Chapter 6. Themes, Perspectives and Current Debates in TVET Research[1]

This chapter reviews the themes and goals of TVET research in SSA (see Table 3.4 in Section 3.7). It summarises key perspectives and current debates (RQ3); discusses a number of objectives of specific research projects and substantive TVET research questions (RQ4 and RQ5) and considers research goals in sequence. It structures these goals according to the following topics:

- Evidence-based understanding of specific interventions and programming (Section 6.1.)
- Types of TVET (Section 6.2.)
- Region-specific features of TVET (Section 6.3.)
- TVET in relation to ICT (Section 6.4.)
- Institutions and personnel in TVET (Section 6.5.)
- Studies with recommendations for TVET research (Section 6.6.)

Note that these topics are used as headings in the following sections as indicated in parentheses.

As described in the methodology (Chapter 2), the present chapter only considers the relevance of the publications to the various themes and objectives. Therefore, this chapter does not – and does not seek to – offer any evidence-based statements about TVET as such. Instead, it reviews themes appearing in the U-publications in order to shed light on the interests of the TVET researchers involved.

By contrast, Chapter 7 undertakes a qualitative evaluation of the U-publications in order to offer an evidence-based perspective on TVET in sub-Saharan Africa (SSA). Chapters 8 and 9 then consider specific topics that appear in the U-publications: TVET models (Chapter 8, RQ7) and inclusion (Chapter 9, RQ12). Nevertheless, since these issues also appear among the general topics, they are initially (albeit briefly) addressed in this chapter, with a fuller presentation following in Chapters 8 and 9.

---

1 Citation for this chapter: Haßler, Haseloff, et al. (2020). *Chapter 6. Themes, Perspectives and Current Debates in TVET Research.* In: Haßler, Haseloff, et al. (2020). *Technical and Vocational Education and Training in Sub-Saharan Africa: A Systematic Review of the Research Landscape.* VET Repository, Bundesinstitut für Berufsbildung, Bonn, Germany. https://doi.org/10.5281/zenodo.3843351

It should be noted at this point that there is no uniform concept of TVET in SSA, nor is there or can there be a uniform view of the concept of TVET (that exists in the regions; cf., Chapter 4, RQ2). Depending on the expert group interviewed – including providers or users of TVET – such conceptualisations varied. The U-publications considered here enable us to better define and understand the perspectives of different TVET actors (Section 6.6.2.).

Research questions considered in this chapter

The research questions considered in this chapter are listed in the box below. Each section in this chapter corresponds to one of the research questions (RQ3 with 6.1; RQ4 with 6.2; RQ5 with 6.3).

Research questions considered in this chapter
RQ3. Topics, perspectives, current debates.
[RQ3.a] What are the **topics, perspectives and current debates** concerning TVET that can be identified? Are there **special topics** that stand out? (For example: 'informal apprenticeship'?)
[RQ3.b] Are there **trends and correlations in regions** or groups of countries, or on the topics of advancement opportunities, informal sector and TVET, social inequality, labour market integration of young people, etc.?
[RQ4.] What are the **overall goals of the research project** and the **substantive questions** pursued by researchers? For example: key concerns, overarching research questions or other priorities for the research project. What are the disciplinary priorities?
[RQ5.] What are the **research questions** pursued in the papers? What specific TVET issues or problems are being tackled in the research?

Conclusions of this chapter

Chapter 6 provides an overview of the current themes and objectives of TVET research in SSA. In summary, we conclude that:

- The U-publications we considered deal, in part, with the definition and conceptualisation of TVET. Some seek to understand the conceptualisation of TVET by students and educators, whereas others focus on how TVET could be conceptualised in relation to specific training needs. While publications usually do not define the *term* TVET, some examine and define the *concept* of TVET. These can be broadly categorised according to the level of formality associated with the education or training in question, e.g., college-based courses, dual system approaches or apprenticeship-only approaches. However, there is no common definition or concept for TVET that is valid across all SSA regions. Instead, the authors of the present report propose a framework that can be used to classify the different definitions and concepts (cf., Chapter 4).

- Evidence-based insights (from the U-publications) stem from studies on specific interventions or programmes. This includes meta-analyses and case studies across countries, national-level investigations, and identification of learning outcomes or participant outcomes from specific TVET programmes.

- Efforts to ensure that TVET for trainees and teachers is as practice-oriented as possible are recognised as an important field of research.

- An equally important research focus is the tension between TVET policy and practice. The understanding of the importance of demand-oriented TVET is frequently considered, alongside the consideration of future-pointing possibilities and requirements for TVET, which have hitherto been underrepresented within policy-making.

- Several papers discuss or make policy recommendations. Besides the wish for more comprehensive and long-term financing of TVET than has been the case so far, these recommendations include changes in government policy (Zambia: ⬆Ryan, 2015) and measures for TVET providers (Kenya: ⬆Agufana, 2015), as well as further recommendations to address the lack of human and material resources in TVET (e.g., for Ghana: ⬆Amedorme & Fiagbe, 2013).

- Political recommendations are discussed or made in several papers. In addition to the desire for more comprehensive and long-term funding of TVET, these recommendations also include changes in government policy (Zambia: ⬆Ryan, 2015) and measures for TVET providers (Kenya: ⬆Agufana, 2015), as well as further recommendations regarding the lack of human and material resources in training (e.g., for Ghana: ⬆Amedorme & Fiagbe, 2013).

- Another important topic in TVET research is ICT. Questions on the possibilities, applications, benefits and costs of ICT in TVET are analysed in the U-publications. ICT is also discussed as an instrument for evaluating TVET research (Chapter 7).

We note that the specific insights in the U-literature regarding regions and countries reflect, at times, a colonial history. One example of this – at the research level – is the language barriers that have hampered research cooperation between regions. Clearly, TVET systems for any country may still exhibit elements related to their colonial past (e.g. French, British, etc.). However, participants in the Structured Community Review (SCR) stated that the differences between countries are greater than those due to regional or indeed colonial differences. These, and other findings on regional trends in TVET, are discussed in the final section of this chapter, where insights from participants in both the SCR and the U-literature are considered.These insights lead to considerations about expanding comparative research.

As with the other chapters, the subsequent sections offer additional details on the points discussed in the summary above.

6.1. Theme: Evidence-based understanding of specific interventions and programming

A second key goal of TVET research is to advance an evidence-based understanding of TVET. This research involved providing evidence on TVET across multiple countries and within individual countries, as well as examining specific programmes.

6.1.1. Focus: Evidence of the impact across and within countries

There were a number of reviews of the evidence of the effects of TVET across countries. One of these reviews, a meta-analysis (↕Various: Kluve, et al., 2016) that sought to assess evidence of the impact of youth employment programmes on the labour market from around the globe, found that

> *"more than one-third of youth employment programme evaluations worldwide show a significant positive impact on labour market outcomes – either employment rates or earnings"* (↕ibid:25).

This was supported by results from a random-effects model, which showed that *"youth employment interventions have a positive and statistically significant effect"* (although this is not consistent across all intervention sub-groups; ↕ibid:25).

Hardman and colleagues are also making their mark with evidence-based research in this area (↕Uganda, Kenya, Tanzania: Hardman, et al., 2011). They explore the challenges faced by Kenya, Tanzania and Uganda in order to provide evidence about what constitutes a successful professional development programme.

In addition, a case study approach was used by some studies to compare evidence, in an international context, of the current trends and discussions around TVET for specific sectors, (e.g., ↕Benin and Ethiopia: Walker & Hofstetter, 2016).

Evidence on the effects of TVET within countries is provided in studies by Oluwafemi et al. (↕Nigeria: 2015) and Kingombe (↕Sierra Leone: 2011). Oluwafemi arrived at the broad conclusion that each successive Nigerian government has "*good thoughts*" for the education sector, but has achieved limited success (↕Nigeria: Oluwafemi, et. al., 2015). These limitations were partly attributed to the divergence between educational decisions and cultural contexts (particularly regarding colonial educational policies (↕ibid.). In a wide-ranging review of TVET in Sierra Leone, Kingome's most poignant finding identified the pivotal role played by TVET in a

> *"…reintegration that creates and facilitates new opportunities and livelihoods for ex-combatants and for communities by enabling the possibility of building realities that differ considerably from pre-conflict ones"* (↕Kingome, 2011).

Further information on international and national research results can be found in Chapter 7.

6.1.2. Focus: Evidence from and impact of TVET programmes

The main goal of other studies was to learn from existing TVET programmes. These studies focused on evaluating the success of particular countries' TVET programmes in order to identify learning outcomes (⇡Burundi: Scanga, et al., 2018; ⇡Côte d'Ivoire, Mali, Senegal and Guinea-Bissau: Cáceres, et al., 2017; ⇡Malawi: Safford, et al., 2013; ⇡Senegal: Garcia-Rodriguez, et al., 2017; ⇡Ghana: Dzisi, et al., 2018, ⇡Ghana: Wolf, et al., 2018; ⇡Benin: Okry, et al., 2014; ⇡Botswana: Odora, 2011).

The scope of these studies often goes beyond a mere assessment of TVET programmes. For example, one such study examined whether the specific training and development provided by financial institutions in multiple countries made a difference to the performance of mid-level managers in those institutions (⇡Abugre & Adebola, 2015). Another study produced detailed empirical findings of cascade training in Cameroon in order to assess whether it works and whether it contributes to the improvement of teaching quality (⇡Cameroon: Lange & Benavot, 2016). The majority of these rather broad studies were from West and Southern Africa. The goal of many of the studies that focused on training programmes was to determine the outcomes for participants. One such study used a tracer survey of graduates of artisan apprenticeship (⇡Tanzania: Bennell, et al., 2006). Other studies explored whether training had an impact on livelihood practices (⇡Ethiopia: Baraki & van Kemenade, 2013). For example, one study assessed the impact of a training programme on the cultivation practices associated with rice farming (⇡Uganda: Kijima, et al., 2012), and another examined the effects of the training of trauma teams in terms of developing their knowledge of trauma and improving their performance (⇡Tanzania: Bergman, et al., 2008). A number of other studies assessed the impact of TVET programmes on learning, performance and income (⇡Kenya: Ndegwa, et al., 2015; ⇡Tanzania: Nakano, et al., 2018; ⇡Cameroon Anglophone part: Lange, 2014; ⇡Ghana: Mano, et al., 2012; ⇡Zambia: Prager, et al., 2012).

6.2. Theme: Types of TVET

In this section, we will provide a detailed examination of studies that attempt to define the concept of TVET. Although the publications usually do not define the *term* TVET, there are still some publications that examine and define the *concept*. In addition to the definition of the concept, these studies consider the sub-components of on-the-job training, apprenticeships, occupational education, career and technical education TVET, technical/vocational colleges and secondary schools, and sector-specific TVET (for example ⇡Nigeria: Sharehu, 2014). The purpose of TVET (or any particular sub-component of TVET) is identified by Idris & Rajuddin as providing learners with the requisite knowledge and skills to enable them to participate in industry (⇡Nigeria: Idris & Rajuddin, 2012; ⇡Ghana: Adogpa, 2015). In the studies that we surveyed, TVET was considered to be applicable to a wide range of industries. This was evidenced both by the wide range of academic disciplines represented by the contributing authors (see RQ1.b, Section 5.1.) as well as by responses that we received to a stakeholder survey, in which there was broad agreement that all occupational groups recognised by the ILO were applicable to TVET (RQ2).

These studies aim to deepen the conceptual understanding of TVET, for example with regard to aspects of TVET programme design (RQ7). Such aspects mentioned in the U-literature can be broadly grouped in terms of their cooperative dimension into three categories, depending on the extent to which they involve practical components.[2] These categories are defined as follows:

- **Type K1.** Formalised, college-based courses that focus on theoretical teaching.
- **Type K2.** Formalised dual-system approaches that include significant work-based activities (e.g., 50%–70% work-based activities, similar to the German dual model);
- **Type K3.** Apprenticeship-only approaches that are almost entirely work-based.

(also see Chapters 4 and 7). The approaches of types K1 and K3 appear often in U-publications. Examples of formalised type K1 TVET programmes are identified in several countries / economic sectors, e.g., in the education sector in Cameroon (↕Cameroon: Wohlfahrt, 2018), in agriculture in Ethiopia and Benin (↕Ethiopia, Benin: Walker & Hofstetter, 2016), in the pharmaceutical sector in South Africa (↕South Africa: Summers, et al., 2001), in the health and care sector in Uganda (↕ Miceli, et al., 2012), and in training programmes for entrepreneurs and craftspeople in Ghana (↕Hanson, 2005).

Similarly, apprenticeship-only approaches (Type K3) were, with varying levels of formality, reported on in diverse settings, for example in traditional eye medicine (↕Nigeria: Ebeigbe, 2013) and in pottery (↕Cameroon: Wallaert, 2008).

Dual-system approaches (Type K2) were also mentioned, although they appeared with less frequency.

For example, type K2 is found at a national level (macro-level) in Ethiopia (↕Krishnan & Shaorshadze, 2013) and Mozambique (↕Sandirasegarane, et al., 2016), at programme level (meso-level) in Malawi (↕Malawi: Safford, et al., 2013), and at the educational level (micro-level) in Mali (↕Sierra Leone: Kingombe, 2011) and Botswana (↕Preckler Galguera, 2018). For further details, see Section 8.1.2.

The design, significance and usefulness of practical or work-related components in TVET is a frequently addressed topic in the U-literature. It has also been addressed in studies of programmes where practical components inTVET have been scarce or non-existent. These consider the neglect of the 'practical side' of training. Compared to other topics, the far-reaching and multifaceted discussion of practical or work-related (components in) TVET (e.g., 'workplace-oriented learning', 'work-based learning', 'work-integrated learning', 'internships') in the TVET literature underlines the importance of the role that researchers assign to this topic in the conceptualisation of TVET.

---

2 Two further categories of vocational training are described in chapter 7. These categories focus on technology-supported distance learning and continuing training approaches (Type Z4), as well as continuing TVET (CPD; Type Z5).

6.2.1. Focus: TVET Policy

The majority of publications in the field of TVET policy aim to highlight the interrelation between TVET policy and practice. The studies mentioned in this section seek to understand the relationship between TVET policy and practice. This involves taking existing TVET practice and situating it within current or future government policies. Full in-depth discussion on the relationship between TVET policy and practice is presented across Chapters 10 through 13. Other publications on TVET policy focus on the broader policy framework for TVET in a region or country. Such publications examine, for example, whether and how TVET meets the requirements expected by the responsible government agencies. They include analysis of the results achieved and consider how TVET opportunities fit into the overall education system of the region or country. The studies also examine whether and which changes are possible through political influence in terms of an improved professional policy, and how these could be initiated.

Some studies deal specifically with TVET policy-making, including critical reflection on the policy dimensions of TVET (⬍Kenya: Mayaka & Akama, 2007). Others focus on developing entrepreneurship education tailored to different capacities (e.g., financial) and incorporating it into formal curricula (⬍Nigeria: Eze & Nwali, 2012). Others focus on developing entrepreneurial training tailored to different skills (e.g., financial) and incorporating this into formal curricula (⬍Nigeria: Eze & Nwali, 2012).

One multi-country study in East Africa specifically aims to deliver policy-relevant results, particularly on professional skills (⬍Kenya, Ghana, Uganda, Tanzania: Ndlovu, et al., 2006).

6.2.2. Focus: Regulating supply and demand through vocational training policy

One regional study explored the origins of apprenticeship to see whether it is on track to meet the wider socio-economic and labour market challenges (⬍Akoojee, 2013). Other studies look at whether the (educational) provision of TVET meets the requirements of national legislation and the guidelines derived from it, as well as the needs of the market (and more rarely, those of learners; ⬍Kenya: Mayaka, et al., 2002; ⬍Nigeria and UK: Awe, et al., 2009; ⬍Ghana: Adogpa, 2015; ⬍Ghana: Amedorme & Fiagbe, 2013). Mayaka and King ask if provision meets the requirements of national legislation and identifies policy gaps (⬍Kenya: Mayaka & King, 2002).

Some studies examine the range of tourism education and training on offer in order to determine the extent to which the current range of training is up to date. They also assess the extent of training provision, and analyse whether the quality of education and training meets the needs of the industry experts involved in this study. Another study in Liberia looked at how rural community members perceive their influence on their government's TVET policies (⬍Liberia: Forh, 2014).

6.2.3. Focus: TVET — a 'blind spot' of education policy

Some studies examine why TVET in SSA is neglected by education policy compared to other areas of education. For example, one study has considered the strong preference for academic (non-work-based) education (⬍Tanzania: Kahyarara & Teal, 2008). Other studies examine the results of existing government policy on TVET. (⬍Sierra Leone: Kingombe, 2011). Another study aimed to assess the degree to which TVET policies (and legal frameworks) have successfully included those with disabilities (⬍Kenya and Tanzania: Malle, 2016). There was only one study that specifically aimed to understand the instructional use of ICT in TVET and the role that government policy plays in its use (⬍Kenya: Agufana, et al., 2018). However, the role of ICT in TVET was frequently considered outside the scope of government policy.

6.3. Theme: Region-specific features in TVET

Research question RQ3.b asked if there were trends and correlations in regions or groups of countries, or on topics such as advancement opportunities, informal sector and vocational training, social inequality, and the labour market integration of young people (among other topics). The literature review was not informative in this regard, as there was no research dedicated to analysing regional differences or trends within SSA. Hence, the information on regional trends that follows below was retrieved mainly from the SCR.

Participants in the SCR stated that in TVET systems and TVET research, there are more differences between countries than within the African regions. Participants noted that the type of TVET in SSA countries is primarily based on their colonial history. Mpofu and colleagues, for example, noted in the SCR that the differences among the countries studied are *"explained by their historical difference and also by current national and international influences"* (⬍Various: Mpofu, et al., 2007:228). There are, therefore, some commonalities within the circle of French- and English-speaking countries regarding TVET concepts and research. For example, the English-speaking countries Kenya, Tanzania, Uganda and Rwanda have similar TVET systems, and have a dialogue with each other. Burkina Faso and Senegal have close cultural links and similarities between their educational systems. By contrast, similarities and exchanges between French- and English-speaking countries are rare. According to Joy Papier (University of the Western Cape, South Africa), language barriers have hampered research efforts between these countries.

Peliwe Lolwana (University of the Witwatersrand, South Africa) is another participant who brought up the difference in attitude between local technicians and immigrants. She has found that people coming from other parts of SSA are more active and entrepreneurial than South Africans, who tend to be more reliant on the government. She researched the skills acquired through the informal sector in South Africa and was surprised to see many migrants (from Zambia, Kenya, Mozambique, Zimbabwe and Congo) leading the companies in this sector, and stated that people who are likely to migrate seem to be stronger and more resilient.

In East Africa, the TVET systems of Tanzania and Ethiopia have a few similarities with the German TVET system. Some elements of dual TVET have been adopted: for example, the connection between workshop and classroom in vocational colleges in Ethiopia (⇡Eicker, et al., 2017). In addition, future teachers for TVET colleges must complete a mandatory internship during their studies in Ethiopia (ibid.).

Namibia and South Africa have similar trends in terms of TVET challenges (⇡Eicker, et al., 2017). The work of Eicker and Haseloff (2017) also points to similarities between South Africa and Mozambique.

6.4. Theme: TVET in relation to ICT

The use of technology is another goal identified in TVET research. Papers presented findings on ICT use, methods of promoting ICT use, and the delivery of TVET through ICT-based programmes. These studies were conducted in all regions of SSA.

Continuing from the previous section's discussion of ICT policy within the TVET realm, this section explores the goal of dealing with the role of ICT in TVET. A number of studies evaluated specific TVET programmes that used technology and ICT as part of their provision (⇡Malawi: Mastellos, et al., 2018; ⇡Zimbabwe: Musarurwa, 2011; ⇡Kenya: Butt, et al., 2013; ⇡high-income countries and Benin and Senegal: Mêgnigbêto, 2007; ⇡South Africa: Duys, et al., 2017; ⇡Nigeria: Gloria & Oluwadara, 2016; ⇡Tanzania: Sanga, et al., 2016; and ⇡Saud, et al., 2011).

The large majority of studies explore how TVET provision can be improved through focusing on the potential of ICT within TVET.[3] The following studies investigate the accessibility, current utilisation and feasibility of ICT use, as well as the electronic resources in a number of areas to inform future programming (⇡Nigeria: Olaniran, et al., 2016; ⇡Mozambique: Romiszowski, 2015; ⇡Nigeria: Olabiyi, 2014; ⇡Rwanda: Harerimana, et al., 2016; ⇡Nigeria: Sharehu & Achor, 2014; ⇡Zambia: Hennessy, et al., 2016).

A number of studies focus on the justification for using ICT in TVET. For example, Romiszowski analyses the current TVET situation in Mozambique in order to evaluate the need for and viability of employing open and distance learning, particularly e-learning (⇡Mozambique: Romiszowski, 2015). Olabiyi also assesses the relevance of ICT in the field of TVET (⇡Nigeria: Olabiyi, 2014).

Harerimana and colleagues analyse the utilisation of e-learning in nursing campuses (⇡Rwanda: Harerimana, et al., 2016), whereas Dodds discusses open and distance learning for supporting health workers in general (⇡Gambia: Dodds, 2011). Sharehu and Achor examine ICT strategies regarding entrepreneurship-focused TVET (⇡Nigeria: Sharehu & Achor, 2014).

---

3 We note that the OER4Schools approach is unique, in that the full programme is freely available (as an Open Educational Resource) alongside research publications spanning an extended period of time. It is, therefore, possible to relate the research outcomes back to the exact resources that were used in achieving this outcome (⇡Haßler, et al., 2018; and references therein).

One study focusing on SSA as a whole presented an innovative approach to ICT skills training in order to identify and propose promising ways in which ICT can be used to improve TVET (⇕General: Evoh, 2012). Another study evaluated ICT usage in teaching and learning to highlight the factors that influence the effective integration of ICT in these contexts (⇕Ghana: Bonsu, et al., 2013). Saud and colleagues' literature review also provides an overview of the challenges and factors influencing the effective integration of ICT in TVET, concluding that adequate planning and management of ICT resources are required to properly address the challenges of integrating ICT (⇕General: Saud, et al., 2011).

6.4.1. Focus: ICT use by teachers and institutions

A number of studies focus on teachers. Olaniran investigated accessibility to, and utilisation of, electronic resources among pre-service teachers, evaluating the viability of employing open and distance learning and e-Learning in particular (⇕Nigeria: Olaniran, et al., 2016). Hennessy and colleagues explored the feasibility of using ICT to support more interactive forms of subject teaching and learning (⇕Zambia: Hennessy, et al., 2016). Hlophe and Mindebele focused on assessing the computer literacy skills of teachers (in agriculture, commerce, home economics and technical studies) in order to determine the feasibility of ICT education (⇕eSwatini: Hlophe & Mindebele, 2001).

Other studies look at the frequency of ICT use by teachers. For example, Agufana reported that ICT was used with relative frequency by TVET lecturers (⇕Kenya: Agufana, 2015). Authors considered the use of ICT to be positive (see, for example, ⇕Kenya, Rwanda: Agufana, 2018), and methods for increasing its use were advocated (⇕eSwatini: Hlophe & Mindebele, 2001). However, ICT facilities or materials were considered to be inadequate (⇕Mozambique: Romiszowski, 2015; ⇕Nigeria: Olaniran, et al., 2016).

6.4.2. Focus: Costs for the use of ICT and ODL

We note that there is little discourse around the cost of ICT and ODL usage. Speaking generally, David and Asamoah state that programmes that delivered content using technology were viewed favourably, in part because of their low costs (⇕Ghana: David & Asamoah, 2011). However, quite often, such programmes do not account for all costs, and when full cost analysis is undertaken, they compare less favourably.

While not reporting on a research project, Hoose and Butcher describe costing approaches to open and distance learning and ICTs, and extrapolate these findings to apply to the TVET context (⇕General: Hoosen & Butcher, 2017; in ⇕General: Latchem, 2017).

6.5. Theme: Institutions and personnel in TVET

The U-literature often discusses the diverse range of challenges facing TVET in practice. The main challenges discussed in these studies include facilities (⇕Uganda: Tukamushaba & Xiao, 2012), TVET teachers or staff (⇕Uganda: Bananuka, 2008), and the perception of TVET.

It is often pointed out that the institutions and concepts for teacher professional development are lacking or, if they exist, are operating at a low level. One related study found, for example, that employers thought that graduates of the Botswana Technical Education Programme had less than satisfactory skills, a possible outcome of the challenges plaguing TVET in practice (⇡Botswana: Odora, 2011). This is one of the reasons why there are hardly enough qualified personnel available for the implementation of TVET programmes. Another problem that contributes to the low interest in training to become a TVET teacher is the stigma attached to it. It is regarded as *"a low-prestige career pathway"* (Ghana: ⇡Ayentimi, et al., 2018:409), which is why candidates for TVET often do not want to take it up. These problems are expanded upon in Section 7.3. The SCR participants also expand on these issues in Chapter 14.

6.5.1. Focus: Further perspectives on TVET

Another noticeable topic in the U-publications is the definition and conceptualisation of TVET. In Chapter 4, we introduced an overarching scheme that was designed to capture and conceptualise all types of TVET worldwide. Although Chapter 4 was primarily concerned with conceptualising TVET, it always draws from the publications from our literature search. Up to this point, we have mainly presented the perspective of researchers on TVET. In the publications we examined, this has often been the perspective adopted by Idris and Rajuddin. According to them, TVET (or a specific component of TVET) is designed to provide learners with the knowledge and skills necessary to participate in working life (⇡Nigeria: Idris & Rajuddin, 2012; ⇡Ghana: Adogpa, 2015). In our opinion (Working Definition, Section 4.1.), this view does not go far enough to be able to identify and develop the possibilities of TVET (Chapter 4.). Section 6.6. discusses how different TVET students, teachers (Section 6.6.1.) and representatives from the business community (Section 6.6.2.) understand the conceptualisation of TVET.

6.5.2. Focus: Perspectives of TVET students and TVET educators

The goal of some studies was to understand the conceptualisation of TVET by students and educators (⇡Nigeria: Idris & Rajuddin, 2012).[4] It is important to note that the conceptualisation of TVET is not uniform (RQ2). and that differences occur depending on which group – whether TVET providers or users – has been surveyed. These studies are therefore important to improving our understanding of how different actors define and understand TVET. For example, Tukamushaba and Xiao conducted an integrative analysis of students' motivations when choosing hospitality and tourism programmes, as well as industry perceptions of graduates' qualifications for employment in Uganda (⇡Uganda: Tukamushaba & Xiao. 2012). One project in Malawi looks at teachers' views about, and practices in, technical education in Malawi in order to better understand the way in which they conceptualise technical education (⇡Malawi: Chikasanda, et al., 2011).

---

4 Other studies aimed to understand these stakeholders' conceptualisations of learning include
⇡Tanzania: Machumu, et al., 2016; ⇡Uganda:Tukamushaba & Xiao, 2012.

6.5.3. Focus: The business perspective on TVET

Various studies deal with the benefits and functions of TVET from an economic perspective. One such study examines how the quality and availability of skills are perceived by skilled construction workers in the construction industry in Zambia. It identifies where and how vocational training is used and when this is useful (⇡Zambia: Muya, et al., 2006). Other studies focus on the specific training needs for different sectors or contexts in order to understand how TVET in each area could be conceptualised and used (⇡South Africa: Dulandas & Brysiewicz, 2018; ⇡Uganda: Okiror, et al., 2017; ⇡Uganda: Miceli, et al., 2012). Another study details the processes that had already been used to develop TVET in Ghana (⇡Ghana: Bell, et al., 2014).

6.6. Theme: Studies with recommendations for TVET research

This section looks at studies that develop recommendations for TVET research. The overall findings and the challenges identified in these studies lead to recommendations for the improvement of future TVET research and policy. The policy recommendations provided can be grouped into the following three categories:

1. Government policy changes / amendment of existing policy (⇡Zambia: Ryan, 2015);
2. TVET provider policy (⇡Kenya: Agufana, 2015);
3. General / other policy (⇡Ghana: Amedorme & Fiagbe, 2013; see also Section 7.5.).

Additionally, authors' recommendations for further research advocated additional investigation into the topic(s) within the area under (their) consideration (⇡Botswana: Coker & Majuta, 2015; ⇡Ghana: David & Asamoah, 2011; ⇡South Africa: Ogunniyi, 2011). At times, this included more research into a specific intervention, event or setting that was considered as part of the study (⇡Belwal, et al., 2010), or even direct replication of the study design being employed (⇡Kenya: Mayaka & Akama, 2007).

6.7. Chapter bibliography

This bibliography can be accessed from the entry for this document in our evidence library.

Abugre, J. B., & Adebola, K. (2015). An examination of training and development of middle level managers in emerging economies: Evidence from financial institutions in Ghana. *International Journal of Organizational Analysis*. https://doi.org/10/gf62pz (⇡record)

Adedoja, G., & Oluwadara, A. (2016). Influence of Mobile Learning Training on Pre-Service Social Studies Teachers' Technology and Mobile Phone Self-Efficacies. *Journal of Education and Practice*. (⇡record)

Adogpa, J. N. (2015). Technical-Vocational Education and Language Policy in Ghana. *International Journal of Educational Administration and Policy Studies*. (⇡record)

Agufana, P. (2015). *Assessment of perceived attributes and instructional use of information communication technology by lecturers in technical training institutions in Kenya*. Moi University. (⇡record)

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*. http://repository.mut.ac.ke:8080/xmlui/handle/123456789/3028 (⇡record)

Akoojee, S. (2013). *Apprenticeship in a Globalised World: Premises, Promises and Pitfalls*. LIT Verlag Münster. (⇡record)

Amedorme, S., & Fiagbe, Y. (2013). Challenges facing technical and vocational education in Ghana. *International Journal of Scientific & Technology Research*. http://www.ijstr.org/paper-references.php?ref=IJSTR-0613-6625 (⇡record)

Awe, E., Stephenson, P., & Griffith, A. (2009). *An assessment of education and training needs of skilled operatives within the Nigerian construction industry*. (⇡record)

Ayentimi, D. T., Burgess, J., & Dayaram, K. (2018). Skilled labour shortage: a qualitative study of Ghana's training and apprenticeship system. *Human Resource Development International*, *21*(5), 406–424. https://doi.org/10/gf62j4 (⇡record)

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 (⇡record)

Baraki, A. H., & van Kemenade, E. (2013). Effectiveness of Technical and Vocational Education and Training (TVET) Insights from Ethiopia's reform. *TQM*, *25*(5), 492–506. https://doi.org/10/gf62pf (⇡record)

Bell, S. A., Oteng, R., Redman, R., Lapham, J., Bam, V., Dzomecku, V., Yakubu, J., Tagoe, N., & Donkor, P. (2014). Development of an emergency nursing training curriculum in Ghana. *International Emergency Nursing*. https://doi.org/10/f6vv27 (⇡record)

Belwal, R., Dawit Ayalew Kassa, & Medhanie Gaim Asgedom. (2010). Challenges of Curtin-AVU-AAU Distance Learning Program in Ethiopia: A Case Study. *MERLOT Journal of Online Learning and Teaching*. (⬆record)

Bennell, P., Mukyanuzi, F., Kasogela, M., Mutashubirwa, F., & Klim, M. (2006). Artisan training and employment outcomes in Tanzania. *Compare: A Journal of Comparative and International Education*. https://doi.org/10/cq4xfd (⬆record)

Bergman, S., Deckelbaum, D., Lett, R., Haas, B., Demyttenaere, S., Munthali, V., Mbembati, N., Museru, L., Razek, T., & Razek, T. (2008). Assessing the impact of the trauma team training program in Tanzania. *Journal of Trauma - Injury, Infection and Critical Care*. https://doi.org/10/bzcnz5 (⬆record)

Bonsu, K., Duodu, A., Bonsu, K., & Duodu, K. (2013). The challenges and prospects of ICTs in teaching and learning in Sunyani Polytechnic, Ghana. *Capa Scientific Journal*. http://tum.ac.ke/assets/highlights/6896059_JOURNAL_FINAL_COPY.pdfpage=16 (⬆record)

Butt, Z., Chaudhri, A., & Nassiri, N. (2013). *Narrowing the Digital Divide a case study of "learning by doing" approach to narrowing the Digital Divide in East Africa (Kenya) by Dubai Women's College students* [Conference proceedings]. https://ieeexplore.ieee.org/abstract/document/6749487/ (⬆record)

Cáceres, V. M., Sidibe, S., Andre, M., Traicoff, D., Lambert, S., King, M. E., Kazambu, D., Lopez, A., Pedalino, B., Herrera Guibert, D. J., Wasswa, P., Cardoso, P., Assi, B., Ly, A., Traore, B., Angulo, F. J., Quick, L., Dicker, R., Brenner, E., … Johnson, K. (2017). Surveillance training for ebola preparedness in Côte d'Ivoire, Guinea-Bissau, Senegal, and Mali. *Emerging Infectious Diseases*. https://doi.org/10/gf62j5 (⬆record)

Chikasanda, V., K Otrel-Cass, K., & Jones, A. (2011). Teachers' views about technical education: implications for reforms towards a broad based technology curriculum in Malawi. *International Journal of Technology and Design Education*. https://doi.org/10/cqjzj5 (⬆record)

Coker, A. D., & Majuta, A. R. (2015). Teaching Group Counseling in Botswana: Two U.S.-Trained Counselors Discuss Experiences and Share Cultural Considerations for Practice. *Journal for Specialists in Group Work*. https://doi.org/10/gf62j6 (⬆record)

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*. (⬆record)

Dodds, T. (2011). Open and distance learning for health: supporting health workers through education and training. *Open Learning: The Journal of Open, Distance and e-Learning*, 5. https://doi.org/10/gf6225 (⬆record)

Dulandas, R., & Brysiewicz, P. (2018). A description of the self-perceived educational needs of emergency nurses in Durban, KwaZulu-Natal, South Africa. *African Journal of Emergency Medicine*. https://doi.org/10/gf62nv (⬆record)

Duys, R., Duma, S., & Dyer, R. (2017). A pilot of the use of short message service (SMS) as a training tool for anaesthesia nurses. *Southern African Journal of Anaesthesia and Analgesia*. https://doi.org/10/gf62mm (⇕record)

Dzisi, S., Odoom, F. D., & Gligah, B. (2018). Entrepreneurship training and skills development in Africa: Evidence from Koforidua Technical University, Ghana. *International Journal of Economics and Business Research*. https://doi.org/10/gf62nw (⇕record)

Ebeigbe, J. (2013). Traditional eye medicine practice in Benin-City, Nigeria. *Southern African Optometrist*. http://avehjournal.org/index.php/aveh/article/view/54 (⇕record)

Eicker, F., Haseloff, G., & Lennartz, B. (Eds.). (2017). *Vocational education and training in Sub-Saharan Africa: current situation and development*. W. Bertelsmann Verlag GmbH & Co. KG. https://www.wbv.de/artikel/6004570w (⇕record)

Evoh, C. J. (2012). Taming the youth bulge in africa: Rethinking the world bank's policy on technical and vocational education for disadvantaged youth in the knowledge economy. *International Perspectives on Education and Society*. https://doi.org/10/gf62mw (⇕record)

Eze, J. F., & Nwali, A. C. (2012). Capacity Building For Entrepreneurship Education: The Challenge For The Developing Nations. *American Journal of Business Education (AJBE)*, *5*(4), 401–408. https://doi.org/10/gf62m8 (⇕record)

Forh, E. (2014). *Stakeholders' Roles in Prioritizing Technical Vocational Education and Training in Postconflict Liberia*. (⇕record)

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*. (⇕record)

Haßler, B., Hennessy, S., & Hofmann, R. (2018). *Sustaining and Scaling Pedagogic Innovation in Sub-Saharan Africa: Grounded Insights For Teacher Professional Development. 5*(1). (⇕record)

Hanson, K. (2005). Vulnerability, partnerships and the pursuit of survival: Urban livelihoods and apprenticeship contracts in a West African City. *GeoJournal*. https://doi.org/10/cjzk3k (⇕record)

Hardman, F., Ackers, J., Abrishamian, N., & O'Sullivan, M. (2011). Developing a systemic approach to teacher education in sub-Saharan Africa: emerging lessons from Kenya, Tanzania and Uganda. *Compare: A Journal of Comparative and International Education*, *41*(5), 669–683. https://doi.org/10/gftr63 (⇕record)

Harerimana, A., Mtshali, N., & Hewing, H. (2016). E-Learning in nursing education in Rwanda: benefits and challenges. An exploration of participants' perspectives. *Journal of Nursing and Health Science*. (⇕record)

Hennessy, S., Haßler, B., & Mwewa, G. (2016). *Using digital technology and school-based professional development to leverage interactive classroom teaching*

in Zambia. https://www.taylorfrancis.com/books/e/9781136157974/chapters/10.4324%2F9780203078945-13 (⇡record)

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 (⇡record)

Hoosen, S., & Butcher, N. (2017). Chapter 12: Considerations in Costing ODL and ICTs in TVET. In C. Lachem (Ed.), *Using ICTs and Blended Learning in Transforming TVET*. (⇡record)

Idris, A., & Rajuddin, M. (2012). An assessment of employability skills among technical and vocational education students in Nigeria. *Archives Des Science*. (⇡record)

Kahyarara, G., & Teal, F. (2008). The returns to vocational training and academic education: Evidence from Tanzania. *World Development*, *36*(11), 2223–2242. https://doi.org/10/dv4nwz (⇡record)

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 (⇡record)

Kingombe, C. (2011). Lessons for developing countries from experience with technical and vocational education and training. *Economic Challenges and Policy Issues in Early Twenty-First-Century Sierra Leone*, 278–365. http://www.theigc.org/wp-content/uploads/2014/09/Kingombe-2014-Working-Paper-1.pdf (⇡record)

Kluve, J., Puerto, S., Robalino, D. A., Romero, J. M., Rother, F., Stöterau, J., Weidenkaff, F., & Witte, M. (2016). *Do youth employment programs improve labor market outcomes? A systematic review* (Ruhr Economic Papers) [Working Paper]. RWI - Leibniz-Institut für Wirtschaftsforschung. http://hdl.handle.net/10419/149137 (⇡record)

Krishnan, P., & Shaorshadze, I. (2013). *Technical and vocational Education and Training in Ethiopia* [Working Paper]. http://prime-ethiopia.org/wp-content/uploads/2015/03/TVET1.pdf (⇡record)

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 (⇡record)

Lange, S., & Benavot, A. (2016). *Achieving teaching quality in sub-Saharan Africa: Empirical results from cascade training* (LOCAL-SCOPUS_ID:85017575802). https://doi.org/10/gfw34w (⇡record)

Latchem, C. (2017). *Using ICTs and Blended Learning in Transforming TVET*. UNESCO; COL. http://unesdoc.unesco.org/images/0024/002474/247495e.pdf (⇡record)

Mêgnigbêto, E. (2007). LIS curriculum in French-speaking West Africa in the age of ICTs: The case of Benin and Senegal. *The International Information & Library Review*. https://doi.org/10/d26vb2 (⇡record)

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 (⇡record)

Malle, A. Y. (2016). Inclusiveness in the Vocational Education Policy and Legal Frameworks of Kenya and Tanzania. *Journal of Education and Learning*. (⇡record)

Mano, Y., Iddrisu, A., Yoshino, Y., & Sonobe, T. (2012). How Can Micro and Small Enterprises in Sub-Saharan Africa Become More Productive? The Impacts of Experimental Basic Managerial Training. *World Development*. https://doi.org/10/cxgkj2 (⇡record)

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 (⇡record)

Mayaka, M., & Akama, J. S. (2007). Systems approach to tourism training and education: The Kenyan case study. *Tourism Management*. https://doi.org/10/dq2df7 (⇡record)

Mayaka, M., & King, B. (2002). A Quality assessment of education and for Kenya's tour-operating sector. *Current Issues in Tourism*. https://doi.org/10/dkhvf5 (⇡record)

Miceli, A., Sebuyira, L. M., Crozier, I., Cooke, M., Naikoba, S., Omwangangye, A. P., Rayko-Farrar, L., Ronald, A., Tumwebaze, M., Willis, K. S., & Weaver, M. R. (2012). Advances in clinical education: a model for infectious disease training for mid-level practitioners in Uganda. *International Journal of Infectious Diseases*. https://doi.org/10/f2fz47 (⇡record)

Mpofu, E., Jelsma, J., Maart, S., Levers, L. L., Montsi, M. M. R., Tlabiwe, P., Mupawose, A., Mwamwenda, T., Ngoma, M. S., & Tchombe, T. M. S. (2007). Rehabilitation in Seven Sub-Saharan African Countries: Personnel Education and Training. *Rehabilitation Education*. https://doi.org/10/gf623d (⇡record)

Musarurwa, C. (2011). Teaching with and Learning through ICTs in Zimbabwe's Teacher Education Colleges. *US-China Education Review*. https://eric.ed.gov/?id=ED529913 (⇡record)

Muya, M., Price, A. D. f., & Edum-Fotwe, F. T. (2006). Construction craft skills requirements in sub-Saharan Africa: A focus on Zambia. *Engineering, Construction and Architectural Management*. https://doi.org/10/bzvww9 (⇡record)

Nakano, Y., Tsusaka, T. W., Aida, T., & Pede, V. O. (2018). Is farmer-to-farmer exten-
   sion effective? The impact of training on technology adoption and rice farming
   productivity in Tanzania. *World Development*. https://doi.org/10/gf62mx (⇡record)

Ndegwa, M. K., de Groote, H., & Gitonga, Z. M. (2015). Evaluation of artisan training in
   metal silo construction for grain storage in Africa: Impact on uptake, entrepre-
   neurship and income. *International Journal of Educational Development*. https://
   doi.org/10/f7q8g8 (⇡record)

Ndlovu, T., Kajiba, J., Aiko, R., Kessy, F., Mkenda, B. K., Kweka, J., & Kabelwa, G. (2006).
   *A Comparative Analysis of Firm Based Training in East African Manufacturing
   Sector: Does Level of Education Matter?* http://hdl.handle.net/20.500.11810/2905
   (⇡record)

Odora, R. (2011). *Employers' perceptions regarding the quality of technical education and
   training in Southern Africa : a case of the Botswana Technical Education Programme*.
   https://jointbankfundlibrary.on.worldcat.org/oclc/1045432917 (⇡record)

Ogunniyi, M. B. (2011). The Context of Training Teachers to Implement a Socially Rele-
   vant Science Education in Africa. *African Journal of Research in Mathematics,
   Science and Technology Education*. https://doi.org/10/gf62k6 (⇡record)

Okiror, J. J., Hayward, G., & Winterbottom, M. (2017). Towards in-service training needs
   of secondary school agriculture teachers in a paradigm shift to outcome-based
   education in Uganda. *The Journal of Agricultural Education and Extension*. https://
   doi.org/10/gf62j8 (⇡record)

Okry, F., Van Mele, P., & Houinsou, F. (2014). Forging New Partnerships: Lessons from the
   Dissemination of Agricultural Training Videos in Benin. *The Journal of Agricultural
   Education and Extension*. https://doi.org/10/gf62k7 (⇡record)

Olabiyi, O. (2014). Challenges and Prospects of Information Communication Technology
   (ICT) in Teaching Technical Education towards Globalisation. In *Effects of Informa-
   tion Capitalism and Globalization on Teaching and Learning*. (⇡record)

Olaniran, S. O., Duma, M. A. N., Nzima, D. R., Kumar, V., Murthy, S., & Kinshuk. (2016).
   Availability, Access and Utilization of E-Resources among Pre-Service Teacher
   Trainees by Distance. *IEEE 8TH International Conference on Technology for Educa-
   tion*. https://doi.org/10.1109/T4E.2016.55 (⇡record)

Oluwafemi, C., Martins, O., & Adebiaye, H. (2015). *Governance and Change in Educational
   Policy Systems in Technical Vocational Education*. (⇡record)

Prager, S., Gupta, P., Chilambwe, J., Vwalika, B., Neukom, J., Siamwanza, N., Eber, M.,
   & Blumenthal, P. D. (2012). Feasibility of training Zambian nurse–midwives to
   perform postplacental and postpartum insertions of intrauterine devices. *Interna-
   tional Journal of Gynecology & Obstetrics*. https://doi.org/10/f2hgm7 (⇡record)

Preckler Galguera, M. (2018). *Globalization, Mass Education and Technical and Vocational Education and Training: the influence of UNESCO in Botswana and Namibia*. (⇕record)

Romiszowski, A. (2015). *Baseline Study for Distance Technical and Professional Education in Mozambique*. http://oasis.col.org/handle/11599/1775 (⇕record)

Ryan, S. (2015). *"If I can be a helper, one day I be a boss"–A case study of informal apprenticeship in Lusaka*. (⇕record)

Safford, K., Cooper, D., Wolfenden, F., & Chitsulo, J. (2013). "Give courage to the ladies": Expansive apprenticeship for women in rural Malawi. *Journal of Vocational Education & Training*. https://doi.org/10/gf62pr (⇕record)

Sandirasegarane, S., Sutermaster, S., & Gill, A. (2016). Context-driven entrepreneurial education in vocational schools. *International Journal for Research in Vocational Education and Training*. https://doi.org/10/ggxx5z (⇕record)

Sanga, C., Mlozi, M., Haug, R., & Tumbo, S. (2016). Mobile learning bridging the gap in agricultural extension service delivery: Experiences from Sokoine University of Agriculture, Tanzania. *International Journal of Education and Development Using Information and Communication Technology*. http://41.73.194.142:8080/xmlui/handle/123456789/1184 (⇕record)

Saud, M., Shu, B., & Yasin, M. (2011). Effective integration of information and communication technologies (ICTs) in technical and vocational education and training (TVET) toward knowledge management. *African Journal of Business Management*. http://www.academicjournals.org/journal/AJBM/article-abstract/11F54F315018 (⇕record)

Scanga, L. H., Deen, M. K. Y., Smith, S. R., & Wright, K. (2018). Zoom Around the World: Using Videoconferencing Technology for International Trainings. *Journal of Extension*. (⇕record)

Sharehu, A., & Achor, E. (2014). Empowering Individuals to Empower the Nation Nigeria. *National Association for Science, Humanities & Education Research Journal*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2578866 (⇕record)

Summers, R., Haavik, C., Summers, B., Moola, F., Lowes, M., & Enslin, G. (2001). Pharmaceutical education in the South African multicultural society. *American Journal of Pharmaceutical Education*. (⇕record)

Tukamushaba, E. K., & Xiao, H. (2012). Hospitality and Tourism Education in Uganda: An Integrative Analysis of Students' Motivations and Industry Perceptions. *Journal of Teaching in Travel & Tourism*. https://doi.org/10/gf62kz (⇕record)

Walker, K., & Hofstetter, S. (2016). *A Study of Agricultural Technical and Vocational Education and Training (ATVET) in Developing Countries*. (⇕record)

Wallaert, H. (2008). *Apprenticeship Strategies Among Dii Potters from Cameroon, West Africa*. (⇡record)

Wohlfahrt, M. U. (2018). Primary Teacher Education in Rural Cameroon: Can Informal Learning Compensate for the Deficiencies in Formal Training? *Africa Education Review*. https://doi.org/10/gfv9vv (⇡record)

Wolf, S., Raza, M., Kim, S., Aber, J. L., Behrman, J., & Seidman, E. (2018). Measuring and predicting process quality in Ghanaian pre-primary classrooms using the Teacher Instructional Practices and Processes System (TIPPS). *Early Childhood Research Quarterly*. https://doi.org/10/gfjkng (⇡record)