprenticeships?

Christina Boateng: Yes, indeed. In larger cities, there were complete lockdowns for several weeks. Therefore, students lost hours and days of training. Apprenticeships, trainings in the informal sector, are based on the business of the Master Craft Person who is instructing the student or apprentice. If there was no business activity, it meant there was not much to learn for students. When it comes to apprenticeships in Ghana, one of the big sectors or industries engaged in informal training is the events and entertainment sector. However, as everywhere, the events organization and hospitality industry were totally shut down and are still under restrictions. During the shutdown, there was no business and hence no training in that area. One particular area where usually a lot of training takes place is garment production and tailoring; it was really affected. There was no work in that area as the whole sector was on hold as a result of the restrictions.

Julia Olesen: How did trainers and students maintain contact during the shutdown?

Christina Boateng: When schools were closed, trainers found other means of communication and maintaining the contact with students. Many of them resorted to WhatsApp; it was the most popular form of communication with students. Trainers and teachers would send either text messages or record information in audio format. There was a learning TV station broadcasting on national TV by the government, but there was no specific offers on TVET and rather focusing on general education, such as literacy, mathematics, language, sciences, and physics. But nothing specifically for TVET. It was up to the individual institutions and teachers to find the best way to engage with the students. I think there was a lot of pressure on trainers to find ways and means of maintaining contact with their students even if it meant having to learn new skills.

Julia Olesen: How is the situation today, mid of 2021?

Christina Boateng: The situation has improved a lot: our schools are back to face-to-face sessions, observing hygiene and safety protocols. In basic, secondary education, and TVET, classes are usually large, consisting of 40-50 students. But now classrooms had to be reorganized in order to ensure a one meter distance between all students. Another problem is that now teachers have to work extra hours: due to the hygiene and safety protocols, classes may only have 25 students, but if the class size is usually 40 to 50 students, the teachers are expected to teach twice, resulting in extra hours for them.

So, that is the situation right now. At the same time, as we have also introduced our project, teachers and students are adapting to new forms of learning and teaching if their facilities allow it. It has become easier to manage larger numbers of students with digital support. Many of them are also using technology to try and recover some of the lost hours.

Julia Olesen: You are coordinating a collaborative project between UNESCO–UNEVOC and UCC to strengthen the capacity of TVET instructors in Ghana in the use of technology-supported teaching learning strategies. Where do you currently stand in this project and what are the major activities?

Christina Boateng: Yes. I had the opportunity to participate in the UNESCO–UNEVOC leadership programme in 2018. In 2020, a call came to alumni of the programme to propose collaborative projects for funding. When I observed that the learning TV had nothing specific on TVET, I decided I would propose something to enable TVET trainers to develop their capacity to engage trainees while they are at home because at that time we were not sure when schools were going to reopen.

As the first step in the project we investigated what kind of facilities with regard to digital learning exist in public TVET institutions already. When we are talking about innovative and different ways of teaching, we must also consider the various levels of technology available. The question in our context was what can be done, even with limited resources? We did a needs assessment first, and it turned out that there were some basics: there was basic literacy in ICT among students and teachers as every TVET programme has ICT as a mandatory subject and every school has at least a few computers or an ICT lab. Teachers and students know their way around and have basic ICT literacy. What teachers needed to know was where to find specific information or guidance about tools they could use for distance teaching.

As part of the project, a manual providing information on general tools available to teachers and trainers was developed. The manual also provides information about the methods and pedagogy that they can adapt in order to integrate technology in every subject. The objective was to integrate ICT in trade subjects, e.g. how to use digital technology to teach leather work or plumbing. Trainers were encouraged to adapt methods and digital tools to their field of work. We also exposed them to open learning resources where they could download, adapt, and repurpose materials in every field of work.

We brought in trainers from all 28 trade areas that are imparted in public TVET institutions. Additionally, there was a regional distribution of the participants, making sure that there were at least three trainers from each region. Eventually 53 trainers from across the country were invited to our trainings. We trained them, and they would train others. So right after the training, they returned to their schools and started training their colleagues. We have exposed them to google classroom, google meet, and schoology (an assessment platform) as alternative tools for their classes.

As part of the project, we are now introducing regional trainings which all the teachers are very excited about. In Ghana, we have more privately owned schools than publicly owned TVET institutes. In the first phase of our project, we targeted public schools. We are now working with the trainers of each region to train other teachers and instructors who would want to participate even from the private sector.

Julia Olesen: How has the training of instructors actually improved their teaching?

Christina Boateng: From the teachers' point of view, it definitely has enhanced their work. The training has exposed them to certain databases and information they had not been familiar with before. Scoring in theoretical exams can be done now with google classroom or schoology. The assessment, especially for larger classes, as it is mostly the case, has become much easier. For teachers this has been a real improvement.

Julia Olesen: Have they also noticed an impact on practical training?

Christina Boateng: Yes, thanks to the training and the manual, now trainers have access to a wider range of materials, including videos, informative graphs, etc. Students can, for instance, see how a production process works instead of teachers describing and drawing explanations on the board and leaving it up to imagination. With the introduction of open learning resources, trainers and students can access more information, e.g. videos that they can download. Students are able to see how processes really work. Teachers do not have to teach in abstract terms. I remember one of the teachers told me that it has always been difficult to explain something you have not even seen yourself. Now, videos make it much easier, and students respond to it very well. The project has helped teachers to vary their methods but also the content of their courses; the access to more relevant information in their field of work has expanded.

Julia Olesen: How did students react to the new tools?

Christina Boateng: People's perception of TVET is not the best, so with the application of new and digital tools, learners were very excited about it and increased their engagement. To see TVET imparted in a new and modern way increased the motivation of students. It shows how important the application of new technology in TVET is for young persons, especially because many students have smartphones and have a basic understanding of technology. They use it for other things and now they have started to understand it as an educational tool. This is a shift of paradigm because now the smartphones that young persons use the most, not desktop computers, have become and converted into an educational tool. That alone, this shift, has been exciting for students.

Julia Olesen: How do you think digital skills and competences can and should be expanded in the future?

Christina Boateng: Teachers need to periodically update their knowledge of technology. The refreshing and further development of knowledge is very important for teachers. In a project like ours, we targeted just the teachers of public institutions, but as I have mentioned, there are more private institutions with trainers also requiring these digital skills. However, our initiative is limited in its capacities. So far it has just been the tip of the iceberg.

Julia Olesen: In the bilateral workshop on the impact of COVID-19, you mentioned that some of the main challenges were connectivity and access to Internet and devices. How are these tackled in the project?

Christina Boateng: Yes, those are definitely big challenges. Even here at the university, earlier today we did not have Internet connection at all. It is a big challenge for the whole country, so it is also the same for TVET institutions. Of course, some schools are better endowed and have better resources than others, but in some places, connectivity is just bad most of the time. But even in those places, teachers find flexible ways, e.g. they switch between different places depending on their need for connectivity. They upload and download files in one place and then work with the materials offline.

Another issue is the cost of data, which usually have to be covered by teachers or students individually. For public institutions, it is not possible to provide mobile data to them. But the project has created the awareness and the excitement, so teachers and learners manage to get internet and the data when they want to.

Julia Olesen: After almost 10 months of school closures, what do you expect to be the long-term impacts?

Christina Boateng: Some students have not returned to school after they reopened. Maybe they have lost interest and exited education early. Some students also needed to start working or did not see the sense in waiting for schools to reopen. TVET is still not a popular form of education, you know. So if students do not benefit from it, because schools are closed, they direct their attention to something else.

Another long-term effect for our economy and country is the loss of skilled labour. Young persons rather go to do any job but remain unskilled. If people are leaving education so early, it can lead to streetism, roaming around without any fixed structure or work. The share of NEETs (Neither in Education, Employment, or Training) is expected to increase. Young people rather tend to hawk in the street. In their perception, they are working, but is it a stable, secure, and productive job? They do not have enough skills for anybody to take them into any good or regularized work. Generally, for young persons, it has a big impact on their biography if they leave the education system early and do not enter a stable workplace, whether formal or informal.