Appendix 1: Annotated bibliography

This annotated bibliography contains brief descriptions of the most cited items in this report as well as summaries of the 14 U.u publications used in Chapter 7.

1.1. Most-cited items

This section contains brief descriptions of the most cited items in this report in order to number of citations.

1.1.1. 'Give Courage to the Ladies'

Kimberly Safford, Deborah Cooper, Freda Wolfenden & Joyce Chitsulo (2013). *'Give courage to the ladies': expansive apprenticeship for women in rural Malawi.* **Journal of Vocational Education & Training, 65:2, 193–207.**	
Citation	⇕Malawi: Safford, et al., 2013
Comment	This paper examines the apprenticeship opportunities in a large-scale Access to Teaching Scholarship in Malawi. The programme's study materials and support structures are designed to move participants from restrictive to expansive contexts for learning, and to develop hybrid roles as students, community workers and apprentice teachers. The authors examine data from the first cohort of participants and consider the extent to which the Scholarship offers an innovative model of expansive apprenticeship to address barriers to female continuing education and chronic teacher shortages in sub-Saharan Africa.

1.1.2. Achieving Teaching Quality in Sub-Saharan Africa: Empirical Results from Cascade Training

Lange, Sarah (2016). *Achieving teaching quality in sub-Saharan Africa: Empirical results from cascade training.* **Bamberg: Springer, p. 242.**	
Citation	⇡Cameroon: Lange, 2016
Comment	This study is concerned with the question as to whether cascade training in professional development of teachers can contribute to the improvement of teaching quality. The author explores the effectiveness of training multipliers in schools in Cameroon. The report focuses on whether the participation of teachers in professional development leads to differences in the teaching practice and in the attitude of teachers. This research question is analysed with a research methodology, which encompasses a questionnaire survey provided to teachers, students and principals, as well as a teacher video survey and a student achievement test. The empirical results show the effects of cascade training on the learner-oriented teaching practice, if the trained teachers are supported in their roles as change agents. Among the conditions for the conceptual quality and the implementation of cascade training, the continuity of school-based professional development is particularly emphasised in light of the results.

1.1.3. UNESCO-UNEVOC World TVET Database Country Report Nigeria

UNESCO-UNEVOC World TVET Nigeria, p. 13, Database country report	
Citation	⇡UNESCO-UNEVOC, 2012
Comment	A brief report on the general characteristics of the TVET system in Nigeria, including the country's TVET mission, strategy, legislation, current reforms, and major projects and challenges. It also contains information on Nigeria's formal, non-formal and informal systems, the governance and financing of TVET, and the country's qualifications frameworks.

1.1.4. Lessons for Developing Countries from Experience with Technical and Vocational Education and Training

Kingombe, Christian (2011). *Lessons for Developing Countries from Experience with Technical and Vocational Education and Training.* **International Growth Centre (IGC) working paper, reference number: F-39011-SLE-1.**	
Citation	⇧Sierra Leone: Kingombe, 2011
Comment	Based on research on the lessons learned from recent TVET reforms in other developing countries, this paper aims to inform the future comprehensive design and implementation of strategies for TVET in Sierra Leone. It makes suggestions for how to address future challenges and opportunities to ensure that the good performance of TVET reforms contribute to the promotion of sustainable growth through private sector development. The paper is structured as follows. • Section 2 provides a stock taking of the available quantitative evidence on the impact of TVET. • Section 3 presents and discusses different institutional and strategic TVET frameworks. • Section 4 discusses the importance of a demand-oriented TVET system. • Section 5 discusses the various existing and potential sources for the financing of the TVET system. • Section 6 presents various examples of successful external cooperation on TVET projects in Africa and Asia. • Finally, section 7 presents policy options.

1.1.5. Assessment of Perceived Attributes and Instructional Use of Information Communication Technology

Agufana, PB (2015). *Assessment of Perceived Attributes and Instructional Use of Information Communication Technology by Lecturers in Technical Training Institutions in Kenya.* **Thesis submitted in partial fulfilment of the requirements for the award of the degree of Doctor of Philosophy in Curriculum Instruction and Educational Media of Moi University, Eldoret, p. 159.**	
Citation	⇡Kenya: Agufana, 2015
Comment	The specific objectives of this study were to establish the relationship between perceived attributes (ease of use, usefulness, cultural relevance, and government policy) and instructional use of ICT. The study adopted the quantitative research design.

1.1.6. Republic of Botswana (2015) ETSSP 2015–2020 — Education & Training Sector Strategic Plan

Republic of Botswana (2015) *ETSSP 2015–2020 — Education & Training Sector Strategic Plan, p. 174.*	
Citation	⇡Botswana: Government of Botswana, 2015
Comment	The Botswana Government, through the Ministry of Education and Skills Development (MoESD), has set out its five-year Education and Training Strategic Sector Plan (ETSSP: 2015–2020) setting out its priorities for the sector. It is designed to give guidance to decision makers and planners at all levels and aims to improve education sector performance over the next five years. The plan refers to many of the challenges facing the education sector and the various strategies, programmes and activities designed to meet these challenges.

1.1.7. Factors Affecting Youth Entrepreneurship Development within Kibera, Kenya: the Perspective of Entrepreneurship Education

Sambo, Wise (2016). *Factors affecting youth entrepreneurship development within Kibera, Kenya: the perspective of entrepreneurship education.* **Problems and Perspectives in Management, 14(2–2), pp. 331–338.**	
Citation	⇕Kenya: Sambo, 2016
Comment	This study seeks to investigate and report on the factors affecting youth entrepreneurship development with specific reference to entrepreneurship education in Kibera, a district of Kenya. Two objectives are identified, namely (i) to determine the government's provision and access to entrepreneurship education and training among the Kenyan youth, and (ii) to determine whether there is a relationship between the level of education, training and development of youth entrepreneurship. Findings revealed a strong positive correlation between the provision of entrepreneurship education and development of youth entrepreneurship, and that the level of education has a very weak positive correlation to youth entrepreneurship development. Recommendations are made on how youth entrepreneurship can be improved in Kibera and the rest of Kenya.

1.1.8. Traditional Apprenticeship in Ghana and Senegal

Sonnenberg, K. (2012). Traditional Apprenticeship in Ghana and Senegal: Skills Development for Youth for the Informal Sector. Journal of International Cooperation in Education, Vol. 15, No. 2 (2012), pp. 93–105. CICE Hiroshima University.	
Citation	⇕Ghana, Senegal: Sonnenberg, 2012
Comment	Ghana and Senegal have long histories of traditional apprenticeship. These forms of skills training reach more youth than formal technical and vocational training. This paper examines the approaches these two countries' governments have taken to increase access to and quality of non-formal skills training opportunities. Despite a lack of data on the long-term outcomes of these initiatives, programmes and reforms, several important implications arise from these countries' experiences. These implications are discussed, as well as areas for future research.

1.1.9. Hospitality and Tourism Education in Uganda

Eddy Kurobuza Tukamushaba & Honggen Xiao (2012). Hospitality and Tourism Education in Uganda: An Integrative Analysis of Students' Motivations and Industry Perceptions. Journal of Teaching in Travel & Tourism, 12:4, pp. 332–357.	
Citation	⬆Uganda: Tukamushaba, & Xiao, 2012
Comment	This article presents an integrative analysis of students' motivations in choosing hospitality and tourism programmes as well as industry perceptions of graduates' qualifications for employment in Uganda. Implications of the study are discussed in light of curriculum and programme refinement to better prepare future graduates for the industry.

1.1.10. Mapping Non-formal Education at Post-primary Educational Level in Uganda

Bananuka, T., & Katahoire, A. (2008). *Mapping Non-formal Education at Post-primary Educational Level in Uganda* [Working document]. http://cees.mak.ac.ug/sites/default/files/publications/Session.pdf	
Citation	⬆Uganda: Bananuka & Katahoire, 2008
Comment	This paper explores various cases of non-formal education at post-primary education level in Uganda with special focus on the analysis of the context of non-formal education (NFE) provision and the curriculum. Other issues explored include educator training, materials development, teaching and learning methods, policy development and implementation, the relationship with formal education, linkages with work and employment, and issues of sustainability and continuity.

1.1.11. Government of Nigeria (1985) Education Act No. 16 (National Minimum Standards and Establishment of Institutions)

Government of Nigeria (1985). Education Act No. 16 (National Minimum Standards and Establishment of Institutions)	
Citation	⬆Nigeria, Government, 1985
Comment	An Act to deal with, amongst other things, the specification of various authorities empowered to prescribe minimum standards of education in Nigeria; and to impose penalties for any contravention of its provisions. The document contains a section on secondary and teacher education, and a section on technical education. It states the purpose of TVET and teacher education, as well as the minimum standards for each of them.

1.1.12. Inclusiveness in the Vocational Education Policy and Legal Frameworks of Kenya and Tanzania

Malle, A. Y. (2016). Inclusiveness in the Vocational Education Policy and Legal Frameworks of Kenya and Tanzania. Journal of Education and Learning, p. 103.	
Citation	⬆Kenya, Tanzania: Malle, 2016
Comment	This study examines the status of inclusiveness in the education and training policies of Ethiopia in comparison to those of selected East African countries. Most of the study participants agreed that the issue of disability was not adequately addressed in the education and training policies or the legal and implementation instruments of the study countries. The participants also proposed valuable recommendations.

1.1.13. Video as a Tool for Agricultural Extension in Africa: A Case Study from Ghana

David, S., & Asamoah, C. (2011). Video as a tool for agricultural extension in Africa: a case study from Ghana. International Journal of Education and Development Using ICT, 1516.	
Citation	⬆Ghana: David, & Asamoah, 2011
Comment	The paper explores the effectiveness of video viewing clubs (VVCs) as a training method. Results suggest that the VVC is effective as a relatively low cost, interactive training method for providing low-literacy populations with skills, information and knowledge on complex technical topics. The paper concludes by discussing the challenges of scaling up VVCs and identifying issues for further research.

1.1.14. Undergraduate Students' Learning Outcomes

Alade, I. A. (2015). Effects of Three Categories of Manpower on Undergraduate Students' Learning Outcomes in Technical Education and Their Implications for the Curriculum Implementation. JISTE Vol. 19, No. 2, 2015, p. 1144.	
Citation	⬆Nigeria: Alade, 2015
Comment	This study examines the effects of three categories of manpower on undergraduate students' learning outcomes in technical education, and their implications for the curriculum implementation. It was concluded that the three categories of manpower are effective at enhancing students' learning outcomes in technical education in various dimensions. To this end, it was recommended that literate artisans should be integrated into the teaching of vocational skills in tertiary education institutions.

1.1.15. Technical and Vocational Education and Training in Ethiopia

Krishnan, P., & Shaorshadze, I. (2013). Technical and Vocational Education and Training in Ethiopia (p. 1379) [Working Paper]. Retrieved from http://prime-ethiopia.org/wp-content/uploads/2015/03/TVET1.pdf

Citation	⇅Ethiopia: Krishnan & Shaorshadze, 2013
Comment	This report presents a background study of the state of technical and vocational education and training in Ethiopia, arguing that it is important to improve its efficiency. Two ways to doing so are proposed: • Improve the efficiency and equity of the centrally-driven allocation mechanism, drawing on the recent advances in matching algorithms and their application to school choice. • Impact evaluation of the final labour market outcomes of graduates has to be an integral part of the TVET system.

1.1.16. Training Community Healthcare Workers

Mastellos, N., Tran, T., Dharmayat, K., Cecil, E., Lee, H.-Y., PengWong, C. C., . . . O'Donoghue, J. M. (2018). Training community healthcare workers on the use of information and communication technologies: a randomised controlled trial of traditional versus blended learning in Malawi, Africa. BMC MEDICAL EDUCATION, 958. https://doi.org/2129771:ZRWBTANL

Citation	⇅Malawi: Mastellos, et al., 2018
Comment	This study argues that there is no difference between blended and traditional face-to-face learning in relation to the acquisition of ICT knowledge among community healthcare workers in developing countries. Given the human resource constraints in remote resource-poor areas, the blended learning approach may present an advantageous alternative to traditional learning.

1.1.17. Vulnerability, Partnerships and the Pursuit of Survival: Urban Livelihoods and Apprenticeship Contracts in a West African City

Hanson, K. (2005). Vulnerability, Partnerships and the Pursuit of Survival: Urban Livelihoods and Apprenticeship Contracts in a West African City. GeoJournal, 1643. https://doi.org/2129771:QJBKZ3W3	
Citation	⇕Ghana: Hanson, 2005
Comment	This paper analyses local-level apprenticeship contracts and networks to highlight informal urban livelihoods within the context of socio-economic vulnerability and wider contemporary changes taking place in Koforidua, Ghana. It contends that apprenticeship contracts and the network spaces they create have created a new social cohesion and community that transcend the traditionally known spaces of social support, i.e., ethnic ties, family ties or even institutional support.

1.1.18. "If I can be a helper, one day I be a boss"

Ryan, S. (2015). "If I can be a helper, one day I be a boss" – A case study of informal apprenticeship in Lusaka	
Citation	⇕Zambia: Ryan, 2015
Comment	In light of the revision of the Apprenticeship Act in Zambia, this report argues for the expansion of the definition of 'apprenticeship', with an emphasis on apprenticeship within the informal economy. The authors state that the Basic Trades Certificate, which recognises informally acquired skills, including skills gained through informal or traditional apprenticeships, promoted skills acquisition more effectively, and provides a means to access formal vocational training courses and certification. The authors defend the view that TVET policy needs to become more responsive to the informal economy, and that the quality of training needs to be improved. Decent work outcomes also need to be strengthened through supporting trade associations, providing greater access to finance for master craftworkers and graduating apprentices, improving health and safety outcomes, and creating greater links between the formal and informal training and employment sectors.

1.1.19. Baseline Study for Distance Technical and Professional Education in Mozambique

Romiszowski, A. (2015). Baseline Study for Distance Technical and Professional Education in Mozambique (p. 613). Retrieved from http://oasis.col.org/handle/11599/1775	
Citation	⇡Mozambique: Romiszowski, 2015
Comment	This baseline study was undertaken to describe and analyse the current situation in Mozambique with respect to TVET, in order to evaluate the needs and the viability of employing open and distance Learning (ODL), and in particular, eLearning, in a flexible and blended approach.

1.1.20. Assessment of Perceived Ease of Use and Instructional Use of ICT by Lecturers in Technical Training Institutions in Kenya

Agufana, P., Too, J., & Mukwa, C. (2018). Assessment of Perceived Ease of Use and Instructional Use of ICT by Lecturers in Technical Training Institutions in Kenya. African Journal of Education, Science and Technology, p. 124.	
Citation	⇡Kenya, Rwanda: Agufana, et al., 2018
Comment	The findings indicated that use of ICT by lecturers is perceived to greatly improve instruction. The study recommends that lecturers be encouraged to use ICT for instructional purposes for that reason.

1.2. Overview of the 14 U.u publications

The following tables indicate the goals, methodology and results of the 14 U.u publications. As the layout of the information presented differs from Appendix 1.2., we have repeated publications where there is overlap.

1.2.1. Influences on students' learning outcomes in Nigeria

Alade, I. A. (2015). Effects of Three Categories of Manpower on Undergraduate Students' Learning Outcomes in Technical Education and Their Implications for the Curriculum Implementation. *JISTE, 19*(2)	
Citation	↑[U.u]/Nigeria: Alade, 2015
Goals	The aim of this study was to explore the effects of three categories of manpower: vocational educator, higher technician and literate artisan.
	The study explored the effects of these three categories on undergraduate students' learning outcomes in technical education.
	Additionally, it examined the implications of the results for implementing the curriculum.
Methods	The study had a sample size of sixty students.
	Students were randomly assigned to treatment groups where they were trained for one week.
	The study employed a quasi-experimental design using a 4x3x2 factorial matrix.
	Students took part in pre- and post-tests using a questionnaire developed by the researchers.
Results	The study found that students' learning outcomes in technical education were enhanced by the intervention in question.
	Students taught by a vocational educator, literate artisan or a higher technician group all showed improvements over a control group.

1.2.2. Learning the master's trade in Ghana

Frazer, G., & Frazer, G. (2006). Learning the master's trade: Apprenticeship and human capital in Ghana. *Journal of Development Economics.* **https://doi.org/10/dmcqmr**	
Citation	↕ U.u/Ghana: Frazer & & Frazer, 2006
Goals	This study explored the financial impact of apprenticeships in Ghana. A model of apprenticeship as training in specific human capital was outlined with the goal of exploring this model through the study. The model aimed to predict worker productivity and remuneration.
Methods	Secondary data were used in this publication. Data were obtained from a national household survey (the Ghana Living Standards Survey). The sample size was 14.991 (all individuals over the age of 15). Out of this sample, 4.151 individuals were in the labour force. A panel dataset of manufacturing firms was also used. The panel dataset had a sample size of 2.122.
Results	Results suggested that a return on apprenticeship was enjoyed only among the self-employed. Furthermore, they suggested that capital was the only constraint preventing apprentices from becoming self-employed entrepreneurs.

1.2.3. Entrepreneurship education in Senegal

Garcia-Rodriguez, F. J., Gil-Soto, E., Ruiz-Rosa, I., & Sene, P. M. (2017). *Entrepreneurship Education in Sub-Saharan Africa: Results of a Case Study in Senegal.*	
Citation	↕ U.u/Senegal: Garcia-Rodriguez, et al., 2017
Goals	Students' entrepreneurial potential was assessed. The study researched a threeyear entrepreneurship promotion programme. The goal was to explore the impact of the entrepreneurship programme.
Methods	A structured questionnaire was used to collect data. The questionnaire measured Entrepreneurial Intention, Perceived Desirability, Perceived Feasibility and Attitudes toward Enterprise. The sample size was 128 students. The study employed a pre-/post-test.
Results	Improvements were found in student entrepreneurial potential, perceived desirability and perceived feasibility at the programme's end. However, there was no improvement with regard to any of the attitudes associated with entrepreneurship.

1.2.4. Computer literacy among practical arts teachers in Swaziland

Hlophe, Z. F., & Mindebele, C. (2001). Computer literacy among practical arts teachers in swaziland vocational schools. *Journal of Vocational Education and Training*. **https://doi.org/10/cxxtx9**	
Citation	↑ᵁ·ᵘ/eSwatini: Hlophe & Mindebele, 2001
Goals	This article reported the findings of a study conducted in Swaziland. The study hoped to determine the computer literacy skills of teachers of agriculture, commerce, home economics and technical studies. The study also explored the computer interests of the teachers. In addition, it examined what computer software programmes and what kind of information teachers were interested in.
Methods	Teachers from sixteen pilot vocational schools were considered. A census survey of all high school teachers of agriculture, commerce, home economics and technical subjects was conducted. In total, 74 teachers were surveyed.
Results	The study found that the teachers did not have the necessary basic computer knowledge and skills. However, it found that teachers did have a strong interest in taking computer technology courses.

1.2.5. Evaluation of a VEOP in South Africa

Jacobs, L., & Wet, C. D. (2013). Evaluation of the vocational education orientation programme (VEOP) at a university in South Africa. *The International Review of Research in Open and Distributed Learning*, 8. https://doi.org/10/gf623n	
Citation	↕ U.u/South Africa: Jacobs and Wet, 2013
Goals	This study sought to evaluate the Vocational Education Orientation Programme (VEOP) at a South African university.
	The study assessed the individual modules and the quality of the VEOP.
	The goal of the evaluation was to improve the programme.
	A further goal was to inform the development of a full qualification.
Methods	Data were collected using two questionnaires.
	A total of 1536 evaluation forms were distributed to lecturer-students at the end of each programme module in 2011.
	A total of 418 questionnaires were returned, out of which only 412 were usable for analysis.
	In 2012, the same cohort was asked to complete the second questionnaire. 60 lecturer-students were randomly selected from three campuses, also randomly selected. A total of 48 lecturer-students responded with feedback on the quality of the overall programme.
Results	Both strengths and weaknesses of the VEOP were found.
	Results suggest that assessment was the best part of the modules, whilst study materials needed the most improvement.
	The need for improved student support and for careful selection and training of tutors was emphasised by the study.

1.2.6. The Impact of Training on Lowland Rice Productivity in Uganda

Kijima, Y., Ito, Y., & Otsuka, K. (2012). Assessing the Impact of Training on Lowland Rice Productivity in an African Setting: Evidence from Uganda. *World Development.* **https://doi.org/10/gf62mn**	
Citation	↑U.u/Uganda: Kijima, et al., 2012
Goals	This study assessed the impacts of a training programme in eastern Uganda. It was initiated by the Japan International Cooperation Agency (JICA).
Methods	A total of 300 households were randomly selected (75 randomly selected from each of four sites). The selections came from two pilot project sites and from two sites where training had previously started. Ex-post non-experimental data were used. Questionnaires pertaining to agricultural production were distributed. Overall, 123 households had not yet harvested rice by the time of data collection, leaving 177 households as the final sample size.
Results	Participation in the training programme resulted in increased adoption of enhanced cultivation practices. Participants in the training programme also had increased profits from rice production.

1.2.7. A school mental health literacy training approach in Tanzania

Kutcher, S., Wei, Y., Gilberds, H., Ubuguyu, O., Njau, T., Brown, A., Sabuni, N., Magimba, A., & Perkins, K. (2016). A school mental health literacy curriculum resource training approach: Effects on Tanzanian teachers' mental health knowledge, stigma and help-seeking efficacy. *International Journal of Mental Health Systems*. https://doi.org/10/gf62ks

Citation	↕ U.u/Malawi, Tanzania: Kutcher, et al., 2016
Goals	Mental health literacy (MHL) is foundational for mental health promotion, prevention, stigma reduction, and care.
	However, school-supported information pertaining to MHL in SSA is extremely limited.
	The study investigated whether the successful application of a school MHL curriculum resource may be an effective way to increase teacher MHL and therefore help to improve mental health outcomes for students.
Methods	Intervention: Secondary school teachers in Tanzania were trained on the African Guide (AG). a school MHL curriculum resource culturally adapted from a Canadian MHL resource (The Guide), for use in Africa.
	Pre-post training assessment of participant knowledge and attitudes was conducted.
	Help-seeking efficacy for teachers themselves and their interventions for students, friends, family members and peers were determined.
	Paired t test (n = 37) was used to analyse the data.
Results	The study demonstrated significant improvements in teachers' overall knowledge (mental health knowledge and curriculum specific knowledge).
	Teachers' stigma against mental illness decreased significantly following the training ($p < 0.001$; $d = 0.61$).
	Teachers also reported high rates (greater than ¾ of the sample) of positive help-seeking efficacy for themselves, as well as for their students, friends, family members and peers.
	The study replicates the results of a previous intervention in Malawi, and the authors suggest that consideration could be given to scaling up this intervention in both Malawi and Tanzania.

1.2.8. Professional development of teachers in Cameroon

<table>
<tr><td colspan="2">Lange, S. (2014). Learner orientation through professional development of teachers? Empirical results from cascade training in Anglophone Cameroon. Compare: A Journal of Comparative and International Education, 44(4), 587–612. https://doi.org/10.1080/03057925.2013.841027[1]</td></tr>
<tr><td>Citation</td><td>↑U.u/Cameroon: Lange, 2014</td></tr>
<tr><td>Goals</td><td>The publication examines the effects of a professional development programme on the attitudes towards the teaching and learning of teachers in the anglophone part of Cameroon.

The development programme combines a multiplier system (cascade training) with school-based in-service training.</td></tr>
<tr><td>Methods</td><td>The research compares the effects that the training had on the attitudes of three groups of teachers in a control group design:

(1) teachers participating in the in-service training, subdivided into

(1a) teachers trained as multipliers and

(1b) teachers trained by the multipliers, and

(2) teachers who did not participate in the training.

The study featured a quantitative control group design (n = 292) and is intended to contribute to the discussion on the sustainable effects of in-service teacher training in low-income countries.

The data collection was conducted in 13 secondary schools in Cameroon.</td></tr>
<tr><td>Results</td><td>The results suggest that the programme had effects on the teachers' attitudes and classroom practices.</td></tr>
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1 Related book: Such studies include ↑Lange & Benavot (Cameroon: 2016:160), which used a quasi-experimental control group design. With regards to teacher practice, self-reported measures showed that teachers working in programme schools possessed *"a significantly higher degree of learner orientation"* (↑ibid.:159). In terms of student outcomes, however, there was *"no significant difference between the results of students who were taught by multipliers compared to students taught by trained teachers in programme schools"* (although students "taught by teachers in programme schools in the natural sciences have significantly higher achievement in natural sciences" than those in control schools (↑ibid.).

1.2.9. Blended learning in Tanzania

Machumu, H., Zhu, C., & Sesabo, J. (2016). Blended Learning in the Vocational Education and Training System in Tanzania: Understanding Vocational Educators' Perceptions. *International Journal of Multicultural and Multireligious Understanding.* **https://doi.org/10/gf623b**

Citation	↕^{U,u}/Tanzania: Machumu, et al., 2016
Goals	The paper examines TVET educators' desire for the design, adoption and deployment of blended learning in TVET programmes delivery in Tanzania.
Methods	A single case study design with an in-depth interview and focus group discussion was conducted with 15 TVET educators in three TVET colleges, located in the Morogoro and Dar es Salaam regions. Snowball and purposive sampling were used to obtain sample respondents. For the data analysis, content analysis was employed to condense data obtained from interviews and focus group discussion.
Results	The paper found that online provision of "*continuous professional development, institutional arrangements, and support"* should be provided online. This could encourage the design and use of blended learning in TVET. The paper recommends that locally designed blended learning should be relevant to the environment of both students and teachers. The paper recommends that the relation between blended learning, imparting knowledge and practical skills should be a focus of future research.

1.2.10. Inclusiveness in policy and legal frameworks of Ethiopia, Kenya and Tanzania

Malle, A. Y. (2016). Inclusiveness in the Vocational Education Policy and Legal Frameworks of Kenya and Tanzania. *Journal of Education and Learning.*	
Citation	↕U.u/Kenya, Tanzania: Malle, 2016
Goals	This publication compares the education and training policies of Ethiopia with those of Kenya and Tanzania. It examines the status of inclusiveness in the education and training policies of Ethiopia in comparison to such policies in Kenya and Tanzania, and considers the special educational and training needs of students with disabilities.
Methods	Focus group discussions and interviews conducted in Kenya and Tanzania, relevant policy document analysis and earlier findings were used as primary sources for the research. A total of 18 representatives of Disabled People's Organisations from Kenya and Tanzania participated in two sessions of focus group discussions, and 15 high-profile figures and experts from concerned government bodies of these study countries were interviewed.
Results	Data from document analyses and focus group interviews revealed negative results: *"The participants agreed that the participation of students with disabilities in formal vocational education was insignificant."* (↕U.u/Malle 2016:109) Most of the study participants agreed that the issue of disability was not adequately addressed in the education and training policies or the legal and implementation instruments of the study countries. The publication also makes a number of recommendations.

1.2.11. Training community healthcare workers in Malawi

Mastellos, N., Tran, T., Dharmayat, K., Cecil, E., Lee, H.-Y., PengWong, C. C., Mkandawire, W., Ngalande, E., Tsung-ShuWu, J., Hardy, V., Chirambo, B. G., & O'Donoghue, J. M. (2018). Training community healthcare workers on the use of information and communication technologies: A randomised controlled trial of traditional versus blended learning in Malawi, Africa. *BMC Medical Education.* **https://doi.org/10/gdc33z**

Citation	↕[U,u]/Malawi: Mastellos, et al., 2018
Goals	The publication argues that despite the increasing uptake of information and communication technologies (ICT) within healthcare services across developing countries, community healthcare workers' (CHWs) knowledge is too limited to fully utilise computerised clinical systems and mobile apps. A course on ICT and eHealth was developed with the aim of offering basic knowledge and computer skills to enable CHWs to use digital solutions in healthcare delivery. CHWs were allocated to either a blended or traditional learning course. CHWs' knowledge of and attitudes towards the use of ICT, and their satisfaction with either a traditional or blended learning approach, were assessed.
Methods	Knowledge and attitudes were assessed before and after participants' respective courses. Two questionnaires were developed and tested for face validity and reliability in a pilot course with 20 CHWs. The questionnaires were designed to measure CHWs' knowledge of and attitudes towards the use of ICT before and after each course, as well as their satisfaction with each learning approach. Following validation, a randomised controlled trial was conducted to assess the effectiveness of the two learning approaches. A total of 40 CHWs were recruited, stratified by position, gender and computer experience, and allocated to the traditional or blended learning group using block randomisation. In the analysis, per-item, pre-post and between-group, mean differences for each approach were calculated using paired and unpaired t-tests, respectively. Per-item, between-group satisfaction scores were compared using unpaired t-tests.

Results	Findings were largely positive. Participants' scores improved regardless of the type of course taken. Both blended and traditional learning were found to have unique strengths and weaknesses when compared with each other.
	There were no significant differences between groups in attitudinal gains.
	Satisfaction with the course was generally high in both groups. However, participants in the blended learning group found it more difficult to follow the content of the course.

1.2.12. Nursing education in Tanzania

Muganyizi, P. S., Ishengoma, J., Kanama, J., Kikumbih, N., Mwanga, F., Killian, R., & McGinn, E. (2014). An analysis of pre-service family planning teaching in clinical and nursing education in Tanzania. *BMC Medical Education.* **https://doi.org/10/f6bm6p**	
Citation	↕ U,u/Tanzania: Muganyizi, et al., 2014
Goals	Improving family planning (FP) services was a key aim of this study.
	Improving the quality of FP services, including enhancing pre-service FP teaching, has the potential to improve contraceptive prevalence.
	This study sought to identify gaps in pre-service FP teaching and suggest opportunities for strengthening the training.
Methods	Data were collected from all medical schools and from a representative sample of pre-service nursing, Assistant Medical Officer (AMO), Clinical Officer (CO) and assistant CO schools. A total of 35 pre-service schools were evaluated for FP teaching including 30 technical education and five degree offering schools.
	Semi-structured questionnaires were used in interviews, alongside observations.
	Documents were assessed for their suitability as competency-based FP teaching tools against predefined criteria.
	Quantitative data were analysed using EPI Info 6, and qualitative data were manually analysed using content analysis.
Results	Most of the curricula that were evaluated did not meet the criteria for appropriate FP teaching.
	FP teaching was found to be "*theoretical, poorly guided, and skewed toward short acting methods.*"
	Only 22.9% of all the schools had systems in place to produce graduates who could skillfully provide FP methods.
	Only 23.3% (n = 7) of schools had skills laboratories, and 76% (n = 22) were either physically connected or linked to FP clinics.
	None of the degree-providing schools practiced FP at its own teaching hospital.
	Of the assessed 11 pre-service curricula, only one met the criteria for suitability of FP teaching.
	Teachers were concerned with poor practical exposure and lack of teaching material.

1.2.13. Farmer-to-farmer extension in Tanzania

Nakano, Y., Tsusaka, T. W., Aida, T., & Pede, V. O. (2018). Is farmer-to-farmer extension effective? The impact of training on technology adoption and rice farming productivity in Tanzania. *World Development*. **https://doi.org/10/gf62mx**	
Citation	↑U.u/Tanzania: Nakano, et al., 2018
Goals	Agricultural training is a potentially effective method to disseminate relevant new technologies to increase productivity and alleviate rural poverty in SSA. Since it is prohibitively expensive to provide direct training to all the farmers in SSA, it is critically important to examine the extent to which technologies taught to a small number of farmers disseminate to non-trained farmers. This paper investigates the technology dissemination pathways among smallholder rice producers within a rural irrigation scheme in Tanzania.
Methods	The study compared the performance of three categories of farmers: key farmers (who receive intensive pre-season training at a local training centre); intermediate farmers (who are trained by the key farmers); and other ordinary farmers. By collecting and analysing a unique five-year household-level panel data set, the study estimated difference-in-differences models to assess how the gaps in performance evolve as the technologies spillover from the trained farmers to the ordinary farmers. To disentangle the technology spillover process, the study also examined the extent to which social and geographical networking between the key and intermediate farmers influences the adoption of technologies by the ordinary farmers, by incorporating social relationship variables into spatial econometric models.
Results	The study found that the ordinary farmers, who were a relative, or residential neighbour, of a key or intermediate farmer, were more likely to adopt new technologies than those who were not. As a result, while the key farmers' technology adoption rates rose immediately after the training, those of the non-trained ordinary farmers caught up belatedly. As the technologies disseminated, the paddy yield of the key farmers increased from 3.1 to 5.3 tonnes per hectare, while the yield of the ordinary farmers increased from 2.6 to 3.7 tonnes per hectare. The results suggest the effectiveness and practical potential of farmer-to-farmer extension programmes for smallholders in SSA as an alternative to the conventional farmer training approach.

1.2.14. Pre-service training and coaching in Ghana

Wolf, S. (2018). Impacts of Pre-Service Training and Coaching on Kindergarten Quality and Student Learning Outcomes in Ghana. *Studies in Educational Evaluation*. **https://doi.org/10/gf62pq**	
Citation	**↥ U.u/Ghana: Wolf, 2018**
Goals	This study evaluates a programme designed to support Ghanaian kindergarten (KG) student-teachers during pre-service training through mentorship and in-classroom training. Several potential barriers to teaching quality and learning outcomes are examined.
Methods	The study uses a randomised-control trial. The Fast-track Transformational Teacher Training programme was evaluated in the Western region during the 2015–2016 and 2016–2017 academic years. The randomised-control trial was registered in the American Economic Associations' registry for randomised controlled trials. Participants included the full cohort of KG student-teachers completing coursework from Holy Child College of Education in 2015. A baseline survey was conducted in June 2015 as student-teachers were finishing their coursework prior to their placement year, after which 137 student-teachers were randomised to be placed in either a treatment school (23 schools) or a control school practicing "*business as usual*" (23 schools). Using random assignment, 69 teachers were assigned to the treatment group and 68 teachers to the control group. The baseline survey (baseline) occurred prior to randomisation, and collected basic demographic information, language proficiency and basic pre-literacy skill knowledge before the student-teaching year of training.

Results	Findings show that the programme improved knowledge and implementation of the national curriculum for individuals both when they were student-teachers and, the following year, when they became newly qualified teachers (NQTs).
	There were mixed impacts on professional wellbeing, increasing personal accomplishment and motivation but decreasing job satisfaction for NQTs.
	There were mixed impacts on teaching quality, with increases in child-led learning but decreases in some other aspects of quality.
	There were no impacts on NQTs' student learning outcomes.
	The findings highlight system level challenges with both the posting of NQTs and the absence of support in their first teaching year.

1.3. Appendix bibliography

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