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Ethiopia—Teachers are Changemakers: Toward Inclusive Education in Technical and Vocational Education

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Background
This article examines how an international project can have an impact on the educational development of the partner country, with the Teacher Educators in Higher Education as Catalysts for Inclusive Practices (TECIP) project as an example. This is a collaborative project aimed at the promotion of inclusive education in TVET teacher education in Ethiopia. The Ministry for Foreign Affairs of Finland has supported Ethiopia in the education sector development for years, focusing on inclusive education. The TECIP project is the continuation of the cooperation, expanding to a new education sector. The project is considered a developmental agent that can have an impact on attitudes, skills, and knowledge of actors which, in turn, can lead to sustainable changes in inclusive practices in TVET. The project’s target groups were TVET teacher trainers, TVET administration, and
TVET teachers at the grassroots level at TVET colleges. The project’s target groups were TVET teacher trainers, TVET administration, and TVET teachers at the grassroots level at vocational colleges (JAMK 2020).

The World Report on Disability (World Bank and World Health Organization 2011) estimated that there were 15 million people with disabilities in Ethiopia, representing 17.6% of the total population at the time. Similarly, 95% of people with disabilities in Ethiopia live in poverty (Malle 2017), most of them in rural areas, where basic services are limited and the chances of accessing rehabilitative or support services are remote. Only 3% of Ethiopia’s estimated 2.4 million–4.8 million children with disabilities go to school. Only 0.5% of them continue to technical and vocational education. This is due to stigma among parents and educators, inaccessibility, rigid teaching practices, poorly trained teachers, and the lack of adapted learning resources (Malle 2017). The Government of Ethiopia has taken legislative and policy steps that indicate a commitment to advancing the rights of persons with disabilities. At present, there is a favorable policy environment for developing post-secondary TVET toward inclusion. Still, concrete actions are needed. Because teachers have a key role in enacting reforms, the development of TVET teacher education is the prime objective for ensuring people with special education needs and disabilities get access to and participate in TVET education (Mäkinen et al. 2019).

Before the beginning of the TECIP-project, the share of students with special education needs and disabilities in TVET colleges was quite low. Staff for inclusive education was lacking (Malle 2017), and attitudinal barriers existed. There was also a need for a suitable curriculum, adaptive educational materials, and facilities in all teacher education levels (Malle 2017).

The project started by reevaluating TVET teacher education for inclusion at the beginning of September 2017. The key persons in teacher education of the Federal TVET Institute (FTI) and Addis Ababa University (AAU) were invited to Finland to attend a workshop to examine the situation and compare it to the planning of the project. Although FTI was nominated as the main beneficiary, AAU was the leading university in inclusive education in Ethiopia and was chosen as a partner. To specify the situation at the beginning of the project in 2017, baseline information was collected via qualitative and more structured questionnaires from 111 TVET administrators and 75 TVET teacher trainers in November 2017 (Mäkinen et al. 2019).

Major organizational changes simultaneously provide a possibility for a new way of thinking. These changes may act like cornerstones, which help workers to look forward to the future (Kajamaa 2015). Heikkilä and Seppänen (2014) speak of transformative agency, where the agency is regarded as the subject’s capacity to take purposeful action to change their work.
Goals of the TECIP project
The TECIP was a capacity-building project (2017–2019) between JAMK University of Applied Sciences, Finland; the FTI, Ethiopia; AAU, Ethiopia; and the University of Jyväskylä, Finland. The mission of the TECIP project was to equip the TVET teacher training providers at the national, regional, and local levels with the necessary skills and knowledge on inclusive practices to support national development efforts toward inclusive TVET education in Ethiopia. As an outcome of the project, the TVET teacher training institute, FTI, develops its education structures to include TVET and has curricula on inclusive education and related modules for pre- and in-service TVET teacher programs. As the modules developed during the project are part of the curricula, the results sustain and reach a new generation of teachers. Additionally, a new in-service training model is being developed for FTI and piloted for future use. The project scope involves all regions of Ethiopia via the in-service training model (JAMK 2020).

Contribution of the Project on the Educational Development
In a country like Ethiopia—where administration plays an important role—it is essential to combine sustainable educational and administrative development and ensure their cooperation toward goals. To mobilize the development toward inclusion in TVET colleges, awareness-raising events were organized for TVET administration and heads of TVET colleges in five cities at the beginning of the project in 2017. The goal was to collect baseline information regarding awareness of inclusion and related issues from the key administrative stakeholders, meaning that TVET administrators set up a development process. These events recruited more than 100 participants, and 111 completed questionnaires concerning their opinions on inclusive education.

While there was concern regarding the implementation of inclusion, several respondents reported having good personal and/or organizational experiences regarding efforts to teach people with disabilities. Many good solutions had already been implemented at various levels—albeit not widely—and experience had been gained in organizing support and adjusting for students with disabilities. When respondents were asked to list the major challenges to implementing inclusion, their responses included facilities, materials and equipment, skilled workforce, curriculum, and attitudes. The contribution of the Ethiopian TVET administration—the Federal TVET Agency—was important. The agency directed TVET heads to prepare Special Needs Action Plans for their regions and TVET Colleges which were under inspection during the project (Mäkinen et al. 2019).

The other pedagogical intervention was started with an awareness raising day for the whole staff of FTI in November 2017. A questionnaire was created and delivered to 75 teacher trainers at FTI to determine the attitudinal level and readiness for change concerning their knowledge, practices, and future interests regarding inclusion. Based on the findings, a 5-week training was planned for 17 teachers of FTI. They represented different departments because the goal was to establish a special needs education coordinator system for FTI. The content of the inclusion training was divided into three sections:

(i) Basics in inclusion in Ethiopia. To familiarize oneself with the concept of inclusion and situation in Ethiopia; to elaborate own experiences, skills, knowledge, and future needs; to start discussions on how to do research-based developmental work in teacher training. The teaching content: The state of education of persons with disabilities in Ethiopia, The concept of inclusion, Learning support: student's viewpoint, The profile of inclusive teacher, Curriculum issues and inclusive education, and How to create inclusive teacher education and promote inclusive teaching.

(ii) Disability perspectives in Ethiopia. Diversity of students with disabilities in TVET and how to support students’ learning and participation with inclusive teaching methods; to get more information on the education needs of students with learning difficulties, especially students with hearing and visual impairment; to get to know how to support learning, accessing, and participating of students with special education needs in TVET; to embrace the teaching skills to work with students with special education needs; and to find out how to work as an inclusive teacher trainer.
(iii) Inclusive education from an international context. To find out and elaborate good inclusive practices for TVET and teacher education, to get familiar with the Finnish TVET system, and to get to know support for employment in Finland.

Most of the trainers were Ethiopian—professionals from AAU and disability organizations—to ensure the right cultural context. The Finnish professionals provided a student-centered, activating teaching methodology. Trainees received personal learning plans and two of them got a 3-month scholarship to Finland to prepare for doctorate degrees.

Successful training opportunity. Temesgen Tadele (left) and Tiegist Bayleyegn (right) after completing the study visit to Finland in 2019 (photo by TECIP project).

The training was synchronized with the development of a learning module on inclusion for FTI’s pre- and in-service training. The learning material was developed in close collaboration with Ethiopian persons with disabilities, AAU, and FTI teacher trainers. It was modified into the syllabus form used in FTI and adopted as part of the TVET teacher training curriculum by the Educational Senate of FTI (JAMK 2020). The syllabus of the module Introduction to Inclusive Education is provided in Box 2.

Box 2: Syllabus Module—Introduction to Inclusive Education

Course Description
Students will be introduced to the historical development, philosophy, fundamental knowledge on inclusive education, and the rational for the paradigm shift toward inclusive education. The implications of inclusive education on students’ psychosocial wellbeing, moral development, and in the promotion of social justice, human rights, as well as its cost-effectiveness will be thoroughly examined.

Students will also be exposed to the principles and dynamics of inclusive education practices in TVET focusing on students with disability. Students will be familiarized with contemporary international and national issues of inclusive education. Finally, deliberations and reflections will be made on strategies of how to effectively implement inclusive education in TVET institutions in the country.
Box 2  continued

Course outline

1. Historical development and trends in the education of persons with disabilities
   1.1 Special Education, Special Needs Education or Inclusive Education
       1.1.1 Subject matter (concepts and definitions)
       1.1.2 Conceptualizing disability (in particular, the way that medical and social models have influenced and shaped current thinking)
   1.2 Rational for the paradigm shift toward inclusive education

2. Implications of inclusive education on psychosocial development, social justice, and cost-effectiveness
   2.1 Inclusive education versus psychosocial development
       2.1.1 Psychological and socio-emotional
       2.1.2 Life skills (collaborative, interpersonal communication skills, etc.)
       2.1.3 Moral and ethical development
       2.1.4 Attitudinal issues
   2.2 Inclusive education versus social justice and cost-effectiveness
       2.2.1 Inclusive education, and human rights, moral and ethical issues
       2.2.2 Inclusive education and cost-effectiveness

3. Inclusive Education in TVET
   3.1 Learning characteristics of student with special needs
   3.2 Curriculum (comprehensive and all-embracing)
   3.3 Teaching and instruction (learners’ center, collaborative and outcome-based)
   3.4 Technology support (software, digital and assistive technology, etc.)
   3.5 Assessment (flexible, continuous, and multiple)

4. Contemporary issues on inclusive education
   4.1 International perspectives
       4.1.1 When and where to start?
       4.1.2 Inclusive service environment (universal design)
   4.2 National perspectives
       4.2.1 Policy and strategies of inclusive education
       4.2.2 Practices of inclusive education

5. Reflection on creating an inclusive environment in TVET
   (Discussion and reflection on prioritizing areas of intervention)
   5.1 Inclusive or zero rejection policy formulation (admission, placement, follow-up, graduation tracking)
   5.2 Creating an enabling environment for all students (barrier free social and physical environment)
   5.3 Establishment of inclusive education support center (back-up support for support for students, teachers, and others in need by organizing awareness raising program on inclusive education, short-term refreshment training programs on inclusive for the staff, undertaking institute based-action research to improve the quality of the inclusive education, etc.)

TVET = technical and vocational education and training.
Source: Teacher Educators in Higher Education as Catalysts for Inclusive Practices project.

One important pedagogical intervention was to organize two rounds of training for teachers from TVET colleges from all around the country (TOT training). To ensure the sustainability of the developmental results, 100 TVET teachers at the grassroots level were offered training for 2 weeks in two rounds (February 2018 and August 2018). The first training had 75 participants, and the second training had 90 participants, with the ongoing unrest in
some regions hindering the participation of all invitees. Among the trainees only 13.3% were females, implying a low level of female participation in the TVET system (Mäkinen et al. 2019).

A total of 73.3% of teachers in TVET colleges had their first degree below the minimum policy standard used in specialized institutes like TVET colleges. The participants from 54 TVET colleges represented 31 areas of specialization, with Building Construction (18.7%), ICT (9.3%), Special Needs (6.7%), and Manufacturing (6.7%) being among the leading areas. Conversely, 56% of the participants indicated that students with disabilities did not exist in their classrooms. Sixty percent of the respondents confirmed that they were not aware of inclusion before the training. About 55% of the participants were interested in inclusion. Most of the participants contended that the training was very good and transparent. They also stressed that the training environment was favorable and inclusive. On top of these benefits, the same group of respondents appreciated student-centered, participatory methodology and diverse styles of learning, learning by doing, and group-based exercises in the training. Theoretical and practical training was relevant and enabled participants to know national and international policies and practices to identify their challenges on inclusive development in TVET colleges (Mäkinen et al. 2019).

The participants learned how to create social awareness and manage classroom practices. According to the feedback, the trainees stressed the importance of actively participating in the teaching, as they had the opportunity to explore the student-centered approach as a student. They went through a new experience, which gave them tools to manage classroom practices. The training was cumulative: every trainee planned to share experiences from the training with colleagues and apply them in their TVET colleges.

Similarly, the participants stated minimal follow-up and supervision by the federal and regional TVET authorities as a big challenge as well as the recruitment of students with disabilities in TVET colleges. Lack of resources, career structure, and incentive mechanisms for those TVET teachers who work for inclusion in TVET colleges were also stated as problems. An attitude problem exists among some TVET teachers about making TVET inclusive. There is a need for further cooperation and commitment among high schools, local authorities, and TVET authorities to create awareness and recruit students with disabilities in TVET colleges (Mäkinen et al. 2019).

The success of both pieces of training was based on several factors, high motivation of trainees being one of them. Between the two training rounds, all trainees had to prepare an action plan to be implemented in their college. This encouraged them to learn. An “inclusive pedagogy” was introduced, consisting of (i) activating methods, (ii) doing together, (iii) encouraging for participation and sharing, (iv) reflection, and (v) valuing diversity. The Ethiopian trainers included “Disability Organizations” to ensure Ethiopian relevance.

One essential part of the pedagogical intervention was to ensure progress after the training. Monitoring visits were made twice to 10 TVET colleges representing different regions of Ethiopia. Quantitative as well as qualitative methods were used in the monitoring: Participant observation, questionnaires, checklists, and face-to-face open discussions with TVET teachers, who participated in the training. Apart from helping the teachers to fill in the questionnaires, the facilitators were able to interview the TVET teachers, to provide transparent and in-depth information on the impact of the training. Feedback sessions were organized for leaders of the TVET colleges, regional TVET agencies, the Federal TVET Agency, and the Federal TVET Institute. Except for some positive developments (such as the provision of incentives for students with disabilities, mainstreaming inclusive practices, or conducting needs assessment at the surrounding high schools), awareness-raising attempts were weak in the monitored TVET colleges. This is partly due to the low motivation of TVET teachers, lack of expertise in special needs education, and inadequate support from leaders. The TVET colleges also need to improve the physical accessibility (roads, buildings, ramps, toilets) and strengthen resource centers (Mäkinen et al. 2019).

In summary, although the training is aimed at improving the situation of students with disabilities, its level of implementation is still at an early stage. There is a need for continuing the support to TVET colleges and scale-up their inclusive practices (Mäkinen et al. 2019).
The TECIP project formulated an in-service model for FTI’s use in the future. The inclusive module has been adopted into the pre-service training of TVET teachers at FTI. Additionally, the project process was formed into an in-service training model for FTI. The specialized group of 17 teacher trainers from FTI conducted 2 weeks of training for 620 teacher education graduates in September 2019 focusing the teaching material on inclusion. One important milestone has been reached: The role of 17 TVET teacher trainers has been established as “special needs education coordinators.” The 17 teacher trainers will conduct inclusive training for all TVET teacher education students annually. They have been also nominated to train in in-service training such as for TVET teachers or managers from the field.

**TVET Teacher Trainers and Teachers as Change Agents**

In the TECIP project, change was initiated by combining TVET administration with developmental steps in teacher education. The role of every teacher is important in inclusive education. Therefore, the TECIP project concentrated on improving the skills and knowledge of TVET teacher educators and TVET teachers across the country. Competence development was regarded as positive. The project seemed to increase the empowerment and awareness of trainees. The respondents referred to “an alternative approach in teaching,” which was new for them. The dialogue increased the participants’ possibilities to adopt new knowledge and build networks. The self-evaluation technique enhanced new learning, as did systematic planning. No educational development on the national level would have been promoted without synchronized cooperation with the TVET administration (Mäkinen et al. 2019).

Positive feedback was huge. The trainees have taken many purposeful, goal-oriented actions toward inclusion. Obstacles that were interpreted as insurmountable at the beginning of the project were regarded as merely challenging in the end, and no clear resistance to the development was visible. There was a lot of envisioning the future: great hope that challenges in the development of inclusive education will be tackled through collaboration. To enhance transformative agency, project actors need to have a feeling of empowerment. Native trainers should be prioritized, and European partners should ensure sufficient information on the social context, political, and economic situation, and effects of globalization. This ensures that global knowledge can be successfully applied on a local level. The example of the TECIP project showed that an international project can initiate a change in attitudes, knowledge, and skills of actors. However, to get sustainable changes in inclusive
TVET, there is a long way to go with TVET administration, TVET teacher education, and TVET Colleges joining hands (Mäkinen et al. 2019).

Discussion
The role of TVET education is important in training competent, motivated, and innovative professionals who can contribute to poverty reduction and social and economic development. The Ethiopian Ministry of Education has drafted a plan—Education Development Roadmap (2018–30)—including responsibilities for the TVET education sector to support equitability: guidelines for skill training to be inclusive in urban and rural communities, plans for supporting academically successful students as well as dropouts in general education, promotion of gender parity as well as ensuring access to TVET for people with special needs (Tirussew et al. 2018). Since teachers are changemakers in society, the road map calls for modernization of teacher education in Ethiopia: to prepare and launch a comprehensive teacher preparation and development policy that covers key issues related to recruitment, selection, in-service training, certification, and continuous professional development of teachers. The new education road map pays attention to the development of inclusive education and the quality of teacher education. Similarly, the goal of the TECIP project was to increase access to and participation in TVET education for people with special education needs and disabilities. The Federal TVET Institute can continue the development and work as a flagship for inclusive TVET teacher education in Ethiopia (Mäkinen et al. 2019).