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Towards inclusive education in vocational education Development project as a change agent

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1. Abstract

The article examines how an international project can have an impact on the educational development of the partner country, with the TECIP project (Teacher Educators in Higher Education as Catalysts for Inclusive Practices) being an example. It is a collaborative project aiming at promoting inclusive education in Technical and Vocational Education and Training (TVET) teacher education in Ethiopia. The project is considered a developmental agent that can have an impact on the attitudes, skills and knowledge of actors, which can lead to sustainable changes in inclusive practices in TVET. The project's target groups are TVET teacher trainers, TVET administration and TVET teachers at the grassroots level at vocational colleges. The data was gathered from three baseline studies, from feedback of three trainings in 2017 and 2018 as well as from two monitoring visit rounds to ten TVET Colleges. The analysed studies showed that the project activities have started a development process that the actors are going to continue in their respective organisations. Some improvement was observed in TVET Colleges after the trainings, e.g. awareness raising trainings were organised and construction of ramps were undertaken in some colleges. Nevertheless, the attitude change towards students with disabilities and the physical accessibility did not reach the desired level. Thus, there is a need to join hands and strengthen partnership in order to promote sustainable inclusive practices in Technical and Vocational Education and Training.

2. Background

2.1. Policy context: Ethiopian guidelines towards Inclusive Education in TVET

The 1995 Constitution of Ethiopia guarantees equal rights to all people without any form of discrimination. It also contains a number of important provisions directly and indirectly relevant to the rights of persons with disabilities. The Government of Ethiopia has taken a

number of legislative and policy steps that indicate commitment to advancing the rights of persons with disabilities, such as signing and ratifying the United Nations Convention on the Rights of Persons with Disabilities, the first international, legally binding treaty aimed at protecting the human rights of persons with disabilities, in 2010. Similarly, the Ethiopian Government has ratified other treaties that advance the rights of people with disabilities, e.g. the UN Convention on the Rights of the Child, the African Charter on Human and People's Rights, the Convention on the Elimination of All Forms of Discrimination against Women, and the Beijing Platform for Action – all of which make some reference to protecting the rights of persons with disabilities to fair treatment, appropriate care, inclusion and full participation in society. Other important tools are the CRPD Toolkit for Africa and the Accountability Framework for Africa (2014), which is part of the Common African Position on the Post-2015 Development Agenda.

The challenges facing the full realisation of human rights and fundamental freedom enshrined in the Convention are lack of awareness, necessary skills and technology, violence and abuse, harmful stereotypes linked to disability and disability-based discrimination. The World Report on Disability, published jointly by the World Bank and WHO in 2011, estimated that there were 15 million people with disabilities in Ethiopia, representing 17.6% of the total population at the time. According to the Ministry of Labour and Social Affairs, 95% of people with disabilities in Ethiopia live in poverty - the vast majority of them in rural areas, where basic services are limited and the chances of accessing rehabilitative or support services are remote. According to Handicap International, only 3% of Ethiopia's estimated 2.4 to 4.8 million children with disabilities go to school. This is due to stigma among parents and educators, inaccessibility, rigid teaching practices, poorly trained teachers and the lack of adapted learning resources (Malle, 2015).

2.2. The Goals of the TECIP-project

Major organisational changes simultaneously provide a possibility for a new way of thinking. They may act like cornerstones, which helps workers look to the future (Kajamaa, 2015). Heikkilä and Seppänen (2015) speak of transformative agency, where the agency is regarded as the subject's capacity to take purposeful actions to change their work.

At present in Ethiopia, there is a favourable policy environment for developing post-secondary TVET towards 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 educational needs and disabilities (SEND) get access to and participate in TVET education. However, to support the development, some points need to be taken into account. The project must be needs-based, i.e. responding to needs expressed by the partners. Secondly, the sustainability of the project outcomes must be secured in order to avoid the achievements being forgotten after the project ends.

Teacher Educators in Higher Education as Catalysts for Inclusive Practices in Technical and Vocational Education (TECIP) is a capacity-building project (2017-2019) between JAMK

University of Applied Sciences, Finland, the Federal Technical Vocational Education and Training Institute (FTI), Ethiopia, Addis Ababa University (AAU), Ethiopia, and the University of Jyväskylä, Finland. The project is based on the long-term collaboration between the participating higher education institutions in question. The mission of the TECIP project is 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 towards inclusive TVET education in Ethiopia. As an outcome of the project, the teacher training institute, FTI, develops its educational structures in terms of inclusion in TVET and has curricula on inclusive education and related modules for pre- and in-service TVET teacher programmes. As the modules developed in 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 in Ethiopia via the in-service training model.

3. The Contribution of the Project on the Educational Development

3.1. Baseline

Before the beginning of the TECIP project, we knew that the share of students with SEND in TVET colleges was quite low, though some groups with disabilities (such as those with hearing or visual difficulties) might find it easy to obtain training and education. It was also estimated that there might not be enough trained staff for inclusive education, and attitudinal barriers exist. In addition, as Malle (2015) states, there is a need for a suitable curriculum, adaptive educational materials and facilities.

That is why the project was started by re-evaluating TVET teacher education for inclusion in the beginning of September 2017. The key persons in teacher education of FTI and AAU were interviewed in order to examine the current situation and compare it to the planning of the project.

Table 1. Overview of possible changes to key issues of the TECIP project between the project’s planning (2015) and starting time (2017)

Project plan	Project’s starting time
There were no curricula or training modules on inclusive practices with appropriate materials for future TVET teachers in TVET teacher education.	Although there are no formal curricula or training modules that directly address inclusive education practices, some activities were implemented in this regard in TVET colleges. While making curriculum revisions, some colleges tried to make the curricula inclusive by taking students with disabilities into consideration. They also tried to create an accessible environment for students with special needs. For example, colleges will not be accredited if they are not accessible.

There were no teachers specialised in inclusive education and special needs in TVET teacher education.	The same situation.
TVET teachers had minimal knowledge and skills regarding special needs; only single training days in sign language had been delivered in some colleges.	The same situation.
Collaboration between different stakeholders and parties was weak.	The same situation.
There was limited knowledge regarding inclusion among administrators and other stakeholders.	The leadership has undergone training on how to make TVET colleges both accessible and inclusive.
There was no in-service training model to root inclusive approach to regions and local TVET colleges.	The same situation.
There were no official statistics about students with SEND in TVET colleges. Based on the recent study by Malle (2015), the estimated share of students with SEND in TVET is 0.07–0.55%.	The same situation.

In order to specify the situation in the beginning of the project in 2017, baseline information was collected via qualitative and more structured questionnaires from TVET administrators (N= 111) in awareness raising events in five regions in November 2017 and from TVET teacher trainers (N=75) in the training in November 2017 and the Training of Trainers (ToT) rounds, with the first round in February 2018 and the second one in August 2018 (N=81). Additionally, the progress of the development of inclusive education at TVET Colleges was monitored two times after the Training of Trainers (N=20).

3.2. Attitudinal change of TVET leaders and teacher trainers

In a country like Ethiopia, where administration plays an important role, it is essential to combine educational and administrative development and ensure their cooperation towards sustainable goals. In order to mobilise the developmental process towards inclusion in TVET colleges, awareness raising events were organised for TVET administration and heads of TVET colleges in five cities. Two events took place in Addis Ababa, and the rest occurred in Dire Dawa, Bahir Dar, Mekele and Hawassa. The goal was to collect baseline information regarding awareness of inclusion and related issues from the key administrative stakeholders, i.e. TVET administrators. The events recruited more than a hundred participants, and 111 completed the questionnaires concerning their opinions on inclusive education. Four questions were presented, with three being open-ended. The event moderators delivered the questionnaires to participants and returned the completed questionnaires to the researchers. Participation was voluntary, and all collected data was kept anonymous and confidential.

The questionnaire firstly surveyed the concept of inclusion. It was found that the participants were aware of the concept, and they described it in practical terms (teaching people with disabilities) as well as connected values (e.g. equality). Some of the responses discussed the links between special education and inclusion.

Figure 1 summarises the participants' own estimates of how they viewed their own perception of inclusion. All participants knew about inclusion, and most considered their knowledge either average or good. Slightly less than 10% estimated that they knew the concept well.

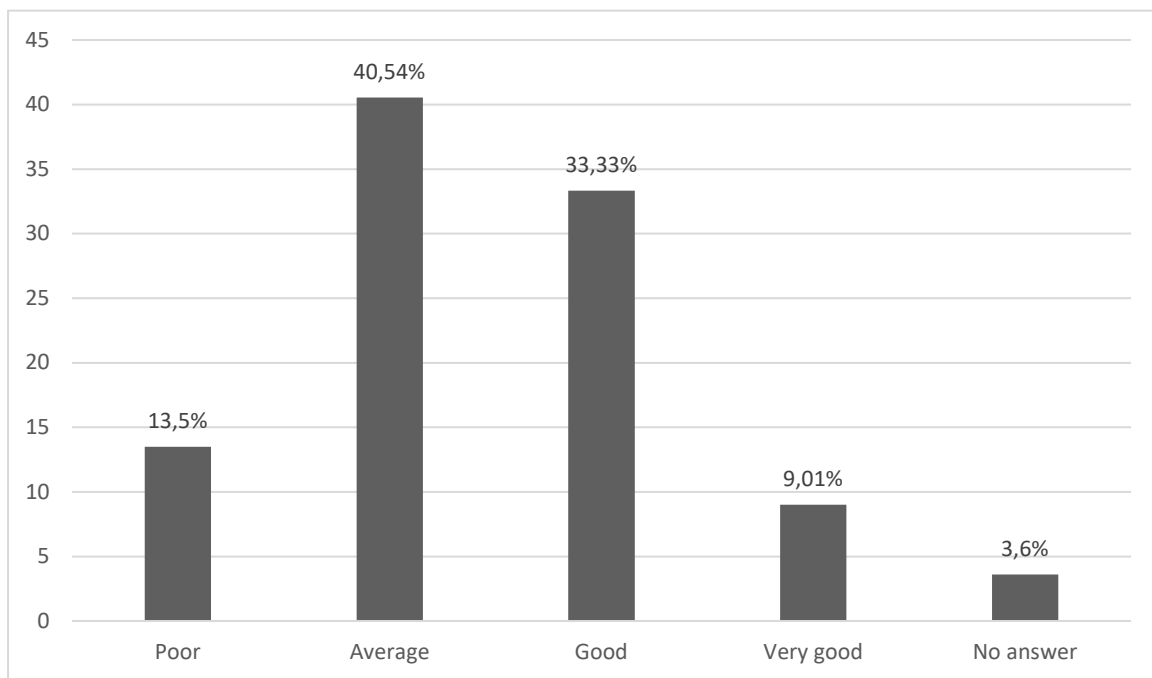


Figure 1. Participants' (N=111) estimations of their level of understanding on inclusive education. Data collected during six different awareness raising events in five regions.

One of the survey questions was as follows: 'According to your opinion and/or knowledge, how is the issue of inclusive education addressed in technical and vocational education?' Even though there was concern regarding the implementation of inclusion, several respondents reported having good personal and/or organisational experiences regarding efforts to teach people with disabilities. Many good solutions have already been implemented at various levels, albeit not widely, and experience has been gained for individual students when considering support measures and adjustments.

When respondents were asked to list the major challenges to implementing inclusion, their responses included facilities, materials and equipment, skilled work force, curriculum and attitudes.

Similarly, a questionnaire was created and delivered to the participants at FTI (N=75) to determine the attitudinal level and readiness for change of current TVET teacher trainers concerning their knowledge, practices and future interests regarding inclusion. The questionnaire was based on an earlier study by Forlin et al. (2011), which has been successfully used worldwide. Slight adaptations were made to ensure that the participants could complete the form during the seminar day. A total of 59 participants completed the questionnaire, of which 17% were female. The average age was 36 (range 24–58). The participants were well educated; most had either a bachelor’s or master’s degree. Per the preliminary findings, over half of the respondents claimed to have interacted with persons with disabilities. When asked about previous training concerning educating people with disabilities, 54% stated that they had received no such training, while 10% claimed to have had a significant amount of training. Many of the respondents (66%) claimed to have had at least some experience in teaching students with disabilities. The participants in this survey were quite confident in teaching disabled persons, with only 3% considering their confidence to be low. Most of the respondents estimated their knowledge of legislation and/or policies as average concerning inclusive education.

3.3. Pedagogical intervention

To ensure the sustainability of the developmental results, 100 TVET teachers at the grassroots level were offered training for two weeks in two rounds (February 2018 and August 2018). Both trainings reached 75 participants, with the ongoing unrest in some regions hindering the participation of all invitees.

Among the 75 trainees only 13.3% were females, thereby implying the low level of female participation in the TVET system. Regarding qualification of instructors or teachers in TVET Colleges, most of the participants (73.3%) were revealed to have had their first degree below the minimum policy standard used in specialised institutes like TVET Colleges. With regard to specialisation, the participants from 54 TVET Colleges trained in 31 areas of specialisation, with Building Construction (18.7%), ICT (9.3%), Special Needs (6.7%) and Manufacturing (6.7%) being among the leading areas (see Annex or SPSS Output for details).

Table 2: Existence of Students with Disability in TVET Colleges (collected in the first training round in 2018)

Existence of Students with Disability in Colleges				Existence of Students with Disability in Classrooms		
	Frequency	Per cent			Frequency	Per cent
Yes	59	78.7		Yes	28	37.3
No	10	13.3		No	42	56.0
Do not know	6	8.0		Do not know	5	6.7
Total	75	100.0		Total	75	100.0

Table 2 deals with the existence of students with disabilities in TVET Colleges. To this end, the majority of respondents (78.7%) confirmed the existence of such students in limited areas of vocational training. Conversely, more than half of participants (56%) indicated that students with disabilities did not exist in their classrooms.

As to the number of students with disabilities and their area of specialisation, there were around 345 students with disabilities in the areas of ICT, Garment, Sanitary, Electricity, Textile, Manufacturing, Surveying, Building Construction, GMFA, Furniture Making, Accounting, Automotive, Pharmacy, AoST, Cooperative, Natural Resource, Crop Science, Food Preparation, TMD, General Mechanics, Electro Mechanics, Animal Health, etc. The total number of 345 is aggregated from the ToT participants who confirmed the existence of students with disabilities in their respective TVET Colleges. The number of students with disabilities in some Colleges may not be exact, as participants tried to mention students with whom they are familiar. To this effect, better data could be obtained from Regional TVET offices.

Table 3: Awareness on Inclusion before the first ToT-training (February 2018)

	Frequency	Per cent		Frequency	Per cent
Not Aware of Inclusion	45	60.0		5	6.7
Somewhat Aware of Inclusion	23	30.7		28	37.3
Totally Aware of Inclusion	5	6.7		41	54.7
No Response	2	2.6		1	1.3
Total	75	100.0		75	100.0

According to Table 3, most of the respondents (60%) confirmed that they were not aware of inclusion before the ToT-training. However, a little more than half of the participants (54.7%) were interested in inclusion.

Table 4: Awareness on Inclusion after the first ToT-training (February 2018)

	Items	Agree		Neutral		Disagree	
		N	%	N	%	N	%
1	I know better how to include all students in my teaching	71	94.7	-	-	4	5.3
2	I know better how to promote every student	71	94.7	4	5.3	-	-

3	I can promote collaboration between students better	68	90.6	4	5.3	1	1.3
4	I am more aware of students' diverse learning styles	71	94.7	2	2.7	1	1.3
5	I know better how to reduce barriers for learning for my students	73	97.3	2	2.7	-	-
6	I know more about student-centred learning methods	74	98.6	1	1.3	-	-
7	I understand my attitudes about the learning of my students	72	96.0	1	1.3	2	2.7
8	I like to have more information in order to act in an inclusive way in my work	74	98.6	1	1.3	-	-
9	I know better how to promote inclusive education in my college	73	97.3	1	1.3	-	-
10	I cooperate with stakeholders to support the learning of my students	74	98.6	1	1.3	-	-

As shown in Table 4, the great majority of the participants were of the opinion that the ToT-training in inclusive education contributed to their learning and future career as TVET trainers.

Accordingly, through the face-to-face discussion with 75 ToT participants, most of the participants during the discussion contended that the ToT-training was very good and transparent. They also stressed that the training environment was favourable and inclusive. On top of these benefits, the same group of respondents outlined the following points for the open-ended question *“what was the most important thing for you in the ToT-training”*:

- Student-centred, participatory and diverse styles of learning, learning by doing, and group-based exercises were appreciated by the participants. Theoretical and practical ToT-training was relevant and enabled participants to know national and international policies and practices in order to identify their existing status and where they should start inclusive education. Moreover, in addition to theory, the training was supported by simulation in order to give example on inclusive practice.
- Training guided ToT-participants to consider the human rights of people with disabilities.
- The participants learned how to create social awareness and manage classroom practices. They are also willing to share experiences from the ToT-training and want to apply it in their TVET Colleges.
- The participants noted inclusive principles, psychological perspectives of inclusive education, factors affecting inclusive education, barriers of disability, and vocational guidance. The ToT-training enabled the trainees to understand previously unknown concepts.

- The ToT-training supported the participants in developing the capacity of persons with disabilities and creating a suitable learning environment, including infrastructure, for them.
- That ToT-training was conducted by some well-versed and physically impaired professionals who can understand the condition of people with disabilities was an impressive feature. The training styles of other Finnish and Ethiopian trainers were also interesting.
- It was interesting to know that people with impairment can do any job if treated equally and when the environment is favourable for them. On the other hand, it was shocking to know that the Ethiopian economy loses 5.1% of its GDP due to the exclusion of people with disabilities. Hence, it is very difficult for Ethiopia to reach the 2025 GTP goal if people with disabilities are discriminated against.

Similarly, the participants stated challenges and gaps, such as:

- Minimal follow-up and supervision by the Federal, Regional and Zonal TVET authorities.
- The extent to which high schools, local authorities and TVET Agencies/Commissions/Bureaus are committed to create awareness and recruit students with disabilities in TVET Colleges.
- There exist only limited resources and budgets to transfer knowledge in inclusion into real-life situations of TVET Colleges.
- There is a lack of career structure and incentive mechanisms for those TVET teachers who work for inclusion in TVET colleges.
- Some regional focal persons and experts have no necessary preparation and professional background.
- CoC (Centres of Assessment) packages including measurement are not synchronised with the needs of students with disabilities.
- An attitude problem exists among some TVET teachers with regard to making TVET inclusive.
- Unless training is properly translated into action, it may result in a wastage of resources.

The participants felt empowered to form suggestions:

- There is a need for joining hands and commitment among high schools, local authorities and TVET Agencies/Commissions/Bureaus in order to create awareness and recruit students with disabilities in TVET Colleges.
- The movement of making TVET colleges inclusive has started and all stakeholders are expected to keep the momentum going.
- There is a need to involve private TVET Colleges in inclusive training.

- Good practices and experiences in some TVET Colleges, such as Adama, Hossana and Debre Berhan, should be scaled up. For instance, in Debre Berhan TVET College they were able to identify and train some hearing impaired individuals despite strong resistance from part of the community. The College also constructed a ramp for students who need a wheelchair. As a result of these interventions, the trainees became successful and started to earn a decent living by getting rid of their previous hand-to-mouth way of living. Such success stories need to be written down and the case studies disseminated to all concerned parties.

In order to ensure the progress after the ToT-trainings, monitoring visits were made two times 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 ToT-trainings. Apart from helping the teachers fill the questionnaires, the facilitators were able to interview the TVET teachers in order to provide transparent and in-depth information on the impact of the ToT-training. Also feedback sessions were provided with leaders of the TVET Colleges, Regional TVET Agencies, the Federal TVET Agency and Federal TVET Institute. Except some positive developments (such as 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 low motivation of TVET teachers, lack of expertise on 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. In summary, although the ToT-training 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.

4. TVET Teacher Trainers and Teachers as Change Agents

The basic question in any development process is how to promote sustainable change. Regarding inclusive education, Booth (2019) defines the change elements in three dimensions: policy, culture and practices. In order to get sustainable results, administration practices as well as the cultural (attitudes) level must be taken into account. In the TECIP-project, the change is initiated with combining TVET administration with developmental steps in teacher education.

In 2012, the European Agency for Development for Inclusion and Special Needs Education defined the profile of inclusive teachers. The profile contains the key values and competence areas that all teachers need when working in inclusive education. The competence areas are tied to the values and made up of three elements: attitudes, knowledge and skills. Each attitude or belief requires a certain piece of knowledge or level of understanding, followed by skills, in order to implement this knowledge in practice. These areas of competence are:

- Conceptions of inclusive education – with a basis in special needs education
- The teacher’s view of learner diversity
- Promoting the academic, practical, social and emotional learning of all learners
- Working with parents and families
- Working with other educational professionals and expert networks
- Teachers as reflective practitioners: assessment of the effectiveness of the teachers’ own actions
- Education as a foundation for professional learning and development.

The role of all teachers is important in inclusive education. Therefore, the TECIP project concentrated on improving skills and knowledge of TVET teacher educators and TVET teachers across the country. Competence development was regarded as very personal. However, the project seemed to increase 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 also systematic planning. However, no educational development on the national level would have been promoted without synchronized cooperation with TVET administration. Generally, in a situation where work changes, the transformative agency (the capacity of the subjects to take purposeful action) in people’s work activity differs greatly (Heikkilä & Seppänen, 2015). It is relevant to analyze the approaches and actions during the project that seemed to enhance transformative agency in the TVET teacher trainers` and teachers` work. The feedback showed that a huge amount of positive feedback emerged. The trainees seemed to have taken many purposeful, goal-oriented actions towards inclusion. Obstacles that were interpreted as insurmountable at the beginning of the project were regarded as merely challenging at the end, and no clear resistance to the development was visible. There was a lot of envisioning of the future: great hope that challenges in the development of inclusive education would be tackled through collaboration. In order to enhance transformative agency, project actors need to have a feeling of empowerment.

As a whole, there are “critical incidents” in development projects, grouped here in six themes:

- Cultural relevance: the project must be needs-based and the working culture must be collaborative
- Well-planned management, relying on equality, transparency and mutual respect
- Clearly planned sustainability actions, native trainers should be prioritized
- Homework done by the European partners before the start of the project: ensuring knowledge on the social context, political and economic situation
- Globalization – “To apply global knowledge on a local level”: well-defined concepts such as inclusive education

- Networking, cooperation, trust.

The example of the TECIP-project showed that an international project can initiate a change on attitudes, knowledge and skills of actors. However, in order 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.

5. Discussion

Ethiopia is undergoing big economic and social changes at the moment. In fact, the change from agricultural industry towards technology-based society is one of the fastest developments in Africa. Therefore, 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: guidelines for skill training to be inclusive for urban and rural community, academically successful and dropouts in their general education, gender parity, and for people with special needs so that better equitable access to TVET would be achieved (Tirussew, Amare, Jeilu, Tassew, Aklilu and Berhannu 2018).

Since teachers are change-makers in society, the Roadmap is calling for modernization of teacher education in Ethiopia: to prepare and launch a comprehensive teacher preparation and development policy, which covers key issues, related to recruitment, selection, in-service training, certification and continuous professional development of teachers. The new Educational Roadmap pays attention to development of inclusive education and to 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 educational needs and disabilities. In order to reach the goal the project worked together with its main beneficiary, Federal TVET Institute, and the Federal TVET Agency.

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