

Abstract booklet

LELAM International TVET Conference 2024

Parallel Session 1

Session 1.1 TVET in non-formal settings

Experiences in non-formal education in Nepal: Narratives of women

Prativa Rai

This research focuses on Non Formal Education (NFE), a crucial avenue for adults who may face challenges entering or returning to formal education. NFE not only provides education to adults who might otherwise be excluded but also facilitates the transition of out-of-school individuals to formal education. Serving as an addition, alternative or complement to formal education, NFE is an essential component of lifelong learning. This narrative study specifically delves into the experiences of women in adult school, an institution delivering NFE designed to cater to the educational needs of adult women. Many of these women have faced societal structure, gender discrimination, and poverty, leading to forgo formal education, often marrying early and limiting themselves to family responsibilities. Despite successfully managing their households, the unfulfilled aspiration of education persisted, creating a sense of sense of inadequacy and a yearning for knowledge.

The study investigates the reasons motivating women to join non-formal education later in their life and explores the subsequent changes they undergo. Applying Amartya Sen's Capability Approach as theoretical lenses, the findings shed light on the adaptability required for women in the face of a changing world and technological advancements. Non-formal education emerges as a pivotal force, equipping women with essential skills in reading, writing and understanding the world. This, in turn, fosters their personal growth and empowerment, enabling them to navigate public spheres, attain economic independence and assume their leadership in the political arena. The study underscores the critical role of non-formal education in bridging educational gaps, empowering women, and fostering resilience against societal challenges.

Keywords: Non Formal Education, Lifelong learning, Capability Approach

Creating Jobs and Income for youth in the informal sector in Sub-Saharan Africa
The case of a dual track Vocational Training Program in the bicycle sector in Burkina Faso
Michel Ducommun

Velafrica

According to the United Nations Human Development Index, Burkina Faso is one of the poorest countries in the world. More than 40% of the population live below the poverty line. 70 % of the population are under 35 years of age¹. Quality vocational training in sectors that improve employability and contribute to gainful income after is crucial to create positive perspectives for youth in a country affected by insecurity and political instability. One sector that has that potential is the bicycle sector. Around 1 billion people in Africa depend on cycling or walking for their daily mobility needs², especially in Burkina Faso people largely depend on bicycles for daily use (access to schools, health centers, local markets etc.)³

Social Entrepreneurial approach in the bicycle sector as an entry point

Velafrica is a Swiss-based not-for profit social enterprise that focuses since 30 years on developing the bicycle sector in Sub-Saharan Africa. Velafrica aims at creating triple-bottom impact to improve sustainable livelihoods. The approach comprises developing durable and affordable access to bicycles through local distribution networks (creation of so called bicycle hubs) and developing VET programs to develop a sustainable maintenance ecosystem. Both of the mentioned strategies have a high potential to create jobs and income for youth. Finally yet importantly, this approach positively affects several of the core SDGs, especially also for the users of the bicycles (see also our impact report, only French and German now).

Although characterized by a high use of bicycles for daily commuting, professional training structures and skills were missing in Burkina Faso. Velafrica therefore started the conceptualization of a dual track VET approach to provide young people with a solid theoretical and practical education which is embedded in the local bicycle system.

Mapping the Sector and modelling the approach due to sector analysis

A series of actions carried out since 2019 have tested the feasibility of the training project. A study on the market potential of bicycles as well as the need of VET in this sector was implemented⁴. Results on existing skills; income schemes; formalization status of businesses; demand for bikes and repairs; schooling situation of existing learning structures and others have been the base for outlining the conceptual and programmatic approach of the VET program.

Formalizing the informal

Key stakeholders in vocational training (private sector, ministries, and associations) in Burkina Faso have been involved in the planning from the earliest stages of the project. This ensured that the program was integrated into local education structures, a key factor in its sustainability. The first national bicycle mechanics course has been developed with local stakeholders and was approved by the Ministry of Education in early 2021. The aim of the program is to train the first 500 young people in 200 local workshops according to a recognized curriculum by 2024. For implementation, the implementation focusses on urban; peri-urban and rural areas. In rural areas, cycling is often the only means of transport and travel. At the same time in those regions, there is a great need for income for young people.

Adapted Training Methods and Instruments

Velafrica provides practical and theoretical knowledge and trains future trainers as part of a "Train-the-Trainer" approach, whereas apprentices are trained in 33 decentralized training centers and work in their respective local workshop. The new training course in bicycle mechanics is based on the Swiss dual system and on knowledge acquired by Velafrica and its partner companies in other countries, as well as on feasibility studies carried out in Burkina Faso and on the local legal framework for vocational training.

Analysing the Impact

Velafrica relies on a sound impact measurement system for all its projects. Data is developed, collected and analyzed in collaboration with local partner organisations and beneficiaries and general indicators used in VET programs. In this way, Velafrica obtains a complete picture of the impact of VET on the living conditions of learners, trainers and workshop owners. The indicators are based on the planned project outcomes and referred to Agenda 2030 sustainable development goals.

Summary of achievements to date

The program is currently being implemented in 33 decentralized training centers. The 400 apprentices are employed by 160 local micro-workshops. 30 vocational trainers have been regularly trained by Velafrica, based on the curriculum and the requirements of the Ministry of Education. In March 2024, the state certification of vocational trainers will take place for the first time in this country. Towards the middle of 2024, the examinations of the apprentices will be carried out in accordance with the applicable examination regulations. This means that for the first time in Burkina Faso, young people from the informal bicycle sector will receive a state-recognized vocational training.

Enhancing Technical and Vocational Education and Training (TVET) in Rural Landscapes: A Theoretical Framework Emphasizing TVET, rural space and intersectionality in Costa Rican Coastal and Inland Experiences

Clyde Caldwell Bermúdez

This presentation explores a proposal aimed at complementing Technical and Vocational Education and Training (TVET) with theoretical dimensions such as social space and intersectionality in rural contexts, along with elements of Rural Education. The objective is to enhance the comprehensiveness and relevance of TVET approaches, making them contextually situated and pertinent, something that is lacking in the Costa Rican context. This proposal is associated with the findings of the research project titled "Analysis of Formal and Non-Formal Educational Offerings and Experiences in Rural Territories: The Case of the Coastal Zone of Lepanto, Puntarenas, and the area of La Suiza, Turrialba conducted by the Institute of Education Research at the University of Costa Rica." This project was carried out in rural areas, one located in a coastal region and the other in the inland area of the country, both of which have been representative of the ongoing changes. Through a qualitative analysis based on case studies, a proposal is made to complement traditional approaches to TVET with aspects such as territory and intersectionality. About In rural Costa Rican contexts, the implementation of TVET has faced significant challenges. The limited understanding of local needs and cultural characteristics of communities, despite the diversity in the small yet varied Costa Rica, has led decision-makers to act without considering the economic, productive particularities, and historical origins of the communities in rural areas. This has resulted in an educational offering that is not always relevant, may be outdated, or is not aligned with the changing demands of the labor market in these territories. Additionally, achieving sustained and sustainable results has been another key challenge in the implementation of TVET in these rural areas. The concept revolves around proposing a theoretical framework to enhance Technical and Vocational Education and Training (TVET) by integrating theoretical dimensions like Social Space and Intersectionality, by Henri Lefebvre and David Harvey, within rural contexts. These theories provide valuable insights into understanding territorial dimensions through the conceived space, perceived space, and practiced space. Additionally, the concept of intersectionality was incorporated, which recognizes the importance of factors such as gender, ethnicity, and social class as fundamental elements that influence individuals' experiences. Lastly, it incorporates elements from the field of Rural Education. This approach seeks to provide a more comprehensive and contextually relevant understanding of TVET. It is closely associated with the outcomes of the research project titled "Analysis of Formal and Non-Formal Educational Offerings and Experiences in Rural Territories: The Case of the Coastal Zone of Lepanto, Puntarenas, and the Area of La Suiza de Turrialba," by the Institute of Education Research at the University of Costa Rica. The project was conducted in rural areas, one in a coastal region and the other in the inland area of the country, both of which have served as representative examples of the ongoing changes in rural territories. This theoretical approach provides a solid foundation for the creation of educational policies, progress indicators, and strategies to enhance the educational offerings, access, and success of students in Technical and Vocational Education and Training (TVET). By considering the different dimensions of 2 space and intersectionality, more effective and equitable interventions can be designed to address the specific needs of rural communities in Costa Rica. Moreover, the creation of territorial-based indicators and the consideration of this dimension in policymaking would provide the opportunity to approach issues from alternative perspectives. The methodological process was centered around case studies of both communities, incorporating a comprehensive approach that involved analyzing public policies, educational policies, and elements of the educational landscape in the region over the past three decades.

Session 1.2 TVET and employment outcomes

The Labor Market Effect of Formal Technical Vocational Education: A Meta-Analysis

Ursula Renold, Patrick McDonald, Audrey Au Yong Lyn and Johanna Kemper¹

Formal Technical Vocational Education and Training (TVET) is an important component of many high-income countries (HIC) (OECD, 2023), less so in middle- or low-income countries (L/MIC), though this is likely to change in the future (The World Bank, UNESCO and ILO, 2023).^{2,3} So far, there are only descriptive summaries (Dougherty & Ecton, 2021; Carruthers & Jepsen, 2021) to inform policy makers about the impact of TVET on labor market outcomes. This is the first meta-analysis to empirically summarize the impact of *formal* TVET (secondary, post-secondary or tertiary level) on labor market outcomes based on studies employing experimental or quasi-experimental counterfactual impact evaluation designs. Our goal is to provide an adequate quantitative summary of the true labor market effect of TVET. We include studies focusing on HICs and L/MICs published in peer-reviewed journals or as grey literature (e.g. working papers, reports) between 1990 and 2022. They must report at least one primary labor market outcome.

We identified three different types of studies evaluating the impact of: i) TVET vs. general education, ii) TVET vs. a control group that did not pursue TVET and started working at some point, iii) work- vs. school-based TVET. To search for primary studies, we screened general (e.g. Google Scholar) and specialized databases (e.g. IDEAS/RePEc), searched through forward citations, and by screening references lists in April 2021 and October-November 2022. This resulted in 2918 (4519) studies in 2021 (2022) of which 153 (98) were considered relevant based on screening title and abstract. Of these, we finally coded 71 studies evaluating 92 TVET intervention cohorts, which we choose as our unit of observation. To summarize effect sizes across primary studies, we compute the standardized mean difference (SMD) Hedges' *g* (Hedges, 1981), which is a unitless measure. In addition, we are able to compute the raw effect of TVET on employment probability and wages/income to give the reader an idea of its real magnitude. To account for dependencies within and between studies in the meta-analysis, we use Robust Variance Estimation (RVE) to synthesize effect sizes (Hedges, Tipton, & Johnson, 2010). We employ alternative estimation methods as a robustness check (OLS, WLS).

Most (91%) of our studies evaluate TVET interventions in HICs. About 39 studies (40 intervention cohorts) belong to type i), 26 studies (46 intervention cohorts) to type ii) and only 7 studies (6 intervention cohorts) to type iii) studies. Therefore, we only include studies from categories i) and ii) in our meta-analysis. Most type i) studies evaluate interventions at the upper-secondary level (about 36), while most type ii) studies evaluate interventions at the post-secondary/ tertiary level (about 39).

Preliminary results of univariate regressions for type i) studies suggest that TVET has a greater impact on labor market outcomes than general education, which reflects the general consent in the literature (see Table 1). We find that this impact is driven by employment- rather than earning-related outcomes. Analyzing the effect in the short- (<4 years after treatment), medium- (4-6.9 years) and long- term (7+ years) suggests an almost inverted-U shape of the impact of TVET versus general education. These findings are again in line with the literature, showing a positive to neutral short- and long-term impact of TVET. Regressions using the raw employment probability and wages/income as dependent variable

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²Especially at the upper-secondary education level, where about 44% of all students are enrolled in TVET (OECD, 2023).

³Enrollment in L/MICs was about 13% in the past years (World Bank, 2023).

show that TVET graduates are more likely employed, while wages/income do not appear to be statistically different.

Preliminary results of univariate regressions for type ii) studies suggest an overall positive effect of TVET vis-à-vis the control group that did not pursue TVET and started working at some point. This positive effect is driven by employment- and earnings-related outcomes. The labor market effect using the SMD and the employment probability as outcome are comparable to the effect of non-formal training programs, as found by a related meta-analysis (Stöterau, Kemper, & Ghisletta, 2022). The effect on wages/income is comparable to other human-capital interventions (McKenzie, 2017). In contrast to type i) studies, analyzing the effect of type ii) studies over time depicts a hump-shape.

Further steps of our paper involve running more univariate and multivariate meta-regressions to analyze impact heterogeneity of TVET on labor market outcomes.

Table 1: Main results univariate meta-regressions using RVE

	Type i) studies			Type ii) studies		
	All	Employment	Earnings	All	Employment	Earnings
Average effect	0.022***	0.031**	0.000	0.082***	0.069***	0.076***
	(0.008)	(0.012)	(0.000)	(0.015)	(0.010)	(0.015)
95% Cis	[0.006,0.038]	[0.007,0.055]	[-0.000,0.000]	[0.053,0.111]	[0.050,0.088]	[0.047,0.106]
Estimates	335	110	225	577	155	422
Intervention cohorts	40	26	35	46	29	44
Studies	39	24	36	26	14	25

Bridging the Gap: Analyzing the Transition from Vocational and Technical Education to the Labor Market in Chile

Paola Bordón Tapia

This study explores the dynamic process of transitioning from vocational and technical education (TVET) programs to the workforce in Chile. Focusing on job transitions, the research aims to comprehend the crucial factors influencing the successful integration and progression of individuals with a TVET background in the job market. Utilizing data from the National Socioeconomic Survey and aligning it with labor market skill requirements data, the study seeks to characterize the labor market outcomes of TVET youth in Chile.

The analysis places emphasis on the alignment between TVET curricula and the changing demands of the labor market, evaluating the relevance of skills acquired during vocational training to contemporary job needs. Additionally, the paper delves into the supportive roles of mechanisms such as apprenticeships, and industry partnerships in facilitating smooth transitions for TVET graduates into gainful employment.

Moreover, the research delves into potential disparities among demographic groups, considering variables such as gender, socio-economic background, and regional variations. This exploration aims to identify potential barriers that might hinder equitable access to quality employment opportunities.

Anticipated to provide valuable insights for policymakers, educators, and employers in Chile, the findings aim to inform the development of targeted strategies. These strategies are intended to optimize the synergy between TVET programs and the labor market. By comprehending the intricacies of the transition process, stakeholders can collaboratively enhance the effectiveness of vocational and technical education. This ensures that it not only meets the evolving needs of the workforce but also fosters inclusivity and equal opportunities for all individuals striving for a successful career path.

Vocational Education and Training and the Youth Labor Market Transition in Southern Benin

Koffi Ambroise Houedou, Esaïe Gandonou and Sylvain Kpenavoun Chogou

Increasingly, vocational training is seen as a panacea for reducing youth unemployment. This paper aims to assess the contribution of Vocational Education and Training (VET) to the youth labour market transition in Benin. The target population is youth aged 20-29 living in Benin's largest city, Cotonou, with its surrounding urban areas, Abomey-Calavi and Sèmè-Kpodji. The data used are from the field survey organized in July 2019 as part of the project entitled "Linking Education and Labor Markets: Under what conditions can Technical Vocational Education and Training (TVET) improve the income of the youth?" Random sampling stratified by youth occupation level was used. The size of the sample drawn from the 3683 young people identified and aged between 20 and 29 in 2019 was 900. This size was distributed proportionally to the 4 strata constituted by the current situation of the youth on the labor market. Among the 900 young people surveyed, only 568 were either employed, self-employed, or unemployed. A total of 530 young people were included in the analysis, which were carried out mainly using binary logistic regression and likelihood ratio test. The results showed that one out of five young people was a craftsman and that the majority of the young people surveyed (54.5%) did not have any professional qualifications, even though 53% of them had at least 10 years of schooling. The results also showed that unemployment affected 38.5% of young people, but young craftsmen with an improved traditional apprenticeship certificate had the lowest unemployment rate (10%). These are youth who graduated from dual apprenticeship or traditional upgraded apprenticeship. The econometric results confirmed this finding, young craftsmen with an enhanced apprenticeship degree do better in the labor market. This type of vocational diploma improves the probability of access to employment for young people by 35.5 percent. All other things being equal, male youth are more likely to find work than female youth. Although in-depth analyzes are needed to prove the impact of the dual apprenticeship on youth employment, the results suggest that dual vocational training should be taken seriously in educational programs.

Keywords: Vocational training, Dual apprenticeship, Logistic regression, Urban employment, Benin

Session 1.3 Stakeholders' perspectives on TVET

Challenges of Youth Employment in Local Levels: Stakeholders' Perspectives

Durga Prasad Baral

Nepal's transition to a federalized governance system has brought significant changes to its local-level governance and education systems. With the restructuring of the country into seven provinces and 753 local levels, the local governments have gained more authority in managing the Technical and Vocational Education and Training (TVET) sector. This study, conducted as part of the Linking Education and Labor Market (LELAM) project, aims to gather and analyze stakeholders' perspectives on: 1) challenges faced by TVET providers in facilitating employment for graduates, 2) issues related to the human resources and skill mismatches in the business and industry sector, and 3) efforts made by local governments in managing skilled human resources at the local level.

The study engaged stakeholders through interactive programs conducted in six local government units (Palikas) across different provinces. Participants, including representatives from business and industry, TVET providers, local governments, and other key stakeholders, participated in half-day workshops. The workshops commenced with a presentation outlining constitutional and legal provisions guiding local levels' mandates and stakeholders' roles, following the Curriculum Value Chain concept (Renold et al., 2015). Three groups were formed based on the research questions, and group presentations, coupled with open discussions, provided data for each research question. A preliminary analysis was conducted, resulting in individual reports that were subsequently synthesized, culminating in the identification of major findings.

Stakeholder interactions revealed substantial challenges, ranging from outdated curricula and insufficient practical training to a lack of information about local labor market needs and misalignment between TVET programs and local employment demands. Moreover, the lack of effective policy implementation at the local level, limited funding, inadequate awareness of TVET benefits, and the absence of a coordinated monitoring and evaluation system were revealed. Stakeholders repeatedly emphasized the scarcity of information and the absence of a coordinated monitoring and evaluation system. Consequently, the paper centers on these issues and advocates for ongoing research and the implementation of a coordinated monitoring system within the TVET sector.

Analysis of the effect of vocational training on self-learning, innovativeness, and performance of stakeholders in rice and soybean value chains in central Benin

Farêne NOUATIN, Mori GOUROUBERA et Ismail Moumouni-Moussa³

In Benin, vocational training in crafts and agricultural sectors plays a crucial role in facilitating youth employment. The agricultural sector contributes approximately 70% to the employment generation. Despite the existing of formal vocational training programs in agricultural subjects, the continuing vocational training for actors in the agriculture chain value remains significantly limited. This research aims to assess the impact of continuing vocational training on self-learning, innovativeness, and the performance of actors involved in the rice and soybean value chains in central Benin. To achieve this, 240 actors were interviewed, including 120 beneficiaries and 120 non-beneficiaries, using a simple random sampling method and a questionnaire. The human capital theory guided this research. Results obtained from structural equation modeling analysis indicate that training influences the self-learning of beneficiaries. Self-learning influences the capacity to innovate by the beneficiaries. Hence, more actors are trained more they develop self-confidence and more they are motivated to innovate. Thereby they enhance their performance by reducing product turnover time, increasing selling prices, and minimizing marketing costs. We conclude that continuing raining to actors has a positive impact on their performance.

Keywords: Vocational Training, Continuing training, Self-learning, Innovativeness, Agricultural Sector, Benin.

The importance of the private sector in shaping a dual apprenticeship system in Kenya

Samuel Derrer & Lilian Mwai

In Kenya, approximately one million young individuals enter the labour market annually, facing challenges in securing employment. Vocational Education and Training (VET) has the potential to address youth unemployment and foster sustainable, innovative economic growth. However, the existing VET system in Kenya often operates independently of the private sector's needs, resulting in a workforce with mismatched skills set, especially in fast-growing sectors like construction. Kenya has developed formally a dual VET model but the private sector engagement component is not regulated.

Employing qualitative research involving a series of interviews with VET stakeholders including policy implementers, education and development experts and providers, the study investigates the factors influencing the participation of electrical and plumbing installation companies in providing work-based training for vocational learners. This research was conducted during the process of developing a dual apprenticeship system under the [PropelA](#) project, financed by the Hilti Foundation and the Swiss Agency for Development and Cooperation (SDC) and implemented by Swisscontact. Data from interviews with TVET experts and entrepreneurs were thematically structured following the dialogical work culture approach ([Wolf, 2021](#)), contributing with multi-voiced perspectives in understanding the factors governing private sector engagement.

Findings reveal that drivers for company engagement encompass business growth, investment opportunities, innovation, and reputation enhancement. However, challenges persist, including inadequate investment and training costs, unfavourable framework conditions in the construction sector at the interface between formal and informal economy, a fragmented TVET system, lack of responsibility for formal training, insufficient corporate social responsibility, technology gaps, and weak business organisations.

Building on evidence and considering the perspective and needs of the private sector, the PropelA project succeeded in running a functional dual VET pilot, fostering partnerships with 35 companies from the Nairobi area, and providing access to over 200 students to the new dual training, all of which being formally employed under an apprenticeship contract. This flagship project is a seminal approach to systemic VET systems development with the leading role of the private sector.

This contribution will unfold the critical role of private sector engagement throughout various stages, from system and sector analysis to model adaptation, curriculum development, mentor training, and quality assurance, in the process of developing a functional dual VET model that can be replicated to other sectors and inform policymaking based on evidence and proved concepts. Exploring key success factors and insights adds depth to the study's findings.

The implications of this research extend beyond Kenya's construction sector and hold relevance for VET development in fields and other Sub-Saharan African nations. Its outcomes offer valuable evidence for shaping dual VET policies and implementing skills development projects in similar developing contexts.

Parallel Session 2

Session 2.1 TVET and Technological Change

The transformative role of digital technologies in fostering accessibility and inclusion of youth in the TVET system of developing countries: challenges, opportunities, and lessons learned from the practitioners' perspective

Alessia Evi-Colombo

If VR and AI can improve our professional and educational landscape, as well as our mental and physical health and our leisure, how the intent and capabilities in developing new ways of training and teaching can lead VR and AI technologies to enhance skills development, upskill and reskill in TVET, as well as to ensure learners engagement through inclusion and accessibility?

This presentation showcases the TVET practitioners' perspective on the use of VR and AI solutions, as it delves into the state-of-the-art of these technologies, leveraging from the current best practices and lessons learned, and shedding light on the challenges and bias that VR and AI for TVET bring forth.

Most conversations in the VR and AI contexts revolve around the development of tangible products whose success is measured in the way they meet the transformative markets' request as quickly and as efficiently as possible, with the risk of underserving the educational and training system of resource-constrained environments.

Based on these premises, this presentation will shed light on the use of VR and AI solutions in the areas of soft and core skills development, by attempting to answer the following critical questions:

1. Who are the involved stakeholders?
2. What models are sustainable and profitable?
3. How can inclusion be ensured?

Each of these key questions will be answered highlighting the current research trends in field of VR and AI for TVET, and through the analysis of dedicated case studies and pilot projects from Africa and Asia that have targeted the skilling and upskilling of the youth workforce through the use of VR and AI solutions.

The aim of this presentation is to encourage a multi-stakeholders, multi-nations discussion within the international community of TVET practitioners in order to share initiatives and milestones that foster the use of inclusive, sustainable, and scalable VR and AI solutions for skills development of the youth of middle- and low-income countries, meeting current needs and anticipating future demands.

Valuing Education and Automation Risk: Parental Preferences in the Era of Generative AI

Maria A. Cattaneo, Christian Gschwendt, Stefan C. Wolter

Keywords: Automation, education, occupational choice, parents, preferences

Advances in digital technologies have been the driving force behind a surge in demand for highly skilled workers ([Katz and Murphy, 1992](#)) and individuals specialized in non-routine cognitive work ([Autor et al., 2003](#)) in recent decades. Largely supported by educational expansion, more and more individuals with high levels of education entered the digitalizing labor markets of developed economies, where they found good job opportunities and compensation. In this respect, up to now the higher the level of education, the greater the benefits of digital technologies for workers in general. However, this law may no longer hold true for recent advances in Generative Artificial Intelligence (GAI) technologies, as early research suggests that they will negatively affect the employment of workers in non-routine cognitive occupations requiring high levels of skill ([Eloundou et al., 2023](#); [Hui et al., 2023](#)).

In our study, we investigate the valuation of various types and levels of education when considering the automation risk of a currently held job, alongside other career factors such as salary and hierarchical position. To do this, we conduct a discrete-choice experiment as part of a survey with 5'952 respondents in Switzerland, in which we elicit individual's preferences for their hypothetical children's education and career paths. Parents' preferences have shown to be substantially predictive of children's educational ([Miller, 2021](#); [Tungodden and Willén, 2023](#)) and occupational choices ([Fischer-Browne, 2022](#); [Jodl et al., 2001](#)). Moreover, research indicates that parental preferences for their children's education differ according to the parents' own characteristics ([Abrassart et al., 2020](#); [Cattaneo and Wolter, 2022](#)), while they vary according to the child's sex with respect to other factors that are important for later careers ([Tungodden and Willén, 2023](#); [Wahidah et al., 2022](#)).

Using a mixed multinomial logit model, we find that respondents attach a great deal of importance to the automation risk of their hypothetical child's job. In order for their child to work in a job with a 10 percentage point lower automation risk, they are willing to forgo CHF 16'000 of their child's annual gross wage more than a sixth of the average annual gross wage in Switzerland. Furthermore, they prefer higher wages, a higher hierarchical position and, controlling for all other career aspects, both a secondary or tertiary vocational degree compared to a tertiary academic degree for their child. In addition, we investigate interaction effects between career aspects and we find preference heterogeneity depending on the respondents' own education, use of AI at work, migration history and language regions. However, preferences are almost identical for hypothetical sons and daughters.

Factors Associated with Employability of ICT graduates in Nepal

Amrita Sharma

Employability, the attribute of securing employment and sustaining it, is an integrated concept that contributes to a sustainable and successful career span. Graduate employability is important in Information Communication Technology (ICT) because ICT has an emerging industry. However, the factors associated with graduate employability in ICT have hardly been explored. With the consideration, this study aimed to explore the factors associated to employability. Data of the study were collected from the online representative survey of 445 graduating students and 390 employers by using a self-constructed survey instrument and analyzed through principal component analysis (PCA). The result of PCA followed by varimax rotation yielded three components with a total variance of 70.33%, core skills with 59.03%, personality attributes with 6.07%, and organizational adaptability with 5.21%. The insight can be utilized in industries, universities, and policymakers in the attempt of the workforce development of a country and connecting university and industry sectors for mutual growth.

Key words: Employability, factors of employability, Information and Communication Technology (ICT), Nepal, Core skills, personality attributes and organizational adaptability skills

Session 2.2 TVET and Skills

Enhancing Skills for Employability: The Role of Dual Training System (DTS) in Kenya

Simon Kiarie Esther:

TVET holds a central role in Kenya's education system, aiming to equip individuals with practical skills vital for employability, entrepreneurship, and self-employment. However, despite concerted efforts, TVETs in Kenya faces challenges hindering its full realization. A significant concern is the discrepancy between TVET curricula and industry needs, causing a disconnect between education and the job market. This mismatch leads to graduates possessing skills that aren't immediately applicable, exacerbating the skills gap. As a remedy, several models have emerged to ensure TVET graduates acquire relevant skills for a seamless entry into the job market. Internships; involve youth being placed in workplaces posttraining, with varying durations based on employer acceptance. Similarly, apprenticeships especially favoured by youths unable to access formal academic institutions, provide hands-on skills immediately applicable to labor market needs. However, internships sometimes result in a disconnect between theoretical training and practical application in the field while apprenticeship students often lack proficiency in essential areas such as financial literacy, entrepreneurship, and soft skills, which are fundamental for navigating social success. The Dual Training System (DTS) presents an innovative remedy, blending formal and informal training to suit Kenya's informal labor market. DTS seamlessly combines theoretical and practical learning by conducting training in institutes as well as chosen professional or informal settings, tailored to students' disciplines. This system not only develops both formal and informal skills but also facilitates the recognition of informal skills, crucial for the 80% income force contributed by the informal sector in Kenya. DTS was first piloted at St. Kizito Vocational Training Institute through the IDEA Project, funded by DSC, FOSIT, and AVAID and implemented by AVSI. The project witnessed 320 underprivileged youths gaining skills and subsequently entering the job market within three years (2019-2021). Although successful, there's been limited uptake of DTS in Kenya. Urgent policy changes are necessary to either adopt the existing DTS model or adapt it to the Kenyan context, potentially phasing out conventional models that have since proven unreliable. By embracing proven working models like DTS alongside other systemic improvements such as proper funding and gender mainstreaming in VTIs, Kenya can cultivate a diverse and skilled workforce, fostering a more equitable society and offering youth better prospects for personal growth and contributions to economic advancement.

Skills Gap: Exploring Education-to-Employment Transitions in Nepal's Construction Industry
Mahesh Nath Parajuli, Prakash C. Bhattarai, Suresh Gautam, Prakash Kumar Paudel, Amrita Sharma & Anup Bhurtel

The skills gap refers to the discrepancies between the skills graduate employees acquire and their employers require to perform their jobs. It has remained a persistent concern in Nepal's TVET sector, especially in the construction sector. With this consideration, a study was conducted to measure and examine the job competencies reported by the graduate employees in their jobs and those observed by their employers. A self-constructed questionnaire was administered to 59 employers and 222 employees. Data from the study were analyzed using descriptive statistics, independent sample t-tests with power analysis, and logistic regression.

The result showed a significant difference in the job skills as reported by employees and as observed by their employers. Employers' observations indicated that graduate employees demonstrated competency to some extent in construction techniques and installation works and possessed a basic understanding of the workplace. However, their proficiency in soft skills, professional abilities, common technical knowledge, trade-specific skills, and even basic subject-matter knowledge was relatively poor. The graduate employees also reported that they possessed just a modest level of proficiency in professional skills, common technical knowledge, and overall trade-specific skills. In contrast to employers' observations, they perceived to have a higher level of competency in soft skills, installation works, and control surveys within trade-specific skills. The results also showed that employers' assessments of their graduate employees' proficiency in soft skills, professional abilities, CAD software expertise, construction materials knowledge, estimation and costing skills, entrepreneurship development, and engineering survey abilities were lower compared to the graduate employees' perceived competencies. Moreover, the basic subject-matter knowledge of graduate employees was differed across instructors' competencies and on-the-job training (OJT) quality. In conclusion, Nepal's construction sector employers have not received the anticipated skills and competencies from TVET graduates. Careful consideration in developing TVET curricula, teaching methods, and their implementation is essential to address the challenges.

Keywords: skills gap, employers, graduate employees, construction sector, Nepal

Organizational Support and Affective Commitment of the Nurses: Mediating role of Dignity at Workplace

Menuka Sangroula

In the wide realm of numerous courses offered under technical and vocational education and training (TVET), nursing, as a stream, plays an instrumental role in the improvement of healthcare. Despite the critical roles of nursing in healthcare, issues related to lack of support and indignity in the hospital setting as a workplace have grabbed the global attention which are prevalent in underdeveloped countries such as Nepal. In this backdrop, this paper aims to assess the effect of organizational support perceived by the nurses on their affective commitment (AC) and the mediating role of dignity at workplace in the relationship between perceived organizational support (POS) and AC. Data were collected from the period of October 2022 to February 2023 using survey method among 223 nurses working in the private hospitals of Kathmandu, Nepal. Result shows modestly significant effect of POS on AC. Using Hayes Process Macro, the study found significant indirect effect of impact of POS on AC ($b = 0.249$, $t = 10.31$). Moreover, the study also found direct effect of POS on AC in the presence of the mediator (dignity) ($b = 0.2321$, $p < 0.001$) confirming that dignity partially mediates the relationship between POS and AC. The study highlights the importance of support for the nurses to increase the dignity they perceive at their workplace as well as to foster their commitment towards their organization for quality performance. It also draws attention towards the average level of dignity which nurses perceive at their workplace and their affective commitment which has numerous impacts in the healthcare sector of Nepal. Practical and research implications are discussed in the paper.

Key words: perceived organizational support, dignity, commitment, nurses, Nepal

Session 2.3 TVET and labour market transitions

PSDF: A success story of effective Public – Private Partnership in Pakistan

Ali Akbar Bosan

The regulatory and financial oversight of Pakistan's skills landscape predominantly falls within the purview of the Government, with limited involvement from the private sector. This situation has resulted in the delivery of skills that may not align with market demands, leading to compromises on industry-relevant competencies. Furthermore, a significant portion of the budget is allocated to infrastructure and fixed overheads, thereby constraining opportunities for enhancing the quality and diversity of essential skills.

Established in 2010, Punjab Skills Development Fund (PSDF) addresses this formidable challenge by aiming to equip over 1 million underprivileged youth with in-demand skills, thereby bolstering their prospects for income generation. Operating as an innovative public-private partnership (PPP), PSDF serves as a bridge between the public and private sectors, leveraging diverse funding sources, including the Government of Punjab, Pakistan, the Foreign, Commonwealth and Development Office (FCDO) of the UK, the World Bank, the Export Development Fund, and other financial institutions and cooperatives.

The efficacy of PSDF is predicated on its multi-stakeholder approach, from conducting comprehensive sectoral studies to evaluate skills needs and demands, fostering collaboration with the private sector employers, standardized skill certifications from accredited bodies, and engaging with community-based organizations (CBOs) to ensure that training programs are responsive to the unique needs of various industries and communities.

This collaborative strategy has yielded tangible results, with skills being imparted across over 250 demand-driven trades at 1,000 locations throughout Pakistan, delivered with the highest standard. Additionally, this approach extends benefits to the private sector by offering cost savings, facilitating access to industry-ready graduates possessing relevant skills, and promoting transparency and outcome-oriented training programs.

One of PSDF's major initiatives for the past few years has been our approach to digitalizing TVET as a whole. Generally seen as super traditional, we have spearheaded changes in curricula, training delivery modes, learning outcomes and learner experience to fully integrate the global shift we saw in a post covid world. We have launched multiple digital programs, including Coursera specializations, to enable youth for the gig economies in 22 demanded categories from top international institutes, achieving the highest completion rates in the world.

Despite recent increases, female labour force participation in Pakistan remains notably low, at 25%, compared to countries with similar income levels. To address this disparity, PSDF's flexible program structure accommodates diverse learning needs, particularly for women in urban and rural communities, through pioneering online and hybrid models, thereby maximizing accessibility for individuals facing mobility challenges or geographical constraints. This collectively enables PSDF to surpass its mandate of 40% women trainings.

PSDF's successes are underpinned by rigorous market analysis, which informs strategic investments in workforce development to drive economic growth. Continual updates to trades ensure alignment with the evolving nature of commerce, while also considering trainee interests, especially given shifting attitudes toward income generation.

Through partnerships with over 500 pre-qualified training providers, primarily from the industry and private sector, PSDF effectively manages costs, ensures accountability, and delivers quality training, thereby mitigating the risk of mismanagement and cost inflation. This collaborative approach maintains competency while controlling training costs.

In conclusion, PSDF's distinctive model, characterized by diverse funding, multi-stakeholder collaboration, integration of digital learning with market-relevant skills training, a hybrid delivery model, community focus, and a commitment to accountability, serves to empower Pakistani youth and effectively addresses the nation's critical skills gap.

The influence of Career Guidance and Counselling (CGC) services and policies for improving the access to labour markets for the younger generations (better linking education & labour markets)

Jelena Stefanovic

Fast changes in the economy, and the transformation of the world of work and learning, led to the greater need to improve people's competencies, develop a proactive approach towards career decisions, and acquire adaptation and career management skills. Career guidance and counselling policy and services in a changed economy and social environment can make a significant contribution, not only to individuals but also to the achievement of public policy goals in the field of education, economy and social development.

The „Education to Employment“ project (E2E) has facilitated the establishment of nine [JOB INFO centers](#) in nine municipalities and career practitioners are providing a holistic packet of CGC services for young people in twelve regions in Serbia. Trained career practitioners are providing diversified individual and group career guidance services in the [JOB INFO centers](#) and schools (more than 40 schools are currently involved) on three levels: career counselling, informing, career development (e.g. preparation for the labour market, mediation between job seekers and employers, workshops covering e.g. gender-related topics in making career decisions). Following the process of the successful decision-making process and school-to-work transition the below-presented elements are used and the E2E has developed a multilevel career assessment package:

- Self-awareness of personal strengths and weaknesses, skills, personality traits, values
- Opportunities - the awareness of educational and job opportunities, awareness of the job market
- Decisions - ability to make decisions, decision-making skills
- Transitions - the ability to make successful career transitions

During the 2nd phase of the implementation, the E2E in cooperation with Gateway.one from Switzerland, adapted and developed, digitalized and standardized tailor-made tests for the population in Serbia. The multi-level assessment covers the following dimensions:

<p>➤ Interest and personality assessment:</p> <ul style="list-style-type: none"> ○ Who am I? IdentityFi test (personality test) ○ Which job is right for me? WayFi test (interest test) 	<p>➤ Aptitude and competence assessment:</p> <ul style="list-style-type: none"> ○ What can I do? Basic Check <i>Cognitive</i> (competence test covering four-dimension Language tasks; Multidimensional tasks; Numerical tasks; English as a foreign language) and Basic Check <i>Practical</i> (Natural Science; Economy, planning and organization; ICT and data processing; Hygiene and safety at work; Understanding of technique and technology; Human and health) ○ Do I fit the desired job? Matching tool
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The aim was to secure a multilevel objective (digital) assessment of „yourself“ in career guidance in a form and in a way that is interesting for young people. Counselling and informing sessions which are following the assessment are further helping young people to match their *self-image* to opportunities on the job market/or educational opportunities. Via such services youngsters are able to make informed career decisions, and to go through the transition process more easily. Furthermore, it is an integral part of job-seeking process and portfolio for employment (formal qualification, CV, interests

and motivation, cultural fit-personality, competence assessment). So far, in the 2nd implementation phase, 20.632 (10.906 female/9.726 male) persons received CGC services and were supported through individual and group services in acquiring and improving carer management skills.

Project info:

Name of program	From Education to Employment (E2E)		
Program	7F-08747.01.02	Country	Serbia
SDC domain	Economic Development	Working Field	Youth Employment
Duration	Implementation Phase I: 01.01.2016 – 31.12.2019 Implementation Phase II: 01.01.2020 – 31.03.2024		
Overall goal	To increase decent youth employment in Serbia in a socially inclusive and sustainable way.		
Vision	Decent job prospects and career paths for all young women and men in Serbia.		
Mission	E2E improves the position of youth on the Serbian labour market through modernization of youth employment policies and the development of young skilled labour demanded by the private sector.		
Implementation	NIRAS – IP Consult GmbH (NIRAS - IP)		

More about the E2E project on: <https://znanjemdoposla.rs/en>

Inclusive growth and youth labour

Ekaterina Zhelenkova

When considering inclusive growth and labour among the youth, especially in developing countries, it is important to maintain sharp analytical rigour as much as an open mind prepared for the most conventionally unexpected conclusions. By applying the academic fine-tooth comb to the example of a country case study of India, this project has deconstructed the challenges with which the labour force landscape in developing countries with large populations is fraught, and it has analysed the challenges facing labour market entrants, especially marginalised job-seekers such as women and young people. What makes India an interesting and globally relevant case study is the fact that its youthful demographic is projected to add 234 million workers to the labour force by 2027, by which time the working-age population in India will have risen to almost 20% of the entire global labour force. India's impressive economic growth has received ample publicity; however, little has been said about a vital cog in the machine – its job growth. Moreover, scholars are puzzled by the fact that female labour force participation has even been plummeting year by year. Taking stock of the past 30 years in India, this project has examined the literature on the concept of jobless growth along with the manifold examples thereof, and has acquired as well as analysed a wealth of statistical data on labour force participation, including surveys. The project has reflected on the rise in educational attainment and on the concurrent inability or unwillingness to join the labour force on the part of graduates. Increased female education, for instance, has not resulted in increased female labour force participation. Furthermore, according to data from the World Value Survey for the period between 1994 and 2014, increasing numbers of female university graduates reported seeing work as less and less important. Additionally, this project has inspected the observable structural shift in the economy and considered its impact on employment. It has determined that India's leapfrogging of the manufacturing sector has resulted in a bottleneck demand for employment, which crowds out some social groups for reasons partly rooted in socio-cultural prejudice, but there is much more to this than meets the eye. On a related note, it has also been important to consider the role played by employers and the rights that companies have at their disposal to navigate in the evolving economic environment and a policy landscape that still requires adjustments. When talking about inclusive growth in developing countries, it is essential to adopt a multidimensional approach to analysing the building blocks that make the growth's edifice tower, yet it is of equal importance to heed, and forearm oneself against, any misleading indicators of such growth or other distractions susceptible to diverting attention away from questions and areas that are most relevant from a policy point of view. This is all the more momentous as most countries on the African continent are set to soon embark on a path of growth thanks to their expanding demographics. In these scenarios, which involve massive population numbers and increasing fertility rates, countries find themselves placed on track to unlocking their demographic dividend windows. However not all countries can and will be able to seize this springboard opportunity, and failure by a country to harness that demographic dividend could entrain inauspicious consequences not just for the countries concerned, but also for their neighbours, and even further-flung parts of the world, as issues relating to mass outmigration and crime would be exacerbated. It is therefore judicious to draw the attention of the academic community, policymakers and civil society to the imminent direction in which more and more developing countries are headed, to point to the obstacles expected along the way, to put forward tried-and-tested advice that experience suggests to follow, and to successfully confront any challenges so that the rewards promised by the demographic dividend may be reaped for a net global benefit. It remains true that prudence and foresight today will inform the policies and preventive actions of tomorrow while minimising the risks of having to remedy what should have been pre-empted

Parallel Session 3

Session 3.1 TVET and migration

Recognizing foreign acquired VET qualifications: Potential to empower and challenge skill formation eco-systems in countries of origin

Jehona Serhati, Linda Wankin

Abstract As a labour market institution, the recognition of foreign vocational qualifications (RFQ) plays a pivotal role in promoting mobility, flexibility, and lifelong learning, facilitating effective skills signaling and screening for both employers and employees. This is particularly significant for countries with elaborate vocational education and training (VET) systems grappling with demographic challenges and the trend towards increased academization. RFQ has emerged as a critical tool in such contexts, helping to address mid-level skill shortages while safeguarding occupational protectionism and standards. However, the impact of RFQ extends beyond the countries where qualifications are recognized; it also influences countries of origin, where mid-skilled workers seek to have their credentials acknowledged for labor migration purposes. Given the rising prominence of RFQ as a labor market institution and the relatively limited scholarly attention it has received compared to higher education (e.g. Bologna processes), our paper seeks to understand how and why RFQ policies and practices in destination countries shape the skill ecosystem in countries of origin. We focus our empirical analysis on the relationship between Germany, a nation with an elaborate, collectively driven VET system in high demand for individuals with VET credentials, and Kosovo, a country with a strong diaspora and positive migration inflows to Germany. However, in contrast to Germany's VET system, Kosovo's VET system is characterized by a predominantly school-based, centralized, and state-driven system, and complex historical challenges stemming from communist rule, conflict, and instability since gaining independence in 2008. We thus specifically investigate how the skill eco-system has evolved due to increased RFQ policies and practices. This includes an analysis of the landscape of VET actors and their areas of (non-)cooperation, and the underlying politics explaining why the Kosovar skill eco-system has transformed. The empirical focus is on Germany, a country with an elaborate, collectively driven VET system in high demand of individuals with VET credentials, and its impact on Kosovo's skill eco-system, a country with a large and strong diaspora in Germany, and positive migration inflows. However, Kosovo's VET system is characterised by a predominantly schoolbased, centralised, and state-driven system, and a complex history with numerous historical challenges like communist rule, conflict, and instability since gaining independence in 2008. The empirical analysis, with a particular emphasis on the health and construction sectors, draws on 11 interview transcripts with experts and stakeholders within the Kosovar VET system, along with grey and secondary literature. The case study reveals that Germany's policies and practices in facilitating RFQ have led to the emergence of new RFQ-driven VET programmes and transformed stakeholder landscapes in Kosovo. This includes a vocationalisation of the Kosovar skill-ecosystem oriented towards the German labour market, such as the rise in dualized VET programmes in occupational profiles in high demand in Germany, increased private and nonformal provision of VET aligned to German occupational standards, and greater enrollments of youth opting for VET programmes due to prospective migration possibilities. The political factors enabling this transformation include Germany's strong structural power, both economically and in terms of foreign aid, as well as a political elite benefiting from these transformations due to decreased internal pressures resulting from remittances and lower youth unemployment. These findings challenge the methodological nationalism prevalent in much VET scholarship, advocating for a new research agenda that considers the geography of skills development beyond national borders. Key words Recognition of current competency, skilled migration, transition economy, foreign aid.

Migration Prospects, Gender-based Preferences, and Major Choice

Amela Zubovic (presenting author) & Katie Caves (co-author)

Smoothly transitioning into the labor market is at the best interest of individuals once they have completed their education. Difficult economic conditions, other factors like political instability, or simply higher salaries abroad may lead individuals to seek employment in foreign countries (see Lee, 1966). If individuals know they might migrate, they can take proactive steps to enhance their chances of success. For example, they may choose to learn the language spoken in the destination country (Brezis, 2019; Schiff & Özden, 2005) or tailor their skillset to align with occupations in high demand abroad (Di Maria & Lazarova, 2012).

In countries where emigration is not prevalent, research has found specific gender-based segregation in educational pathways (e.g., Barone, 2011; Buser et al., 2017; Su et al., 2009). However, these patterns may not be universal. In the context of migration, individuals might converge towards similar educational paths as they strategically consider acquiring skills that align with high-demand occupations abroad. Alternatively, migration could drive a different gender-based pattern.

To gain deeper insights into this topic, we investigate whether and to what extent migration prospects affect university major choices, with a particular focus on gender dynamics. More specifically, we plan to investigate whether gender-based major choice preferences are consistent across low-emigration and high-emigration contexts, and whether students prioritize migration-related factors over gender-associated preferences when choosing a major.

Major choices are often a complex combination of different preferences and expectations (see Manski, 2004), making it hard to disentangle the real weight migration prospects have on educational choices. By using a survey-based choice experiment (e.g., Combet, 2023; Street & Burgess, 2007), we can estimate the relative importance of certain characteristics for the choice of major.

We study the case of Bosnia and Herzegovina (BiH), which, like the rest of the Western Balkan countries, deals with high emigration among skilled workers. We will administer a survey of around 2,000 BiH students currently attending secondary education. The survey design follows Combet (2023), where the focus is on Swiss students, the gender differences in preferences for major characteristics, and how these affect major choice. We start by using her framework to investigate the gendered major choice in BiH and how these disparities in preferences differ to Swiss students. We expect the choice of major among students to exhibit a different gender-based pattern compared to Switzerland, potentially because BiH students select majors strategically to improve their migration prospects, which might mitigate the influence of gendered preferences in major choice. We test this by adding a major characteristic related to migration chances and expect it to be a large driver of the major choice.

The results of the study help to identify the relative importance of migration for the choice of the major, and whether migration aspirations counteract the gendered major choice.

This knowledge helps policymakers to identify what kind of skills are acquired as a response to migration prospects, accounting for potential gender-based variations. Targeting and improving the sectors where these skills are used, for both male and females, can make staying in the home country more attractive for potential emigrants. On the other hand, destination countries could gain a clearer understanding of the skills they have the potential to attract from abroad.

The Impact of a Refugee Influx on Occupational and Educational Aspirations of German Youth

Eva Lickert, Audrey Au Yong Lyn

ABSTRACT This research project investigates how the arrival of primarily unskilled refugees affects the educational and labor market aspirations of the incumbent population. We utilize the allocation of refugees at the district level as a source of variation and leverage data from the German National Educational Panel Study and regional datasets, employing a fixed-effects model to estimate the impact. Our findings will contribute to the existing literature on the effects of refugee influxes by providing empirical evidence of the link between a refugee influx and the aspirations of the incumbent population. Additionally, the research explores potential mechanisms through which a refugee increase may affect aspirations, including how individuals perceive refugees as either threats or opportunities.

Session 3.2 Employer engagement in TVET

Private Sector Engagement in Vocational Education and Training in times of Conflict: Insights from Ukraine

Poshan B KC

In the summer of 2023, the Swisscontact [EdUP](#) project Ukraine team conducted a study on the role of companies in the organisation of the educational process of vocational training institutions in Ukraine. The study would support the project in redefining its intervention strategy because of the new challenges created by the war. Furthermore, this study aimed to provide evidence for the implementation of state policy in the sphere of promoting the development of Socially Responsible Business (SRB) in Ukraine for the period up to 2030.

The research study identified the areas of collaboration with the private sector that would ensure increased relevance and quality of VET, such as:

- dissemination of information about new technologies and equipment
- conducting production practices (familiarising students with practical tasks improving the skills of potential employees);
- promotion of employment of graduates;
- financial and material assistance (modernisation of the material and technical base of the institution), sponsor financing of the institution;
- the use of material, technical and intellectual resources of the enterprise for the formation of professional competencies of postgraduate students;
- internship of pedagogues and masters of industrial training;
- ensuring market needs

In addition, the research identified the barriers to effective private-sector engagement.

Both for employers and for representatives of professional education institutions, the most significant barrier to effective cooperation between the two sides is the War, the resulting economic crisis which has invariably led to the decrease in the capacities of enterprises and absence of trained workforce with many of them having been drafted to the war effort. *ersonnel.*

One of the striking findings was the **amazing resilience of the Ukrainian Business sector during war times** and consideration of the skilled employees as key factor in their adaptation and growth strategy.

. 45.5% of enterprises predict an increase in business volumes in 2023, compared to 2022. Among them, 8% of enterprises predict significant business growth. At the same time, 24.1% of enterprises predict a result almost similar to that of 2022, and 28.8% predict a decline in business. The business continues to bring back employees and create new jobs.⁴

⁴ *(The research was carried out by the Innovation Development Center, the Office for the Development of Entrepreneurship and Export, with the support of the Ministry of Digital Transformation, the Ministry of Economy of Ukraine, the Ministry of Finance of Ukraine, the Ministry of Community and Territorial Development, the Ministry of Reintegration of the Temporarily Occupied

This presentation will shed light on the implications of private sector engagement in conflict situations like war and underline the role of VET in supporting economic resilience and growth.

territories, the Coalition of Business Communities for the Modernization of Ukraine and the USAID Program "Competitive Economy of Ukraine".

General versus Vocational Education in Recruitment: Which Factors Shape Employers' Preferences Regarding Education?

Aranya Sritharan

As employers act as gatekeepers to jobs, understanding their preferences in hiring decisions is essential (McDonald, 2019). Due to their limited information on applicants' motivation or knowledge, employers' decisions are based on easily observable characteristics, such as education (Imdorf et al., 2017; OswaldEgg & Renold, 2021). Especially in countries with a well-functioning vocational and professional education and training (VPET) system, the question arises what determines employers' preferences regarding different kinds of education. By investigating employers' evaluation of applicants in hiring processes for different positions and occupations, we analyse whether employers prefer applicants with a VPET degree or those with a general education for open positions, when both applicants are qualified (McDonald & Korber, forthcoming). We contribute to the literature by assessing whether familiarity with the VPET system affects these preferences. This investigation helps us to better understand the recruitment and selection decisions made by employers, who are "fundamental as a determinant of inequality, opportunity, and organizational attainments" (Bills et al., 2017) Literature Review and Hypotheses Signalling theories (Spence, 1974) are among the most prominent strands of theories when analysing hiring decisions. They state that the completion of education primarily indicates unobservable traits like trainability and productivity, and that actual contents of education are of lesser relevance. Previous studies show that educational signals differ depending on the context within which they are evaluated (e.g. Damelang et al., 2019; Di Stasio & van de Werfhorst, 2016; Hippach-Schneider et al., 2013). We analyse employers' preferences in hiring processes by focusing on applicants who are equally qualified for the suggested open positions, but have different educational degrees. If employers do indeed perceive these signals differently, we interpret it as a confirmation of Signalling theories. 2 Scholars argue that in highly stratified and vocationally oriented education systems – such as the Swiss education system – employers receive clearer signals from educational credentials than in weakly stratified and generalist systems (Di Stasio et al., 2016). Many European countries know vocational and professional education (VPET) and general education at both the upper-secondary and tertiary education levels. The type of skills that VPET and general education impart differs in several aspects. Thanks to skill transparency, education systems with a well-functioning VPET system tend to have strong linkages with the labour market (Andersen & Van de Werfhorst, 2010). Hence, we hypothesize that in countries with a well-functioning VPET system, applicants with a VPET degree have an advantage in hiring processes due to the fact that specific practical and occupation-oriented skills are in the foreground of VPET, signalling of high employability (McDonald & Korber, forthcoming). Moreover, Shavit and Müller (2000) state that within countries with a well-functioning VPET system, employers who are familiar with VPET may prefer this kind of education to general education. We test this assumption by hypothesizing that employers' characteristics – i.e., their familiarity with VPET – determine their educational preferences in the hiring process. Data and Analytical Strategy Our data stems from a factorial survey experiment among employers in Switzerland. Each employer evaluated eight fictional profiles of applicants for hypothetical job positions: four evaluations for the entry-level position of either 'Administrative Assistant' or 'IT Assistant', and four evaluations for the high-level position of either 'Sales Manager' or 'Head of IT'. When evaluating each applicant, the employers indicated how likely it is that they would invite this applicant for a job interview. The survey yielded an overall sample of 2'384 respondents. Since each participant evaluated multiple applicants, the total number of observations is higher and depends on both the estimation model and included variables. Within this experimental design, applicants' profiles were assigned randomly to the employers and differed in terms of the applicants' education, i.e., whether they have a vocational education or training (VET) or general education degree (for entry-level positions) and

whether they have a 3 professional education and training (PET) or university degree (for high-level positions). To prevent social desirability, the applicants also differed in other dimensions, such as gender or experience. Using multilevel random-effects regressions – which is the standard method when analysing factorial surveys (Di Stasio & van de Werfhorst, 2016) –, we analyse the likelihood of an applicant with a VET degree to be invited to a job interview compared to those with a general education; and the likelihood of applicants with a PET degree compared to those with a university degree. We contribute to the literature by additionally investigating the effect of respondents' familiarity with the VPET system (by including corresponding interaction terms) on this likelihood. We measure the concept of familiarity with the help of five variables: 1) educational background of employers, 2) whether they were born in Switzerland, 3) whether they work in a German speaking region, 4) whether they work in HR and 5) how they assess the relevance of training apprentices within their firm (Abrassart et al., 2020; Bolli & Rageth, 2016; Muehlemann et al., 2007; Wolter et al., 2006).

Preliminary Findings For the two entry-level positions, our findings show that applicants with a VET degree have a higher probability to be invited to a job interview than applicants with general education. For the two higherlevel positions, we find that respondents favour PET only for the position of 'Sales Manager'. For the position of 'Head of IT', they prefer applicants with a university degree. This result may stem from general education being perceived as a strong signal of trainability and less context-specific than VPET, which is highly important in fast changing sectors like IT. Our findings also confirm that respondents who are more familiar with the Swiss VPET system generally have a stronger preference for applicants with such degrees, except for the position of 'Head of IT'. Almost all characteristics have a significant positive effect on the preference for VET for both entry-level positions. For higher-level positions, employer characteristics positively affect the preference for VPET for the position of 'Sales Manager', while employers rather exhibit an aversion towards VPET for the position of 'Head of IT'. We conclude that our findings are in line with Signalling theories and that this signalling also depends on employers' familiarity with the education system. Furthermore, we show that both VET 4 and PET degrees are highly valued by employers in Switzerland when evaluating applicants for open positions. Nevertheless, providing better information on these degrees to those who are less familiar with the VPET system could reduce information asymmetries and further increase the valuation of VPET among employers in Switzerland.

An Analysis of a Dual VET-Apprenticeship Programme in Nepal

Thomas Bolli

The Enhanced Skills for Sustainable and Rewarding Employment (ENSSURE) project is a Technical and vocational education and training (TVET) in Nepal. The project aims to improve labour market outcomes of Nepali workers and to support industries and businesses by three components. These three components consist of 1) support of a Dual VET-Apprenticeship programme, 2) the introduction of short training courses and 3) further training of employed workers.

This paper focuses on the first component, the introduction of a Dual VET-Apprenticeship programme. These Dual VET-Apprenticeships last for 24 months. The first three months consist of classroom education. The following 20 months combine four to five days of workplace training per week with one day of classroom education per week. Finally, the last month consists of classroom education and final examinations. The Dual VET-Apprenticeship leads to a certificate equivalent to the Pre-Diploma in Nepal's Vocational Qualification Framework (NVQF).

The data of the paper stems from surveys among Dual VET apprentices and companies. This allows to analyse outcomes of the Dual VET-Apprenticeship. This includes outcomes in terms of costs and benefits of companies in training apprentices.

Acknowledgments

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Session 3.3 Cohorts and contexts in educational experiences

Intergenerational Mobility of Education in Europe: Geographical Patterns, Cohort-Linked Measures, and the Innovation Nexus

Sarah McNamara, Guido Neidhöfer, Patrick Lehnert

We estimate intergenerational mobility of education for people born 1940-1999 at the subnational level for 40 European countries. The result is a panel of mobility indices for 105 mesoregions (NUTS1), and 215 microregions (NUTS2). We use these indices to make three contributions. First, we describe the geography of intergenerational mobility in Europe. Second, adapting a novel weighting procedure based on cohorts' relative economic contribution, we transform cohort-linked measures into annual measures of intergenerational mobility for each region. Third, we investigate the relationship between intergenerational mobility and innovation, and find robust evidence that higher mobility is associated with increased innovation.

Keywords: Intergenerational Mobility, Equality of Opportunity, Human Capital, Innovation, Regional Economic Performance, Europe. JEL-Classification: D63, I24, J62, O15

The Impact of Subsidies on the Incidence of Training: Evidence from the United States

Guillaume Maxence Morlet

Enrolment in Registered Apprenticeships in the US has risen consistently since the global financial crisis. From 2015 onwards, publicly funded training subsidies were implemented to increase enrolment in Registered Apprenticeships. I evaluate the impact of the first such initiative, the American Apprenticeship Initiative (AAI), on the number of Registered Apprentices. The AAI started in 2015 and was financed by H1-B visa funds. It aimed to subsidise companies as an incentive for them to offer Registered Apprenticeship positions. This aimed at upskilling the American workforce in healthcare, information technology and advanced manufacturing industries and related occupations.

I exploit geographical variation and variation in occupation-industry clusters in the eligibility for funding to identify the causal effect of AAI subsidies to training firms on the number of new Registered Apprenticeships. Considering the existing literature, I discuss the relative advantages that triple difference can have over difference-in-difference methodology in this setting. Findings from triple difference estimation, event studies and distributed lag models indicate that the AAI has not significantly affected the number of new Registered Apprenticeship positions. I additionally show that the triple difference estimates corresponding to the estimated effect of the AAI on the Number of Registered Apprenticeships is economically insignificant. Finally, I conduct spatial difference-in-discontinuity, extended difference-in-difference, and difference-in-difference with propensity score matching. All estimation methods yield results qualitatively aligned with baseline triple difference methodology and pass conventional diagnostic tests. I conclude by discussing policies that could help bolster Registered Apprenticeship in the United States.

An empirical measurement of the social institutions of TVET programs

Patrick McDonald

This paper analyzes what dimensions determine the robustness of social institutions in vocational education and training (VET) programs. The data stems from structured surveys among education experts in Benin, Costa Rica, Nepal and Switzerland. The results show several dimensions affect social institutions' robustness. Fulfillment of the function is the most important determinant of social institutions' robustness, followed by clarity and formality of structures, involvement and extent of culture as well as rigorousness of sanctions. Phase of institutionalization and breadth of scope show mixed results. We further calculate a social institutions robustness index, showing that social institutions are most robust in the analyzed VET programs of Benin and Switzerland.

Keywords: social institutions, robustness, institutionalization

05.04.2024

Parallel Session 4

Session 4.1 Flexibility and permeability in TVET

Greater flexibility in vocational education and training: Are Micro-Credentials the answer?

Christiane Eberhardt, Federal Institute for Vocational Education and Training (BIBB), Bonn

Micro-credentials and micro-degrees are increasingly being discussed in education policy and practice as a flexible and innovative form of qualification. This is because, unlike full degrees or complex certificates, micro-credentials, which are quite new in Europe, can be acquired in a much shorter time and therefore seem perfectly suited to quickly and unbureaucratically meeting current professional qualification needs or individual further training requirements. The topic has gained momentum at a political level: By 2025, the European Commission aims to have taken all necessary measures for the wider use, transferability, and recognition of micro-credentials in EU member states (European Commission, 2020). This conference contribution attempts to illustrate the systemic problems that arise when transferring the concept of Micro-Credentials as introduced by the European Commission in 2020 – mainly aimed to a Higher Education context - to vocational education and training. This is done through the lens of European project implementation and by means of concomitant research.

The BEM project (Beyond Europe with Micro Credentials, project term Jan 2023-Dec 2025) funded by the European Union under the Erasmus+ Capacity Building program forms the framework and the starting point for this conference proposal. A total of 17 partners from 8 partner countries are working together in the partnership with the aim of designing micro-credentials relevant to the labour market and implementing them in their national TVET settings. In the core of Project BEM is the question of how the still relatively vague European concept of Micro-Credentials can be transferred to vocational education and training and with regard to relevance and usability in the labour market.

The results that are to be presented at the conference were developed as part of the concomitant research. Methodologically, both the obstacles and the expectations associated with the concept of micro-credentials were recorded by means of a SWOT analysis and in-depth questionnaires. At the same time, both the literature and practical tools (templates, tool kits, guidelines, inventories) on the topic are continuously identified, evaluated and examined for their usability in the project.

The reference to the labour market relevance of the Micro-Credentials and to target groups not yet covered by the formal VET systems of the partner countries has a significant influence on the design of the credentials and thus clearly distinguishes them from the Micro-Credentials used in the higher education context. In BEM, it is becoming apparent that micro-credentials are being used where formal education does not reach. In this respect, they are add-on qualifications that do not replace traditional qualification components from formal TVET provision but are grouped around it - regarding career advancement, transfer, as well as recognition and crediting issues. There are also indications that the approach of deriving Micro-Credentials from the needs of local companies and developing them together with practitioners can offer long-term prospects for improved vocational education and training cooperation between companies and training providers. Micro-credentials can therefore have an initial function for further cooperation between the learning venues.

Keywords: Micro-credentials, TVET, flexibilization, EU VET policy, Erasmus+

From old narratives to new solutions:
The role of education system permeability in mitigating systemic racism
Katie Caves

Introduction

In June of 2023, the American Education Research Association shared a press release about a new study (Lie et al., 2023), reporting that “a small number of teachers effectively double the racial gaps among students referred for disciplinary action,” and highlighting that “the group of top referrers in our study represented a relatively manageable number of educators, who could be targeted with interventions and other supports” (AERA, June 2023).

Although the study’s findings are compelling in that these teachers certainly have an important impact on racialized outcomes in education, we argue that individual-focused interventions are not the appropriate solution. Using individual-focused interventions and supports to address systemic racial inequity is an old story. We need new stories to counter traditional explanations of racialized opportunity structures. In this conceptual paper, we explore, “How might theorizing education system permeability through Critical Race Theory (CRT) invite educational interests to converge in ways that BIPOC students *and* white students benefit?”

The Old Story

Opportunity in American education is highly stratified by race. Race and racism form “both the cause of and the context for disparate and inequitable social and educational outcomes” (Lynn & Dixson, 2021, p. 1). This manifests in the teachers, curriculum, discipline, and resources available to students. For example, only 57% of African students have access to the full range of math and science courses (U.S. Department of Education Office for Civil Rights, 2014). Likewise, experienced teachers are inequitably distributed based on race among schools **and** classrooms and within schools (Clotfelter et al, 2005). Yet, the dominant narratives around solutions to these challenges typically revolve around individual interventions often focused on students and educators (e.g., administrators, teachers).

One prominent example of an individual-focused intervention aimed at students is mindset, based on psychological evidence that students and teachers can increase learning by fostering a “growth mindset” instead of a “fixed mindset.” One study by Blackwell, Trzesniewski, and Dweck (2007) used a mindset intervention in a diverse low- and middle-income American school where students’ grades tended to go down once they started middle school. They taught their treatment group about mindsets and gave them tools for changing their mindset about their own intelligence. The control group received study skills training. At the end of the year, treated students’ grades went up instead of down.

Other individual-focused interventions include changes in teacher training, supports for teachers, and supports for students. The old story argues that if we can find the right set of interventions and target it at the right people—e.g., the teachers who double racial gaps and specific groups of students—then the sum of small effects will be enough to eliminate opportunity gaps.

A limitation of any individual-focused intervention is the assumption that individual agency is the primary factor in achievement. This diminishes the role of institutional structures, policies, and practices. CRT provides a framework for understanding the history, mechanisms, and impact of institutional racism. A CRT analysis can account for the structural limitations on individual behaviors that lead to academic success and failure as a larger function of racist practice. Put simply, for example, a student in a lower-quality academic setting because of race, class, or gender cannot achieve at the highest level regardless of his personal attitude and effort.

The Counter-Story

New work by Caves and McDonald (forthcoming) proposes a theory that education system permeability is necessary for equity. Permeability is defined as *opportunity* and *access*. Opportunity requires programs to be available at the secondary and post-secondary levels in two types of education. These types are aligned with two theoretical latent skill types (e.g. academic and vocational/professional). Access requires progression routes between programs such that individuals can start and end anywhere in the system. The theoretical permeability type that most closely matches the American education system is the one-pathway model, where formal secondary and tertiary (i.e., post-secondary) education are only available in the academic pathway.

Using a Monte Carlo simulation, Caves and McDonald show that—even in a perfect world where every individual completes tertiary education, everyone is in the program that matches their latent skill type, and skill types are uncorrelated to personal characteristics—a one-pathway model yields lower total achievement and creates skill-based segregation that does not exist in the permeable model. They progressively relax those assumptions and add in an “out-group” that experiences slightly higher skill requirements for tertiary education, slightly lower probability of being in the right program, and slightly lower program effectiveness. Not surprising, the one-pathway model yields dramatically lower achievement overall, segregated outcomes by latent skill type and “out-group” status, and dramatically lower chances of the “out-group” attaining tertiary education even with the highest levels of latent skills. The fully permeable model is not immune to segregated outcomes by group, but the effects are *much smaller* and there is no segregation by latent skill type.

In this conceptual paper, we apply CRT principles of endemic nature of racism, interest convergence (Bell, 1987), and counter-storytelling (1989; 1990) to education system permeability to develop a new narrative about how we can mitigate systemic racism in education. Individual interventions take place in a both one-pathway education system *and* a racialized context. The limitations of the individual approach are clear. A perfect and perfectly effective intervention could theoretically eliminate “out-group” effects—program effectiveness, access to information about programs and to the right programs, and admissions standards. But in a one-pathway model, students will still be lower-achieving on average and will still be segregated by latent skill types especially given the endemic nature of racism.

Discussion

Permeability alone is, of course, not sufficient for mitigating systemic racism. If, for example, one type of program is lower quality than the other, that undoes the benefit of having opportunity in that type. This is especially important when we consider what the practical definitions of education types are in real systems. The history of vocational education and race in America is fraught, to say the least. However, this approach to mitigating systemic racism in education provides a new, hopeful story — everyone with any degree of latent non-academic skills benefits from a more permeable education system regardless of race.

Effective pathways: Articulation policies at Universidad Nacional of Costa Rica with Technical and Vocational Education and Training

Lourdes Castro Campos

Carolina Hernández Chaves

In 2016, Costa Rica established the National Framework of Qualifications for Technical and Professional Education and Training (MNC-EFTP-CR) as a valuable initiative to regulate, organize, and position technical programs offered in the country. This national effort is supported by the collaborative work and contributions of the Ministry of Public Education (MEP), the Ministry of Labor and Social Security (MTSS), the National Council of Rectors of Public Universities (CONARE), the National Institute of Learning (INA), the Costa Rican Union of Chambers and Associations of the Private Sector (UCCAEP), and the Union of Rectors of Private Universities (UNIRE).

This framework represents notable progress in tackling socio-educational changes and occupational profiles. Also, it plays a crucial role in developing new technical programs and restructuring current proposals to align with the requirements of different social and productive sectors. With over 250 qualification standards across various fields, it is a substantial resource for creating diverse educational programs. These standards cover a range of competencies related to discipline, life skills, technology and foreign language proficiency, working conditions, and international benchmarks, among other factors.

This proposal offers a broad perspective on various pathways connecting Technical and Vocational Education and Training to Higher Education in Costa Rica, explicitly emphasizing work-based learning, ongoing training, and professional development that can result in attaining qualifications. Therefore, it explores the articulation policies implemented by Universidad Nacional of Costa Rica for the curriculum design of existing standards of qualifications, as well as requesting new ones, the execution and recognition of the technical programs aligned to the National Framework of Qualifications as optative courses belonging to the programs and curriculum of the university, and the different programs and projects offered to the society, in general, to contribute to lifelong learning and to cope with changing competencies and skills needs.

Session 4.2 Gender issues in TVET

Gender disparities in Vocational Education in East Africa

Maria Gaudenzi

Rooted in colonial legacies, gender disparities persist in education and vocational training, perpetuated by socio-cultural factors such as parental attitudes. Despite strides in addressing gender inequalities, subject choices and career paths continue to align with traditional gender roles.

The main focus shifts to a three-year program, "GET – Gender Equality in Training," implemented by local partners in Uganda and Kenya. Funded by the Austrian Development Agency, the program aims to enhance vocational training centers' capacities to promote gender equality and reduce biases in work-based training. A gender analysis was conducted to identify barriers, legislation, cultural issues, and gender roles in vocational training.

The analytical framework encompasses macro, meso, and micro levels evaluating national policies, institutional structures, household dynamics, and traditional beliefs affecting gender equality. The methodology section outlines a mixed approach using interviews, focus groups, and questionnaires to collect data from students, teachers, and vocational training centers. The study, conducted in February 2022, involved 185 individuals and 157 questionnaires. The findings show that at macro level, in the examination of Uganda and Kenya's legislative structures at macro level, laws and policies promoting gender equality in vocational training are explored. Analyzing the VTI sector through the dimensions of Voice and Rights, and Gender Capacity Building, the study utilizes the Asian Development Bank's gender equality framework. Kenya has extensive gender-related policies, but challenges persist due to patriarchal norms. Women face disparities in employment, education, and leadership. Uganda boasts progressive policies but struggles with implementation, facing issues like early marriages and high GBV rates. Despite affirmative action, women's participation in decision-making remains unequal in both countries. At the meso level, the study explores gender balance, equal access, and pay disparities in vocational training institutions (VTIs) in Kenya and Uganda. The findings reveal challenges related to gender discrimination, stereotypes, and self-sabotage affecting women's education and employment opportunities. Family and community expectations contribute to gender stereotyping. Both countries face issues of female social exclusion, with limited representation of women in leadership roles at VTIs. The study also delves into gender pay gaps, attributing disparities to factors such as negotiation skills and sexual favors. Employment segregation by gender persists, influenced by societal norms and perceptions. Women express confidence in skills but face barriers in accessing opportunities.

At the micro level, the study investigates factors influencing women and men's access to resources in vocational training institutions (VTIs) in Kenya and Uganda. Social networks and social capital are crucial for career advancement, often affected by poverty and gender. Participants highlight challenges faced by women, such as limited networks and economic constraints. Decision-making patterns reveal disparities in household and community levels, with gender-based violence noted. The study addresses workplace safety, the impact of childcare on women's economic participation, and the role of infrastructure. Barriers rooted in traditional norms and discrimination against women in accessing vocational training are explored, alongside efforts towards gender transformation.

Gender and Labour Market Integration Programme

Guillaume Maxence Morlet, Katherine Caves*

Registered Apprenticeships represent a growing labour market integration programme in the United States. The United States's Department of Labor implemented competency-based Registered Apprenticeship (CBRA) in 2008 to address skills mismatches and the chronic gaps traditional timebased Registered Apprenticeship (TBRA) had in serving women and minorities. This paper applies econometric strategies to investigate whether women are more likely to choose CBRA over TBRA as a labour market integration programme. We further analyse whether this effect is even stronger for women with uncertified but existing and occupational-relevant skills. Our empirical findings accompany both hypotheses. Women are significantly more likely to enrol into CBRA programmes, relative to TBRA. Furthermore, women with existing but uncertified skills are significantly more likely to enrol into CBRA, whereas women without skills or with college degrees are not significantly different from the baseline. Our findings are robust to various specifications, and we include a comprehensive set of fixed-effect vectors, addressing industrial, occupational and time-varying state specificities. We discuss the implications of our findings, highlighting how CBRA may be an approach to better serving more diverse populations in Registered Apprenticeship. We also discuss the conditions that CBRA must fulfil to be an effective and beneficial labour market integration programme for its programme graduates.

Keywords: Training, gender, career choice, labour market integration, microeconometrics.

JEL Codes: J01; J10; J16

Impact on young women through gendertransformative vocational skill trainings

Pratima Kunwar, Krishna Kumar Shrestha

A quantitative survey with 211 young women and 134 employers was carried out. Focus groups, in-depth interviews (IDIs) and key informant interview (KIIs) were also carried out. Findings of the study indicated a substantial increase in young people's skill sets for wage-employment opportunities (from 0% to 68%) and heightened awareness of prevention and reporting mechanisms for work-related gender-based violence (from 0% to 98%).

The study also revealed that 57.3% of the beneficiaries were employed or self-employed, with 39.8% in formal jobs and 17.5% in self-employed. Notably, 98% of respondents possessed knowledge of violence prevention measures, and 88.2% found the training helpful in securing employment. The findings reveal that a significant majority of young women, specifically 83%, very importantly receive support from their families to pursue employment opportunities. 53% of companies report an improvement in their recruitment process which was 12% in baseline. 44% employers which take steps towards decent work practices (safe working conditions, no discrimination during hiring, no discrimination on remuneration, have occupational safety and health policy, gender policy and HR policy) for young women.

The project demonstrated high relevance by addressing the needs of marginalized women seeking employment, aligning with local plans and policies, and fostering inclusivity. Participants acknowledged the value of soft skill training, and the project's adaptability in the face of challenges ensured efficient delivery. Despite its recent completion, the project positively impacted young women's employability and gender stereotypes.

In conclusion, the project stands as a model for economic empowerment through training and entrepreneurship development. Recommendations include conducting a long-term impact evaluation, implementing follow-up studies, addressing trade-specific barriers, refining soft skill integration, and considering wellness and care training in the hospitality sector.

Keywords: Gender transformative, gender stereotype, decent work.

Session 4.3 TVET policy and governance

Advances in policy advocacy processes through collaborative action research for educational reform in the Costa Rican Technical Vocational Education and Training (TVET) system

Silvia Camacho Calvo/Jackeline García Fallas

In general, it can be affirmed that one of the purposes of the field of educational research is to ensure that the learning and knowledge developed during the execution of the different phases of the projects contribute to building a wealth of experiences that enable decision-making and the continuous improvement of educational systems, especially in the case of issues of strategic importance for generating cultural changes, social inclusion and equity, which lead to the assurance of social justice through political advocacy processes that contribute to educational reforms. The above, specifically within the framework of educational reforms in Technical Vocational Education and Training (TVET) in Costa Rica, for which collaborative action research was selected as a strategy that allows an inter-subjective construction through reflective dialogue.

The research aims to systematize the characteristics of the process developed between 2017 and 2023 to build political advocacy towards reform in the Costa Rican TVET system, in the framework of the research projects called: Link between education and the labor market: under what conditions can TVET improve the economic income of the young population? and Observatory of Technical Vocational Education and Training (OBEFOTEP), from collaborative action research, as a conceptual and methodological approach. In this specific case, collaborative action research has been used as a strategy for accompanying the personnel responsible for making decisions and carrying out curricular and political changes in TVET, as a mechanism for joint construction, critical comprehensive reflection, and continuous improvement based on research evidence.

The systematization as a methodological strategy gathers the data from the experience shared with the Ministry of Public Education and the National Learning Institute (INA) to analyze the actions intended to contribute towards a curricular transformation and the creation of synergies for joint work under the framework of the National System of Technical Vocational Education and Training (SINEFOTEP).

The main result has been that the collaborative action research not only allows the appropriation of research processes by all participating social actors but also the possibility of generating research evidence that allows for feedback and key information regarding the reforms since the greatest contribution of this strategy is the trust and credibility shared in the process, which is fundamental for decision making.

The main conclusions are that collaborative action research becomes an appropriate strategy to strengthen the political incidence of research in education and in an area such as TVET in which the country must make decisions regarding educational reform and the development of a system that allows optimal conditions for the student population. It allows the construction of knowledge and learning that are legitimized in the process of collaborative work itself, which facilitates feedback and appropriation. This is expressed in the gradual involvement of key actors and sectors in the development of the TVET system through activities that allow for dialogue, construction, and the proposal of actions for continuous improvement.

Professional updating as part of CEMETS guarantees better specialized training for decision-makers, about the political incidence that research projects have generated in the actors, so this updating strengthens the framework of respect, trust, and professionalism that fosters collaborative action-research because the experiences are shared between the sectors and the research team.

One of the main milestones of this experience is the visualization of how the different actors and sectors are linked both for the development of specific processes in the management and consolidation of TVET, as well as for the differentiated and articulated participation in decision-making, facilitated by the analytical, reflective, respectful, and dialogic environment present in SINEFOTEP.

A comprehensive overview of Vocational Education and Training in India, with a focus on policies and progress.

Urgen Dukpa, Falguni Pattanaik

In the wake of the fourth industrial revolution, new technologies have revolutionised the labour market. Consequently, rapid demand for new skills have been arising for all the countries recently. Vocational education and training has been considered as a panacea to this new skill challenge. It is believed that through this system of education, economies can cater the needs of demand for skills arising in the labour market. Hence, it has gained a central space in the policy sphere of all the nations. India not being an exception, has also laid special emphasis on imparting vocational education and training to its population through the implementation of New Education Policy, 2020 (NEP, 2020). “Revamping vocational education and training” has been one of the key targets of this policy. The most comprehensive data on VET in India is collected by the National Statistical Survey Office (NSSO) through its Periodic Labour Force Survey (PLFS), the latest being 2021/22 Periodic Labour Force Survey. This study attempts to comprehend the current status of vocational education and training and has tried to provide an overview of all its demographic and socio-economic characteristics in defining their status in labour market during 2011/12 to 2021/22. Furthermore, it also includes suggestive measures from the policy frontier, emphasizing on its accessibility. The key findings of this study reveal a staggeringly low participation rate in formal vocational training in India. Moreover, maximum participation of VET is acquired from informal VET and not from formal VET. The findings implicate gender differences in participation by fields of formal VET and economic status of those who received it. While men dominated participation in the field of electrical, power and electronics, women took over in textiles and handlooms, apparel. In terms of economic status, majority of male who received formal vocational training participated in the labour force and remained employed, the same did not hold true for female who received formal vocational training. Most of the females held back from participating in the labour force and choose to attend domestic duties. At the policy font, one of the major challenges posed to the government is increasing VET participation rate and improve the employability of those who have received it.

Adaptive Governance in Vocational Education in Emerging Countries: A Case Study Analysis from Albania

Fatjon Dragoshi, Erka Caro

This paper presents a comprehensive overview of the transformative impact of the Skills for Jobs (S4J) project, mandated by the Swiss Agency for Development and Cooperation (SDC) and implemented by Swisscontact in Albania. S4J⁵ is designed to tackle challenges in the VET system and commenced amidst the launch of the VET reform by the Albanian Government, reflecting the ambition to modernize VET. Employing a bottom-up approach⁶, S4J positioned itself as a catalyst for transformative changes within the Albanian VET landscape. The paper explores how the bottom-up approach facilitated a paradigm shift, fostering collaborative partnerships in a traditionally segregated and mistrustful school-based system.

Private sector actors and social partners in Albania have been historically unorganized providing modest, mainly voluntary, and advisory, input in VET. At the same time, the VET sector is characterized by under-financing and a fragile institutional and governance infrastructure. Focused on strengthening the governance of VE schools, S4J gradually improved programs/offer by bringing together schools and the private sector and integrating Work-Based Learning in companies. This resulted in a positive feedback loop, as a critical mass of companies engaged, leading to intensified efforts in quality development and improved governance. Through active engagement and structured dialogue with the private sector and innovative apprenticeship-like schemes, VET institutions underwent a metamorphosis, evolving into agile entities with dynamic offer tailored to the ever-changing demands of the labor market. Data from S4J Monitoring and Results Measurement system show that by the end of phase 2 (June 2023), 2,963 companies in the VET network hosted 8,063 apprentices, and an increase to 48% of the student population engaged in apprenticeships in the academic year 2022-2023. Notably, 71% of 2022 graduates secured employment within a year, a rise from 34% in 2016. In response to company feedback, VE schools strategically paused 8 programs while activating 11, reflecting a dynamic and responsive approach.

The paper employs a case study approach, focusing on two S4J supported VET schools, to illustrate their transformative journey and its impact on governance outcomes⁷ (e.g., adaptability, coherence, inclusiveness, and accountability). This experience offers a framework for guiding gradual reforms toward a demand-based VET system, especially in emerging countries marked by an unorganized private sector. The methodology and analysis are based around governance dimensions⁸ of VET delivery, including regulatory framework, institutional framework, funding, and accountability. Utilizing a mixed-methods approach, data triangulation from providers, businesses, and students will ensure a comprehensive understanding of the governance dynamics driving the shift towards a demand-driven VET system.

The transformative process happening at the school level through this bottom-up approach acts as a dynamic force – adding positive pressure at the top level. As schools take the lead in defining their regional agenda in collaboration with the private sector, they consolidate internal structures,

⁵ S4J (2015-2027) in its second phase expanded its direct support to 10 public VE providers out of 34 VE providers in Albania (<https://skillsforjobs.al/>)

⁶ Complementing parallel SDC projects, part of the Economic Development Domain of the Swiss Cooperation Strategy for Albania, that address policy and sectoral business growth.

⁷ Oliver, D. (2010). Complexity in VET Governance. *Research in Comparative and International Education*.

⁸ Swiss Agency for Development and Cooperation. (April 2022). Understanding and analyzing vocational education and training systems.

optimizing processes, with governance emerging as an organic consequence rather than an objective *per se*. This underscores a vital lesson: achieving systemic change requires bottom-up collaborative partnerships, emphasizing the importance of local level institutions in reshaping elements of governance to meet the evolving needs of the VET landscape.

Session 4.4 SPECIAL SESSION: TVET financing, governance and development in Nepal

Analyzing Financial Allocation and Exploring Funding Models for Strengthening Technical and Vocational Education and Training (TVET) in Nepal: A Time Series Analysis

Baikuntha Prasad Aryal

Adequate financial resource management for the development of Technical and Vocational Education and Training (TVET) is a contemporary issue across the world, even the developed countries are also facing the challenges in TVET financing as to address the emerging concepts like greening TVET, industry 4.0 integration, incorporating advance technology in TVET and focusing practical skills aligned with industry requirement etc. Developing countries like Nepal are also required sufficient financial resources to ensure both access and quality in TVET and also insisted the approaches to generate and mobilize the financial resource to strengthen TVET system which is vital in the dynamic and evolving nature of TVET, where adjustments must be made to address changes in technology, industry demands, and the broader educational environment.

Nepal is currently transitioning in the federal governance system with three tiers of government having certain revenue assignment functions. TVET governance function is mostly under the province government but the revenue authority and the intergovernmental fiscal transfer to the sub national level is not sufficient to manage the TVET sector as the given priority to this sector. However, there is a perceived inadequacy in financial resources allocated to the TVET sector. Financial allocation to the TVET sector in Nepal accounts for about 1% of the total national budget and 0.4% of the gross domestic product on average each year. There is about 30% of the total national budget that has been transferred to the subnational level through intergovernmental fiscal transfer in general while only the 0.55% of the total national budget in TVET sector in particular.

Financial allocation to the TVET sector has been found scattered as about fifteen ministries are involving to implement TVET programs and activities in the federal level. Thus, existing funding system in TVET sector of the country is needed to be analyzed and foster the innovative funding model for this sector that would be relevant to strengthen TVET sector in the country. This paper has explored the existing practice of the financing in TVET including the intergovernmental fiscal transfer system by using descriptive research design. Based on the seven years data collected from the Line Ministerial Budget Information System (LMBIS), the government resource in TVET sector has been analyzed by using multivariate time series analysis method with Auto Regression Integrative Moving Approach (ARIMA) to forecast the government allocation in TVET sector. This analysis is expected to explore the new funding model that will be appropriate in the federal system of the country. Multiple regression analysis has also been used in establishing the relationship among the different variables including expenditure and allocation in TVET sector. The findings of this study will support to identify the existing fund flow system in TVET sector and provide the insight for both policy makers and practitioner to adopt the possible and appropriate funding modality in TVET financing for its sustainability. The study also recommends the strategies and procedures for the policy reform in TVET in general and TVET financing as per the fiscal federalism in particular in the context of Nepal.

Key words: TVET financing, funding model, intergovernmental fiscal transfer

The role of technical and vocational education and training in economic development of Nepal

Ramesh Chandra Paudel

The role of the technical and vocational education and training (TVET) in economic development is widely discussed in the literature of the development economics. The TVET directly contributes to accelerate economic growth, the first order necessary condition for economic development, via increasing the productivity of human resources. Nepal has a long tradition, about seven decades of the TVET education, however it is still not in the mature stage due to number of transitions in political, administrative, and economic arena. Therefore, it is said that Nepal's TVET system needs to be more innovative and compatible with the global trends so that the education system would contribute to overall development of the country. In this regard, 'the contribution of entire TVET system to economic development of Nepal' has not been investigated yet, which is the main aim of this paper. To do so, the paper employs the data for the period from 1990 to 2022 considering the time series properties of the data and reach at the preliminary conclusion that TVET has a statistically significant positive contribution in economic growth, thus in economic development of Nepal. Also, these preliminary results suggest that investing more in TVET may be a way to accelerate the much expected economic growth and overall economic development as this would tie the education system with the productivity and output growth through which Nepal can achieve the goal of socio-economic prosperity of the country.

Local Government Financing in TVET: A Study of Gandaki Province of Nepal

Mahesh Nath Parajuli, Prakash C Bhattarai, Suresh Gautam, Prakash Kumar Paudel, & Milan Shrestha

The national policy in Nepal, particularly after the promulgation of a new constitution in 2015, emphasises the role of local government in designing, implementing and monitoring Technical and Vocational Education and Training (TVET). However, the federal government has remained the major stakeholder in TVET, including its governance and financing. Though multiple agencies are active in this sector, it has suffered from problems like lack of fund and inconsistencies in designing and implementing the TVET programs resulting in weak student learning and thus low employability.

This study explains how do local governments have been financing TVET and provide access to it for youth employment. We detail three fiscal years' (2019, 2020, and 2021) allocation particularly in their investment in TVET and sources of funding made by local governments (palikas) in Gandaki Province. This would help, on the one hand, in understanding the priority of the local governments in designing, implementing, and monitoring the TVET sector and, on the other hand, help developing strategies to support local governments to perform their constitutional responsibility and right. Data for this study was collected from secondary sources – from SuTRA (Sub-National Treasury Regulatory Application). SuTRA is a financial management system managed by the government of Nepal. All 753 local governments in Nepal use SuTRA for their financial management.

This study found that all 85 palikas in Gandaki province allocated a minimal budget to TVET during the three study years. Their average per year allocation in those years was only about 5% of their total budget. Furthermore, TVET was not a priority agenda of those palikas as the source of the allocated budget was largely external and contribution from local governments' internal sources was at a minimum. Their allocation was largely confined to short-term training programmes and budget for formal TVET was hard to find. One implication of such finding is that palikas need support in realizing their constitutional role and capacity strengthening so that they could realize the importance of the TVET sector to contribute to employment generation, and assurance of income for the people.

Keywords: Nepal, Local Government, Gandaki Province, TVET financing

Parallel Session 5

Session 5.1 TVET teachers, instructors, and pedagogy

Improving the quality of education in developing countries: An experimental evaluation of teacher training programs in El Salvador

Carla Cocciaa , Martina Jakob , Joint work with: Aymo Brunettia , Konstantin Büchel a , Ben Jann

Quality education is one of the Sustainable Development Goals advocated by the United Nations, but many developing countries are still far from reaching this target. In the last decades, low- and middle-income countries have made impressive progress in raising school enrollment. Yet, their productivity in converting educational investments into human capital remains low, as international student assessments highlight. In response to these findings, the World Bank dedicated its World Development Report 2018 to what was declared a global “learning crisis”. Recent data from Africa, Asia, and Latin America shows that poorly qualified teachers – both in terms of pedagogical knowledge and content knowledge – are a key barrier to more effective schooling systems. The available evidence even suggests that the learning crisis in developing countries is, to a large degree, a direct consequence of a teaching crisis. Without joint efforts, this situation is likely to reproduce itself: Many of today’s poorly qualified teachers will continue teaching for years to come and consequently shape tomorrow’s teachers. Despite a growing consensus that inadequate teaching quality lies at the heart of the learning crisis, potential solutions to address the issue have remained understudied. Teacher training programs may be a promising strategy to cut through the outlined vicious cycle that plagues many schooling systems. The main goal of our project is to assess the potential of such programs to raise student learning outcomes in a context that is characterized by a twin deficit among teachers: a lack of both pedagogical knowledge and content knowledge. We further aim to analyze how gains in teachers’ competencies are passed on to students, and how training programs should be designed to optimize their effectiveness. We are particularly interested in quantifying the relative efficacy of pedagogical and content-related training elements, and whether combining them unfolds relevant complementarities. To study these questions, we collaborated with educational experts and Consciente, an NGO specialized in evidence-based schooling projects. Our team of economists, sociologists, and educational scientists has designed a randomized controlled trial (RCT) that targets 338 primary schools and approximately 7200 students in El Salvador. Its core features three teacher training programs focusing on either (i) pedagogical knowledge, (ii) content knowledge, or (iii) a combination of both inputs, referred to as pedagogical content knowledge. In 2022, primary school math teachers participated in either a control group without any training or in one of these training programs that shared a common basic framework combining face-to-face meetings, coaching elements, and self-study modules. To quantify the impact of the interventions, we collected comprehensive data on teacher competence (i.e. content knowledge through math assessments & teaching practices through classroom observations) as well as student learning outcomes in math across two consecutive school years (2022 and 2023). By March 2024, we expect to have all the relevant data to present short- and first long-term results and shed light on possible answers to the important but largely understudied question of how to advance educational quality in a schooling system staffed with poorly qualified teachers.

Training Transfer and Organizational Environment: Exploring the Perceptions of New Instructors

Anup Bhurtel

New instructors are recruited on contract basis to conduct regular classes at diploma level and in short term training courses in technical schools of Nepal. They come up with fresh energy and motivation to exhibit better performance in the classrooms after they acquire instructional skills from the skill-based TVET training. But do they bring expected changes in their performance after the training? This research aims to understand how new instructors share their experiences of training transfer back to their workplace. Using case study method, seven contract-based instructors appointed and working in different technical schools of Council for Technical Education and Vocational Training (CTEVT), Nepal, were purposefully selected who had taken the training on instructional skills within one year's time. This study showed that they had positive experiences with respect to the training, but had bitter experiences during the course of training transfer. Poor supervision from supervisors and discouragement from peers and seniors were found to be the key influencers in the transfer process. In addition, vast curriculum compared limited course duration, unavailability of resources, and pre-set culture of the schools substantially influenced the training transfer of the new instructors. Hence, the work environment consequently affected their training transfer. Further, the study found that they got convinced that they either had to adjust with the organization, or to explore possible opportunities elsewhere for career growth or further study. Practical and research implications are explained in the paper.

Keywords: new instructors, training transfer, technical schools, organizational environment

Pedagogical transformation” of apprenticeships through a competence-based approach in the
Benin crafts sector

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This article examines the pedagogical transformation generated by dual apprenticeship training and its impact on the Benin crafts sector. Since 2005, a dual training has been given to apprentices with the purpose of raising the competence of the master craftspeople. To conduct this research, the authors adopted qualitative methods. Direct observations were used through visits in 7 training centres and 39 workshops. The authors applied life-history approach and semi-structured interviews to collect data with 96 graduates, non-graduates, professional association personnel, training centre staff and trainers in Parakou, the most important city in central and northern Benin. The respondents were interviewed using purposive sampling to pick actors from professional associations and snowball sampling to select the others. The study is underpinned by social change theory, with an emphasis on the factors and agents of change. The research findings indicate that dual training has a favourable impact on skills development, competency transfer and job performance in the crafts sector. The recipients who succeed in setting up their own workshop contribute to replicate a competence-based approach to apprenticeships and stand out in the competitive labour market. Craftspeople who are unable to stand out in the labour market face employment insecurity. The majority of the graduates interviewed had developed high self-esteem and were proud of their valuable knowledge and their ability to deliver high-quality services to satisfied clients. Self-esteem is a significant factor, which can be regarded as an agent of social change because it contributes to a deep understanding of the transformation in the crafts sector.

Keywords: Pedagogical transformation; dual training; apprenticeship; competence-based approach; labour market competition; Benin.

Session 5.2 TVET and learners

Students' Enrollment Decisions in Benin Technical Agricultural Schools: A Narrative Inquiry

Mawutin Nathalie AGBAHIDE

To address food security, youth unemployment, and significantly increase enrollments by 2030 in Benin, one is prompted to inquire: What strategies can be effectively employed to involve students, especially the youth, more actively in agriculture? Additionally, what strategies can be used to generate agricultural income efficiently, essential for reducing poverty? To achieve these goals, human capital must be developed for agriculture. In this context, it is essential to understand the various internal and external motivational aspects that influence students' enrollment decisions, the different constraints and challenges they face, and their career plans for their future professional life to achieve a status of sustainable agricultural and industrial development. Providers, advisors, and educators in Benin's Technical and Vocational Education and Training (TVET) sector should be acquainted with students' plans and the occupations themselves to assist the state in its journey towards the gradual reduction of the poverty rate. This presentation is based on an investigation conducted in southern Benin, advocating for the accessibility of TVET and the realization of equity. I employed the qualitative method, narrative inquiry, to collect stories and experiences regarding their motivation to enroll in technical agricultural schools. The participants were five deliberately selected fourth-year students. An in-depth interview technique was used, and participants' narratives were collected through interviews, with field notes taken. The collected stories were analyzed and interpreted with the cognitive theory of motivation as the theoretical foundation. Furthermore, thanks to internal and external motivation, students have undertaken to be selected to benefit from the state's assistance in its march towards the gradual reduction of the poverty rate. Additionally, it seems crucial for TVET providers, advisors, and educators in Benin to be aware of students' plans and the occupations themselves, as students designate entrepreneurship as their career goal

The systematic incorporation of the IVET learners' perspective into TVET policy as an important element for the attractiveness of TVET systems – a German-Danish-Swiss comparison

Ute Hippach-Scheider

The apprentice's perspective is of central importance for the educational policy design and further development of TVET systems. Their experiences and assessments, their satisfaction or points of criticism have an impact on their environment and society. They play a decisive role in determining whether TVET is perceived as attractive. Especially in systems that have a strong supply side, the choice of learners determines the success of measures that aim to strengthen VET or to stop the continuous decline of apprenticeship numbers as in Germany, Switzerland or Denmark. The skilled labour crisis is no longer a marginal issue in some developed countries, like Germany and Switzerland. Rather, it has arrived in the consciousness of large sections of society and at the centre of politics. The pressure to increase the number of IVET learners is high. Not only but especially in a tense situation, it is crucial for a potentially successful VET policy to know the perspective of those who have decided to enter IVET. It is therefore essential for a successful TVET policy to know the views and opinions of the learners. Questions about how they cope in the learning locations, how they experience the learning situation in the vocational school and the training company. What motivates them, what is a particular challenge for them. The paper presents and discusses whether, how and with what content-related focus this takes place systematically in Germany, Switzerland and Denmark. The basis of the paper is a project of the BIBB (Federal Institute for Vocational Education and Training; <https://www.bibb.de/en/136782.php>). The findings of the project provide an insight into how and to what intensity systematic monitoring of the apprentices' perspective takes place in the three comparison systems and thus the possibility of participation and indirect design options for vocational learners. Remarkable differences between the countries become recognisable. The results to be presented can contribute to thinking more intensively about the role of learners in our TVET systems and provide impulses for new approaches as to how their perspective can be given more space within the framework of governance. Through an extensive literature and document analysis, a comparative overview of different forms and approaches of apprentice surveys could be developed. The results are indicative of the extent to which the learners' perspective is relevant for policy-making in the field of VET. At the same time, both a non-representative online survey and group interviews of apprentices took place. They underpin and reflect the results of the literature and document analysis. The paper is based on the theoretical background of actor-centred institutionalism (Scharpf, 2000) and actor-network theory (Latour, 2007). However, since education policy measures also represent sociopolitical decisions, it would be obvious to provide the group of learners with an at least indirect form of participation.

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Social Representation of Costa Rican Youths on the Dual Technical and Vocational Education and Training Modality (EFTP Dual)

Claudia Hunink

Context: The phenomenon of increased youth unemployment is a tragedy for both the economy and the affected group of people. Costa Rica struggles with a youth unemployment rate that currently stands at 34.2% (Instituto Nacional de Estadística y Censos [INEC], 2022). In this context, the prevailing discourse has been portraying dual technical and vocational education and training (TVET) modalities as a panacea against labor market structural problems (Álvarez-Galván, 2015). In light of this, a bilateral cooperation agreement between Germany and Costa Rica was reached in 2016, to promote cooperation on the topic of TVET. Although such educational programs are said to have enormous potential for integrating young people into the labor market, they are perceived negatively by certain sectors of society, which could be seen as a paradox. However, it should be noted that the category *youth* homogenize a group of people of the same biological age that can have very different backgrounds. In many countries, including Costa Rica, the target group of such educational programs tends to be young people who are considered vulnerable due to their socio-economic background (Beirute Brealey, 2018). Thus, the (dis)interest in vocational training seems to be a question of social class, especially in particularly unequally structured societies of the global South (Allais, 2020; Clement et al., 2021). However, it is questionable how this participating group of people perceives vocational education itself. Considerable research gaps have been identified in this regard (Pilz, 2019; Shi & Bangpan, 2022). Based on this, the following overarching research question is pursued: What expectations and hopes do trainees of *Educación y Formación Técnica Profesional Dual* (EFTP Dual) in Costa Rica associate with this modality?

Approach: At two vocational schools of the Costa Rican Ministry of Education (CTP-MEP), group interviews were conducted with 20 EFTP Dual students at *técnico IV* level. The data was analyzed after the transcription of the audios, following the research style of the Grounded Theory Methodology (GTM) (Strauss & Corbin, 1996).

Findings: The interviewees are aware of the contextual condition of Costa Rica, such as the high youth unemployment. They believe that even academic qualifications do not guarantee a successful transition into the labor market, as they perceive their young age and lack of work experience as a primary obstacle to find employment. They participate in the EFTP Dual with the hope that the practical work at the company will be recognized as work experience by the future employers and that they will consequently find employment after the apprenticeship. Overall, they perceive an increased acquisition of skills compared to students of the regular TVET programs. In addition, they also mention positive changes in their personalities as a result of being introduced to the unfamiliar professional world at the company. Due to their high expectations for the future, the apprentices accept multiple burdens during their apprenticeship, such as school lessons followed by work in the company, not having received the promised state scholarship payment for months, etc., whereby some of the apprentices had to drop out of the EFTP Dual due to financial hardship.

Conclusion/Outlook: The microcosm of the company represents an unfamiliar world for youths. After all, educational institutions follow a different logic than the labor market. The integration into the company leads to a kind of "habitus transformation" (Bourdieu, 1987) and can be interpreted as a halfway into adulthood, while the subsequent entry into employment could stand for initiation. This study cannot make any statements about the career of the interviewees after their apprenticeship. However, it would make sense to carry out long-term studies on the topic of labor market integration in line with the 8th Sustainable Development Goals.

Keywords: Technical Vocational Education and Training, Costa Rica, TVET, Youths, Subject Perspectives, Aspiration

Session 5.3 Employability and employment trajectories

The Impact of Cognitive and Non-cognitive Skills on Selection in Training Firms, Training Completion, and Post-training Earnings Trajectories and the Important Role of the Firm

Mahdi Gholami, Samuel Muehlemann

This paper investigates the impact of cognitive and non-cognitive skills of ninth graders on selection in training firms, completion of dual apprenticeship training, and post-training earnings trajectories. Previous research has shown that these skills are crucial for success in the labor market, but little attention has been given to the role of the firm in shaping earnings variance. To address this gap, we propose a comprehensive examination of the relationship between cognitive and non-cognitive skills and earnings by incorporating firm characteristics (such as firm size, median wage in the firm, and unobserved time-invariant heterogeneity). Using data from the National Educational Panel Study (NEPS) and administrative records from the Institute for Employment Research (IAB), we analyze a sample of German students who were surveyed in ninth grade in 2011, their initial selection in training firms, completion of dual apprenticeship training and subsequent post-training earnings until 2019. Our study includes various competencies, such as math, reading, and science literacy, alongside noncognitive skills, specifically the Big Five personality traits. Our findings indicate that both cognitive and non-cognitive skills significantly influence the selection process in apprenticeship training, with better skills leading to placement in higher-paying companies. Notably, large firms seem to prioritize math grades and reading competencies when selecting apprentices. Additionally, the initial wages of apprenticeship graduates are positively associated with their math competencies, as measured in 9th grade, for apprentices who leave the training firm after completing their apprenticeship. However, we find that once we account for firm characteristics, the association between cognitive and non-cognitive skills and post-training wages is no longer statistically significant. We interpret our findings that math competencies are an important signal in the market for apprentices but also in the market for skilled labor when employees do not yet have substantial labor market experience and when firms could not yet acquire relevant information about an individual's productivity.

Keywords: Cognitive skills, Non-cognitive skills, Apprenticeship training, Training completion, Post training earning

Costa Rica: Achievements and challenges in the implementation of reforms to strengthen the TVET system, with a view to improving employability

Hilda Ugarte Medina

Objective:

Highlight the achievements and challenges resulting from the efforts that have been taking place in Costa Rica, during the implementation of three important reforms for the TVET system, from 2014 to 2023.

Methodology:

Bibliographic review of inputs such as: Laws, decrees, procedures, plans, reports and publications.

Description:

Between 2014 and 2023, Costa Rica has implemented reforms aimed to strengthening the Technical Education and Vocational Training System, such as:

- Creation and implementation of the National Qualifications Framework for Technical Vocational Education and Training of Costa Rica (MNC-FTP-CR).
- Promulgation and operationalization of the Dual Vocational Technical Education and Training Law (Law 9728 and its General Regulations).
- Creation of the National System of Professional Technical Education and Training (SINEFOTEP) with its corresponding Advisory Body and Technical Secretariat.

Some of the achievements linked with the reforms mentioned above, are the promulgation of the legal support for the instances and the modality created and the establishment of technical and administrative conditions to operationalized it; as well as the generation of products associated with the reforms, such as: Design of Qualification Standards (EC), creation of mechanisms for aligning the offer designed with the EC, organization and implementation of a Special Scholarship Fund, creation of a special student insurance, design and implementation of dual programs, preparation of strategic and operational plans, execution of dissemination strategies, among others.

However, there are still some important challenges to achieve the desired impact with these reforms, among which there can mentioned: Lack of knowledge of the scope and impact of the reforms implemented by some sectors; the need to increase the involvement of the business sector, lack of clarity in the strategic discourse, limited designed offer, doubts about the quality of the curricular offer by private educational institutions, and also an issue about governance, in case of SINEFOTEP.

The new actions and the reforms that come along with them as wells as the documents such as the laws, decrees and regulations, strategies, plans, improvements recommended and monitoring, requires additional efforts to secure its effective implementation.

Recognition of Prior Learning: Analysing existing procedures in a national and international context

Lena Dändliker, Thomas Bolli

In this study, commissioned by the State Secretariat for Education, Research and Innovation (SERI), we analyse the challenges of procedures for the «recognition of prior learning» in vocational education and training (VET). Such procedures enable employees to have their competences recognised towards a VET qualification. The relevance and potential of the «recognition of prior learning» in Switzerland is high, as ensuring the employability of people without an upper secondary level qualification - i.e. around 370,000 people in employment - could counteract the shortage of skilled workers.

In order to be able to compare such procedures internationally, we have developed a typology. We differentiate between two dimensions: the primary objective – «dispensation» or «partial/full certification» – and the primary evaluation method – competence verification with exam or equivalence verification without exam. The combination of the two dimensions results in four types of procedure. In Switzerland, the «equivalence verification-based dispensation» type dominates. Our literature research shows that in the EU states, in contrast, the «exam-based partial/full certification» type is the most widespread. Compared to the EU states, «recognition of prior learning» procedures are used relatively frequently in Switzerland, accounting for around 8% of all VET qualifications in 2020.

Our study presents the results of a structured online survey, which were also discussed in a policy workshop. It shows that there is still potential for optimisation in the «recognition of prior learning» procedures in Switzerland. The results show that the confederation, the cantons and the employer associations are generally in favour of promoting the procedures in Switzerland. However, there are differing ideas as to who should bear the costs and the moderation of the procedures. We also identify various obstacles, such as the fact that the target group is not sufficiently informed about the procedures.

Session 5.4 SPECIAL SESSION: Findings from the Nepal Youth Survey

Youth Income and Associated Factors in Nepal: Insights from the 2022 Youth Survey

*Mahesh Nath Parajuli, Prakash C. Bhattarai, Suresh Gautam, Prakash Kumar Paudel, Usha Bhandari,
Anil Gupta*

Involvement in earning has always been one of the fundamental quests for most people as they think it is one prime aspect for better living. Accordingly, countries around the world have been seeking answers to questions like what contributes to the increase of income of the youth. This study aimed to see the factors that contribute to higher income among the youth in Nepal.

The study adapted the questionnaire used in Benin by the LELAM research team, a research project being implemented in Benin, Chile, Costa Rica, and Nepal. The questionnaire, however, was contextualized to Nepali situation. The study covered a total of 1503 youth of age between 21 and 30 in three cities (Dhangadhi, Kathmandu, and Biratnagar), located in different geographical regions of Nepal. These cities have been major destinations for youth migrants, mainly for studying and seeking jobs, not only from nearby districts but also from distant hill and mountain districts. Data collection was carried out by the local enumerators who had prior experience of data collection in similar types of studies and were also trained for this study. The enumerators randomly approached youth in these different cities and interviewed them with their consent to participate in the survey, after confirming their age (21-30).

Out of total 1503 surveyed youth, only 432 (28%) reported that they were regularly earning. A logistic regression model was used to analyze the associated factors of earning of the youth. It was found that male, higher education, training, self-employment, and positive attitude toward future is associated with the income of above the minimum basic salary. More importantly, this study also found that those with technical and vocational education do have the prospect of being in the group earning above the minimum basic salary compared to those with general education. This study thus establishes the importance of TVET, training, entrepreneurship, and positive outlook toward future in achieving better earning status.

Key words: youth, income, TVET, Nepal.

Assessing Youth Employment in Nepal: Current Landscape and Future Aspirations
Mahesh Nath Parajuli, Prakash C Bhattarai, Hari Prasad Lamsal, Anil Muni Bajracharya, Suresh Gautam, Prakash Kumar Paudel

The Labour Force Survey of 2019 in Nepal illuminates the employment dynamics, revealing that 20.7 million individuals, constituting 71.5 percent of the total population, fall within the working-age bracket (15 years and above). Among them, 7.1 million are employed, with 2.8 million engaged in foreign employment. Notably, 11 percent of the working-age population remains unemployed (Central Bureau of Statistics [CBS], 2019). The informal sector commands a significant share, amounting to 62.2%, and the non-agricultural sector emerges as the predominant force, encompassing 41% of the national employment structure.

Against this backdrop, this study aims to scrutinize the current state of youth employment in Nepal. Specifically, the research focuses on evaluating the employment status of youth and delving into their future aspirations. A survey was conducted, encompassing 1400 youths aged 20-29 in three major cities: Kathmandu, Biratnagar, and Dhangadhi.

The findings reveal that a substantial portion of youth (65.6%) still relies on parental support. Agriculture emerges as the primary profession for both fathers (44.6%) and mothers (51.5%). Among employed youths, a majority (71.3%) express satisfaction, attributing it to the acquisition of skills. Only 21.1% cite good wages/salary as the reason for their contentment. For dissatisfied individuals, 70% point to low salary as the primary cause.

Notably, a significant number (68.2%) receive financial support from their families for their entrepreneurial endeavors, as opposed to seeking support from financial institutions. However, nearly 30% express a desire to transition from their current employment, with over 70% attributing this intention to inadequate income. Moreover, 50.6% of respondents express a strong inclination to seek employment actively, underscoring a substantial emphasis on securing job opportunities or advancing professional careers.

Furthermore, a noteworthy 31.6% of respondents express a desire to establish their own businesses, signaling a prevalent entrepreneurial spirit. A small proportion (5%) remains uncertain about their future plans, indicating a need for guidance.

Hence, this study serves as a significant contribution to knowledge in Nepal, particularly for policymakers. It aims to enhance the productivity of the active-age working population and boost the contribution of the primary sector to fortify the national economy in the long run.

Keywords: Youth employment, Future aspiration, Nepal

Technical and Vocational Education and Training (TVET) has long been considered a vital pathway for youth to employment opportunities. But in many countries, including Nepal, the TVET sector has lagged against the expectation of its contribution to creating employment. With the consideration, the paper presents a study that has the objective to examine the relationship between youth education, their preference toward the streams of the study (TVET vs general), and their employment, specifically focusing on technical and vocational education and training. The study was conducted in 2022 in three major cities in Nepal: Kathmandu, Biratnagar, and Dhangadi, among 1503 youths of 20-29 years age group.

The paper draws meaning using descriptive statistics and binary logistic regression model to analyse the outcome variable “youth employment”. The result shows that the students studying in privately funded TVET institutions have higher chances of getting employment opportunities. Additionally, the study explores the significance of gender roles in determining the choice between TVET and non-TVET sectors – more boys preferred TVET compared to girls. Therefore, despite the emphasis on equitable technical skills and vocational training, the sector has not contributed satisfactorily to fulfilling the youth aspirations for employment. This indicates there are critical concerns in Nepali TVET, particularly in its linkage with the employment sector. Consequently, even after 70 years of continuous efforts, Nepali youth are finding that it has not been that helpful in getting employment and, thus, a better living.

Key Words: Youth, Education, Employment, TVET, Nepal