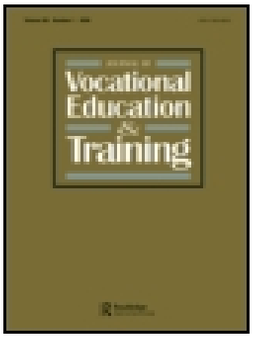

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Vocational education and training for African development: a literature review

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ABSTRACT
The SDGs mark the clearest global acceptance yet that the previous approach to development was unsustainable. In VET, UNESCO has responded by developing a clear account of how a transformed VET must be part of a transformative approach to development. It argues that credible, comprehensive skills systems can be built that can support individuals, communities, and organisations to generate and maintain enhanced and just livelihood opportunities. However, the major current theoretical approaches to VET are not up to this challenge. In the context of Africa, we seek to address this problem through a presentation of literatures that contribute to the theorisation of this new vision. They agree that the world is not made up of atomised individuals guided by a "hidden hand". Rather, reality is heavily structured within political economies that have emerged out of contestations and compromises in specific historical and geographical spaces. Thus, labour markets and education and training systems have arisen, characterised by inequalities and exclusions. These specific forms profoundly influence individuals' and communities' views about the value of different forms of learning and working. However, they do not fully define what individuals dream, think and do. Rather, a transformed and transformative VET for Africa is possible.

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Introduction

The decision by the United Nations General Assembly in September 2015 to ratify the Sustainable Development Goals (SDGs) marked the clearest acceptance yet by the world's leaders that the previous approach to development was unsustainable. In the UN Agenda 2030's insistence that thinking about prosperity, people and planet are interlocking, we see signs of high-level commitment to a new way of thinking about the intertwining of economic, environmental

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and social development. Crucially, the SDGs stress that development necessitates concentrated attention to overturning intersectional disadvantage and securing environmental sustainability, and not just to economic growth. In the field of vocational education and training (VET), UNESCO has responded by developing a clear account of how a transformed VET must be part of a transformative approach to development (UNESCO 2016). It argues that credible, comprehensive skills systems can be built that can support individuals, communities, and organisations to generate and maintain enhanced and just livelihood opportunities.

Whilst we remain critical regarding the genuineness of the political rhetoric about transformative development and skills reform, we believe that the UNESCO project should be embraced and pushed further than the current political vision. This article is part of a larger project to develop new theories and practices of transformed VET from transformative development in African contexts but, specifically, is the place where we engage with existing literatures as a way of building towards new accounts of VET for African development.

In what follows, we do two main things. First, we review the past by examining the major strands of the existing VET literature in/on Africa and critiquing these. We do so to argue that the majority literatures of African VET are grounded in an inadequate theorisation of both VET and development, and fail to fully account for political economy histories emerging out of colonial regimes that shape both what is present and what is absent in VET policies and debates (McGrath 2011, 2012). As such, they are of limited help in driving us forward in the directions and at the pace necessary to confront the accelerating challenges faced.

Second, we imagine the future by offering a reflexive attempt to contribute to a transformed and transformative way of thinking about VET and sustainable development. As authors, we have written independently in a number of traditions and do not necessarily fully agree on their relative strengths and weaknesses. Thus, our discussion is based on the genuine internal debate within the authorial team and is intended to offer a pluralistic account of directions we consider fruitful rather than a synoptic account.

The rest of the article is structured in five sections. First, we briefly outline our methodological approach and considerations before providing a brief overview of the history of VET and development. The next two sections contain the two main substantive elements of our article, focusing on a review of earlier literature and dominant approaches before turning to five emergent literatures and prospects for generating understandings. In the final section, we propose a new framework for theorising VET in Africa for sustainable development.

Some methodological notes

Definitions of VET vary, and we do not have space here to go into them in any real detail. Focusing on Sub-Saharan African, we can see that VET is heavily shaped by the intertwined dynamics of the nature of economic development and colonialism. In this article, we largely concentrate on public, formal VET, on which the bulk of the literature has been written. However, the size, shape and level of this vary very strongly according to colonial approaches to overall education systems. Public vocational systems often started at the lower secondary level but most systems have subsequently developed upper secondary and tertiary components. The size of private for- and not-for-profit systems vary considerably but there is a very little written on these. Formal industry is often weak and its training systems poor: and a literature on this too is limited. For most Africans, likely labour market destinations are still in the urban informal or rural subsistence economies. There was an early interest in both of these from researchers but there has been relatively little literature on either in recent years.

This article draws on team members' experiences of previous attempts to summarise the literature on VET in Africa. These were donor-funded and aimed at providing policy-useful syntheses rather than better theorisation. Here we are concerned to draw out conceptual strands from the existing literature and are more concerned with where it might go rather than where it is. Our selections and summaries, therefore, are theory-driven.

Such selections, however, must also be shaped by notions of quality. Here we largely focus on that which is published, peer-reviewed and has standing in the scholarly community. However, we have also reviewed those relevant master's dissertations and doctoral theses that we could access. We primarily focus on the educational literature but have also looked into major development economics, development studies, management and political science journals, all of which occasionally carry VET-related articles, as well as into some key grey literature.

However, the notion of quality is not entirely neutral. The published literature is predominantly Anglophone given the biases of global knowledge production towards Anglophone journals. Whilst we have drawn on our knowledge of existing literature reviews that consider other languages, there is an Anglophone bias in research considered here and the countries covered. We must acknowledge also that who gets to publish is also shaped by which knowledges count. This is a recurring theme of the second half of the article but we need to flag up here that there is a preponderance in this literature, and in our authorial team, of white voices, whether Northern or Southern.

The literatures that we work with in the second main part of the article are generally small, although some have longer pedigrees than others. We focus on them, as we noted above, because we consider they collectively may be generative for developing new theories about VET and African development.

A very brief history of VET and development in Africa

Policy and practice on VET in Africa prior to independence was largely either a traditional practice embedded in communities, or oriented by labour development strategies for primarily extractive colonial states. Since independence, they have gone through three main post-independence phases. These broadly reflect wider developmental orthodoxies of modernisation, basic needs and neoliberalism (cf. McGrath 2018). While these are presented chronologically, there is also a need to recognise their often concomitant or parallel development, and that all three were subject to local resistance and adaptation.

The first of the three phases began around the point of transition between colonialism and independence in the late 1950s and 1960s. The new economics of education, and aspirations for widening education access in post-colonial states, supported a massive increase in African schooling and a focus on development through industrialisation in the interests of state formation (McGrath 2018). Experts and politicians understood that industrialisation required the replacement of highly skilled expatriates and the localisation of middle-high skills capacity through investment in public VET in order to achieve industrialisation (Rostow 1960).

However, concerns quickly grew about the new phenomenon of 'educated unemployment'. A second phase of VET planning began, reflecting a broader questioning of modernisation accounts in the rise of the basic needs agenda (McGrath 2018). VET saw well-publicised interventions designed to provide appropriate skills for rural and later urban informal sector settings (NCCK, 1967; Van Rensburg 1974; King 1977; Fluitman 1988).

Foster (1965) had offered early warnings about 'the vocational school fallacy in development planning', arguing that post-independence labour markets needed general, not vocational education. However, policy and research orthodoxies that valued vocational education were not overturned until World Bank research in the 1980s (Psacharopoulos 1981, 1985; Heyneman 2003). By 1990, the Bank was prioritising primary education, a trend reinforced by Education for All and the Millennium Development Goals (McGrath 2018). Nonetheless, African governments were less convinced by this argument, believing that expanding schooling would reopen the educated unemployment issue. Moreover, whilst the intellectual certainty of the Bank's researchers was unwavering, the Bank's day-to-day business remained to invest money in projects, and its investment in VET continued.

This resulted in a third phase of VET in Africa in which the Bank developed a new account of public VET that bemoaned its weaknesses before offering new policy conditionalities for continued lending (Middleton, Ziderman, and Adams 1993; Johanson and Adams 2004). Inevitably, such reforms drew from the wider neoliberal approach. In VET-specific terms, they borrowed from the 'Old Commonwealth' a 'tool kit' of new public management reforms that included

new governance structures giving institutions more autonomy and businesses more say at local and national levels; sectoral bodies; competency-based curricula; national qualifications frameworks; and outcomes-based funding (Allais 2003; McGrath and Lugg 2012). In spite of the SDGs and a new UNESCO vision, this is largely where the orthodox debate still sits.

Reviewing the past: the state of the dominant literatures

Our first substantive section reviews two well-established traditions within the VET Africa literature: economics of training and practice-focused literature.

The economics of training

First, we consider the economics of training literature, which may be divided into two broad traditions: an older tradition based in rate of return analysis, from which emerged the orthodoxy that VET provides poor rates of return; and a new tradition that is reflected in the rise of randomised controlled trials as an educational tool that draws particularly on evaluations of intervention projects, an approach that has spawned some attempts at systematic reviews.

The studies by Psacharopoulos (1981, 1985) cited earlier are the best-known amongst a larger literature that made an apparently unassailable case for disinvestment from VET, which became donor orthodoxy by the 1990s. In this literature, VET was shown to provide far lower returns than primary or academic secondary education. Indeed, such was the apparent power of the evidence at the global level that little strong empirical work was ever actually done on the topic in Africa.

In spite of the Psacharopoulos claims, grounded in global surveys, early studies in Africa (Grootaert; Hinchliffe both 1990) found that returns to VET were high. Indeed, Grootaert's work was particularly important in suggesting that informal training could produce very high rates of return, something that agreed with non-econometric work by others such as Fluitman in West Africa (1992). Later work in East Africa by Kahyarara and Teal (2008) did show the expected academic premium. Nonetheless, they found that returns to VET were rising and did not conclude that VET investment was misplaced, as long as it emphasised broader problem-solving skills rather than narrowly defined vocational skills.

A major issue in this work is the size of the African formal economy, which makes the calculation of rates of return very problematic (Bennell 1996; Bigsten et al. 1998). Moreover, critiques have highlighted that the real issue is one of economic development rather than the efficiency of VET systems. Where formal labour market employment and real wages have been stagnant (as in much of Africa over much of the post-independence period), it is perverse to see the provision of skills as the underlying problem.

Bennell went further and provided a thorough critique of the methodological and theoretical assumptions of the rate of return approach. He pointed in particular to the problems of aggregating weak data into multi-country analyses, a major feature of Psacharopoulos's work. He also highlighted the ways in which the dominant methodology tended to inflate the social returns to education. Whilst accepting that such returns could be high in economies that were rapidly developing, Bennell maintained that this did not apply in most African cases.

He also raised the problem of using educational quantity as a proxy for educational quality. Strictly, human capital theory argues that it is what is learnt that is the engine for increased productivity, wages and economic growth. However, until recently, years of schooling were the default measure provided for human capital, in spite of problems both of accurate school enrolment data and of actual learning. Hanushek and Woessmann (2007, 2012) have pioneered improved work here at the global scale. However, the new approach is dependent on measures of learning that are taken from learning assessments. Both the overall validity of such testing and the viability of comparison across different tests internationally remain controversial. Moreover, such tests have largely concentrated on formal schooling so have little to add to the Psacharopoulos-Bennell debate. Whilst human capital analysis has become more sophisticated in the past 40 years, many of the problems of applying it to African contexts remain.

The second strand of the economics of training literature considers project interventions. These are typically funded by international development actors and are usually short-duration and sit outside the regular formal VET system. As we shall note below, this atypicality leads to a set of specific issues in evaluating what they tell us about VET more widely.

This literature does not easily get spotted by a VET audience as it is apparently focused on active labour market policies/employment-generation programmes. Like the rate of return critique, it is largely associated with the World Bank. Two Bank working papers are particularly important: Blattman and Ralston (2015) and McKenzie (2017). Blattman and Ralston (2015) offered systematic reviews of evidence on labour market and entrepreneurship programmes globally. They argued that skills programmes show very limited positive effects, especially for men. They concluded that such interventions were poor value for money, motivating instead for conditional cash transfers. McKenzie looked at evaluations of active labour market policies. He also concluded that vocational programmes were largely ineffective.

However, both systematic reviews are flawed in multiple ways. They focus on a very small (and non-representative) sample of a specific type of intervention: externally funded, short-duration vocational programmes in settings where there is an unemployment crisis; not on mainstream VET programmes. However, they use the negative evaluation of these programmes to apply the

findings to VET more generally in ways that are neither theoretically nor methodologically valid.

Only one African study is seen as meeting the criteria for inclusion in such systematic reviews: Hicks et al.'s (2011) study of a voucher scheme in Kenya. However, an examination of this simply reinforces some of the key points above: it is not a study of formal VET or its institutions.

At a more theoretical level, there are a range of further issues with the two strands of economic literature on VET and development. They are necessarily locked into a narrow human capital understanding that is too dependent on notions of individuals as acting out of narrow economic rationality and which downplays wider structural issues. They derive from a theory that sought to explain individual rationales and economic dynamics in the most advanced economies without considering the extent to which these same forces operate in different cultures, education systems and economies. Such weaknesses make them poorly suited for addressing the challenges of increasing productivity and economic growth in African urban informal or rural subsistence settings. Moreover, they are badly placed to address issues of sustainability.

Practice-focused research

The second major strand of African VET literature is practice-focused. In keeping with wider trends in the production of education research knowledge, little of this has found its way into mainstream international peer-reviewed journals. Nonetheless, there is a strand in 'international' journals such as JVET, and African journals such as the *Journal of Vocational Adult and Continuing Education and Training* and the *Africa Journal of Technical and Vocational Education and Training*, that we will draw upon as being representative in focus of the wider tradition. This focuses largely on issues of teaching and learning (and increasingly of vocational teacher education) and institutional leadership and management.

In the teaching and learning area, research has focused on curriculum, pedagogy and student support (Needham 2018; Papier and McBride 2018). Vocational teacher education has been a particularly strong theme in the current decade (Papier 2010; Ahmed 2011; Eicker, Haseloff, and Lennartz 2017; Buthelezi 2018; Muwaniki and Wedekind 2018). There has also been some attention to the use of educational technologies (Rotich, Kosgey, and Kimutai 2016), and to issues of languages of instruction, an area that is seen as problematic given the juxtaposition of predominantly metropolitan languages of instruction and low levels of student competence in these languages (Rogers 2019).

In management studies, much of the focus has been on attempts to improve management systems (Akoojee and McGrath 2008; Kraak, Paterson, and Bok 2016; Robertson and Frick 2018). Some attention has extended to colleges'

external partnerships (Ayentimi, Burgess, and Dayaram 2018), including interventions to improve college-to-work transitions (Papier 2017). A lot of grey material has emerged on institutional change, particularly in South Africa through a series of major college management improvement initiatives (cf. Powell 2013 for a review of this literature).

Whilst there are multiple reasons to celebrate and support the growing volume of practice-focused literature on VET in Africa, for our focus – on VET's role in development – this literature is of limited value.

Imagining the future: emergent literatures

In addition to what has come before (with their histories, influences, strengths and weaknesses as outlined above), we see scope for a range of new ways of approaching VET research that has potential to support the improvement of just livelihoods in Africa. In what follows, we summarise five literatures that point to ways in which VET can be theorised in relationship with economic, human and sustainable development, thus extending and expanding VET research in Africa. In all five, there are already African literatures as part of wider traditions, and we will draw primarily on these.

Policy, systems and institutions

Whilst there has been much technical policy literature on VET in Africa (e.g. Atchoarena and Delluc 2002; Johanson and Adams 2004; SADC and UNESCO, 2013), there are small strands of research on the vocational education system that are less focused on efficiency-focused policy reform, and more on critique. The institutional political economy tradition has been influential in understanding skill formation internationally (Soskice and Hall 2001; Thelen 2004; Busemeyer and Iverson 2014). This is less well established in Africa, perhaps because it does not speak well to the challenges of development, and because it has focused on formal labour markets, which are small in the African context (Nölke and Claar 2013). Nonetheless, there has long been interest in this approach in South Africa, where Kraak, Allais and others have used it to explain the particular shape of the evolving post-apartheid skills system (Kraak 2004, 2010, 2012; Allais 2007, 2013). More recently, Wedekind (2018) has explored the processes of institutional shaping of the apprenticeship system in South Africa that looks beyond the regulatory domain, whilst Allais (2018) argues that positional competition for credentials in a stagnant and small formal labour market is undermining the development of strong VET in South Africa. The literature exploring the historical determinants influencing the shape of systems has begun exploring the colonial, settler and imperial foundations (Swartz 2016), processes of policy borrowing, lending and transferring (cf. Steiner-Khamsi and Quist 2000; Spreen 2004), and the nature of the economy underpinning the

society (Wedekind 2014). In so doing, it is spreading from its South African heartland. Inevitably, this brings new methodological and theoretical challenges given the very different historical and contemporary trajectories of economic systems and data that pertain in much of the rest of Africa.

This literature is vital in emphasising the ways that systems evolve historically and reflect the complexities of national political-economic configurations in ways that reflect the foundational influence of Marx on this approach. Against simplistic faith in capitalism, the market or naïve policy transfer, the approach stresses the need to look into system dynamics for the obstacles and opportunities that will shape the likely success of innovations designed to make VET more inclusive and sustainable. Historically, this literature has been more focused at the macro level but there are signs of a growing awareness that the approach needs to be more multi-level.

Vocational knowledge

System-wide analysis of VET brings to the fore issues of what kinds of subject knowledge as well as practical skills should be taught to learners at which levels; related to this is the fraught literature on the relationship between theory and practice. South Africa, probably because of the very strong attempt to introduce outcomes-based education in both the school system and the rest of the education and training system (Allais 2011), has produced a relatively substantial body of research into these issues (Gamble 2003, 2004, 2011; Young and Gamble 2006; Allais et al. 2007; Allais 2014; Allais and Shalem 2018). Much of this has argued for the need for subject- and discipline-based curricula as the basis for meaningful work as well as the broader frame within which practical skills and knowledge are located. Recent research has explored the nature of practical knowledge and its relationships to disciplinary knowledge in disciplines such as engineering (Smit 2018; Wolff 2018) with possible application for VET. Gamble (2018) argues that the outcomes or competence-based approach has derived from crude labour market analysis; by contrast, labour process analysis reveals how different jobs with the same title are often very different and how the nature of knowledge used at work differs dramatically within the same ostensible occupational role. A related but distinct strand of work has sought to draw on German understandings of holistic competence for thinking about the wider dimensions of occupational competence that include work processes, occupational identity and social and environmental responsibility as core components (Eicker, Haseloff, and Lennartz 2017; Obinnim 2018). This work has fed into thinking about teacher education for VET systems in a number of African countries.

A major challenge for imagining new vocational provision lies in understanding the knowledge basis of new programmes, qualifications and occupations. This literature points to the need to get beyond crude technical approaches to

what skills appear to be needed at the surface level, and to consider what knowledge, as well as skills, is required for transformative VET. Here there are clear potential connections to both the community development approach's Freirean roots and to the sustainable development approach's emphasis on participatory, inclusive knowledge formation and on boundary-crossing learning (see discussions below).

However, here too there is a need to expand from the approach's South African centre. In so doing, it will need to engage more with other traditions of knowledge, especially in the context of the rise of decoloniality debates.

Critical capabilities approach

A new theoretical approach to VET and development is emerging which draws on the human development and capabilities approach (Sen 1999). The critical capabilities approach (CCA) addresses both inequality in skills development and how we move away from a narrow focus on immediate employability and production (McGrath 2018).

CCA moves beyond the atomised individualism of the orthodox human capital approach by developing a far stronger account of agency. At the same time, it has also expanded beyond early work on capabilities and education by insisting on the importance of structure and power, hence, the use of 'critical' in our description. In so doing, it is influenced by the political economy of skills tradition, by critical realism, and by feminist theory. The approach has a strong focus both on the need to give considerable attention to young people's voices in articulating their aspirations for meaningful work and lives, and on their intersectional experience of marginalisation and disempowerment. Although drawing on the wider capabilities approach, this literature has largely been Africa-focused (Powell 2012; Tikly 2013; De Jaeghere and Baxter 2014; Powell 2014; McGrath and Powell 2015; De Jaeghere, Wiger, and Willemsen 2016; De Jaeghere 2017; Powell and McGrath 2018 and 2019a, 2019b). At its heart, it has eight key elements.

First, it insists on foregrounding poverty in order to better understand many young people's challenging lived experiences. In keeping with the wider capabilities tradition, CCA sees poverty as being multidimensional (Powell 2014; Powell and McGrath 2019a). Given that most who enter VET in Africa are from poor backgrounds, this insistence on a careful analysis of how they experience poverty seems essential.

Second, the approach draws on feminist literatures to stress how women experience intersectional disadvantages that shape the decisions that they make about education and work throughout their lives and the outcomes they achieve (McGrath 2012; McGrath and Powell 2016). CCA also offers a strong sense of VET as a space in which people (but particularly women) can attempt to identify different agentic responses to structural obstacles.

Third, CCA is influenced by the political economy of skills tradition and accepts that it offers a powerful account of how structural reality influences individuals' experiences of VET (McGrath 2012; Powell and McGrath 2018, 2019a, 2019b). This element is most strongly seen in work on South Africa where the political economy tradition also is strongest.

Fourth, CCA insists on a broad conception of work. It argues that work is not only about income/production but should also be about self-identity and self-worth (Sen 1975). This leads to a stress on how work's potential to fulfil wider human needs can be maximised. Thus, the notion of 'decent work' needs to be protected and expanded. However, the approach notes that access to and status of VET and many forms of work are unequal and structured profoundly by class, gender and race (Powell and McGrath 2018 and 2019a). Given the intended tight relationship between VET and work, these perspectives are crucial for the vision of transformed and transformative VET. Both in work led by De Jaeghere in East Africa and Powell and McGrath in South Africa, there is a strong insistence on understanding the real labour market experiences and possibilities of young people.

Fifth, CCA argues that the focus of our attention to VET should be on how it supports what individuals want to pursue in order to flourish. Hence, VET analysis should shift from considering what the capitalist state argues should be the purpose of VET and life to attention to what individuals' value and why they participate in VET. Evidence from South Africa suggests that VET learners are not simply concerned with immediate employability but value other outcomes from their VET participation, such as respect, active citizenship and empowerment (Powell and McGrath 2019a).

Sixth, the approach offers a distinct view of aspirations, drawing on authors such as Appadurai (2004). This contrasts with the orthodox view of 'aspirations' as a deficit of poor people that needs fixing. The approach understands aspirations as forward-looking 'life projects' in which individuals attempt to respond to their structural obstacles and their endowments of various resources in order to imagine and achieve better lives (Powell and McGrath 2019a). Again, this emphasises the narrowness and short-termness of the employability orthodoxy (cf. Bonvin 2018).

Seventh, CCA argues that the reassessment of life projects and adjustment of aspirations occurs as a repeated process. It draws attention to the series of decision points that individuals experience regarding their learning and work trajectories. Such a focus leads to a realisation that such decision points are unique to the individual in terms of the exact dynamics that both cause a moment of decision and that shape their calculations at that moment. Nonetheless, many of these are caused by system effects that can at least be predicted in terms of their timing, as Powell and McGrath (2018) have detailed in South Africa.

Eighth, the approach concludes that all of the above requires a reassessment of what counts as a success for vocational providers. Rather than emphasise

pass, throughput or employment rates, important though these are, CCA calls for evaluation to focus primarily on the extent and ways in which institutions, and the system, support the flourishing of learners (Powell and McGrath 2014).

The approach needs to develop further in its engagement with current changes in the world of work. Like the political economy account, a stronger multi-level dimension to analysis is needed, as is a better incorporation of sustainability concerns (cf. McGrath and Powell 2016).

VET for community development

Many of the same issues are also taken up by a tradition that draws on critical adult education (e.g. Robinson-Pant 2015; Balwanz 2019). There are two main African hubs for this: the Youth, Education and Work (YEW) network, centred on the UNESCO Chair in Lifelong Learning, Youth and Work at Gulu University in Uganda but also including scholars from elsewhere, most notably the Netherlands (Zeelen et al. 2010; Zeelen 2015; Blaak et al. 2016), and a radical adult and community education tradition in South Africa (Vally and Motala 2014; Balwanz 2019).

In keeping with its adult and community education origins, much of this work is grounded in participatory action research (Boog et al. 2008; Angucia, Zeelen, and de Jong 2010; Tukundane et al. 2015), with a strong insistence on valuing and acting upon local knowledges including those of rural people and the youth (Kanyandago 2010) in ways that are mirrored in the sustainable development account below. Together with CCA, this shift of focus to local socio-economic contexts, attitudes and aspirations appears crucial for a transformative approach to VET.

This work critically situates discussions of education in the wider contexts of capitalist development and of aid. It argues that international education policies have put too much emphasis on access and enrolment in education and too little on the systematic dynamics of inequality. By stressing opportunity, the orthodox approach to education and development has prioritised access and underplayed the structural factors that cause drop out. Uganda, as one of the most enthusiastic and favoured African participants in the orthodoxy, is seen as a prime case where policymakers pay lip service to the importance of VET but in practice have reinforced colonial attitudes that academic education is all that matters. Authors such as Openjuru (2010), Jjuuko (2012) and Zeelen (2015) argue that over-academic education, high levels of drop out and massive levels of youth unemployment force young Ugandans into indecent work. This mirrors recent concerns from South Africa in the critical capabilities literature.

In response, the approach focuses on the crucial challenge of how VET can engage with local labour market realities, characterised by a huge informal economy and subsistence agriculture, providing an obvious link back to one of the challenges facing the political economy account (Blaak, Openjuru, and

Zeelen 2013; Minnis 2006). In response to the failings of academic education, as with De Jaeghere's work cited above, the emphasis is placed upon building craftsmanship, entrepreneurship and financial capabilities. At the same time, there is a call for both formal and non-formal VET to be strengthened and attention be given to changing stakeholder mindsets in a way that could inform and be informed by the aspirations turn in the CCA literature.

The Ugandan literature also adds a further structural dimension missing from the African CCA literature: a post-conflict context. Research in Northern Uganda shows the immense challenge of supporting the reintegration of war-affected children and youth into the community after their traumatic experiences linked to the Lord's Resistance Army (Angucia 2010). The research shows the importance of VET, alongside a range of other factors, in creating chances for these vulnerable groups (Schnelker 2013; van der Bent 2013; van der Linden, Blaak, and Andrew 2013).

Increasingly, it is becoming more attuned to the critical environmental challenges facing the region. With the imminent start of oil extraction in Western Uganda, there is an identified need to reconceptualise VET in the region in ways that meet industry needs but also reflect those of local communities and the environment (Ogwang, Vanclay, and Van Den Assem 2019).

Skills for sustainable development

There are signs in the community development and CCA traditions of a need to address environmental concerns while also addressing societal and economic concerns. Taking this further, our fifth literature explores the complexity of sustainable development and how it must be addressed in the skills arena.

In part, these ideas can be traced back to colonial-era concerns with soil degradation and conservation (Hailey 1938), and natural resource management orientated VET can be viewed as early 'green skills'. However, these early accounts and practices could not name the negative effects of the colonial and Apartheid land expropriation or extractivism. This led to a bifurcation of skills formation systems between an industrial-focused VET mainstream and a separate agricultural and natural resource management focused skills system that reflected the unequal access to and ownership of land.

After independence, a series of more critical and complex literatures emerged that stress more participatory and sustainable approaches to rural skills (e.g. Nyerere 1967; Hope and Timmel 1984; Murwira et al. 2000; Temu, Mwanje, and Mogotsi 2003). These attempt to bridge a series of binaries, most notably between academic and vocational education, and between formal and informal learning spaces. However, there was relatively little impact on the industrial VET model.

Since the Rio Earth Summit in 1992, a discourse of green skills has emerged at the international policy level. However, there have continued to be two major

problems with this. First, there remains a fundamental tension between a drive from environmental ministries towards green skills and a VET policy reform approach characterised by new public management and employability, as noted in our historical overview (Lotz-Sisikta and Raven 2009; Lotz-Sisitka and Olvitt 2009; Ramsarup 2017; AMCEN, 2017). At the same time, the drive towards environmental skills has tended to neglect the technical level, leading to a 'missing middle' problem (Mukute et al. 2012; Dessie and Tadesse 2015; Ramsarup 2016). Clearly, these problems relate to misalignments in development systems and logics, a key area of focus of the political economy of skills tradition.

Resolving the problems of integrating green skills into wider national skills systems is more urgent in the face of stark environmental challenges. From the environmental side, this is driving a demand for more relevant VET programmes, as articulated by the African Ministerial Conference on the Environment (AMCEN) in 2017, focusing on green economy; sustainable energy development; sustainable consumption and production; integrated waste management; and sustainable land management. However, AMCEN notes that 'few technical and vocational education and training programmes have started integrating sustainable development concepts and approaches, and there is much room for innovation here as an African Green Economy is conceptualised' (AMCEN, 2017, 38).

In response to these challenges, more complex theoretical perspectives on the phenomenon of green skills and VET in Africa are emerging. These draw on critical realism, political ecology theory, sociology and development studies, as well as on transformative learning and curriculum theory and praxis (e.g. Mukute 2010; Kachilonda 2015; Pesanayi 2016, 2019; Baloi 2017). This leads to concern, which overlaps with the vocational knowledge and community development accounts, regarding political economies of knowledge production. The sustainable development approach particularly highlights exclusions such as the absence of sustainable agricultural curricula from much of conventional, industrial VET.

The just transitions framing provides a way to move beyond the jobs versus environment argument and intersects with the environmental justice and climate justice movements to provide a broad framing that supports an expanded scale of considerations across economic, social and environmental dimensions. Strikingly, all of these studies point to the need for considering vocational education in a more regionally contextualised frame, where theoretical knowledge is grounded and reflexively constituted in relation to practices. This requires giving attention to the formation of new knowledge in education, and the creation of new human activities that reflect the intersections of society-nature-economy, tradition and innovation, and that are more inclusive (Lotz-Sisitka et al. 2016).

A system that is more proactively constituted for addressing complex and as yet unknown consequences of climate change and water scarcity is needed.

Here some studies are emerging to better assess skills demand that probe the unlocking of green skills that are latent and hidden, yet possible within current systems of operation, e.g. via adopting circular economy principles in local industrial or agricultural contexts and within the wider frame of just transitions (Rosenberg et al. 2015; Jenkin et al. 2016; Ward et al. 2016; Ramsarup et al. 2018).

Overall, this approach highlights the ways in which colonial and post-colonial African political economies have resulted in VET systems that largely ignore the needs of the majority of Africans and of the African environment. It argues that VET needs urgent transformation if it is to be fit to support pressing processes of just transitions. It also points to a need to theorise VET in more complex ways that consider history, ecology and context as well as national policy imperatives, political economy, inclusivity, transformative curriculum and pedagogy, and capabilities. This approach suggests that just transition principles, processes and practices are needed to support a fundamental rethinking of the systemic organisation of VET systems, the world of work and the ways in which they have excluded the majority.

Towards theorising VET for African sustainable development

In the previous section, we sought to demonstrate that emergent literatures contain the seeds of better theorised accounts of VET for African development (cf. McGrath 2012). We bring together these literatures here in a way that has not previously been attempted (see Figure 1), whilst insisting we are not trying to generate a single, unified theory. Together, these accounts share a recognition that the world is not made up of atomised individuals guided by the hidden hand of the free market. Rather, reality is heavily structured by the operations of political economies that have emerged out of contestations and compromises in specific historical and geographical spaces. As a result, specific forms of labour markets and education and training systems have arisen, characterised in profound ways by inequalities and exclusions. These specific forms profoundly influence individuals' and communities' views about the value of different forms of learning and working. However, they do not fully define what individuals dream, think and do. Together, several of the accounts above point towards a transformative potential for VET, albeit one that will be hard to achieve.

We are far from a unified account of what a new transformed and transformative VET vision for Africa would look like, even if such a unified account was desirable. What does emerge from this set of accounts is an agreement that we need more critical understandings of how VET is supporting individuals, communities, firms and countries to find new ways of becoming more productive at the same time as delivering on decent work, sustainable livelihoods and just transitions. This requires better conceptualisations of economies and labour markets at different scales and in different settings, including rural and informal

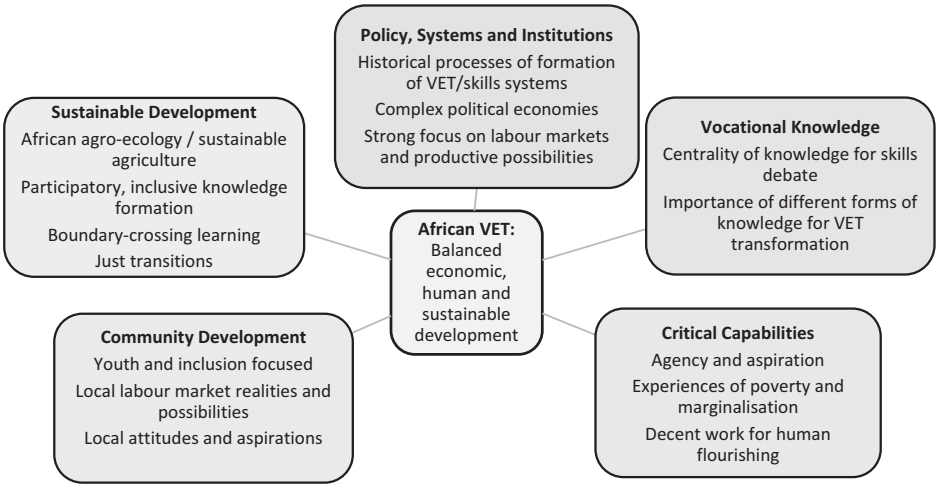

Figure 1. VET for African development – emergent approaches.

urban, as well as industrial. Together, these accounts point to the need to look more into how individuals and communities form aspirations about how productive work supports better lives and what place vocational learning can play in this. However, they also point towards the necessity of understanding how attitudes of learners, parents and employers are shaped both by economic signals and by their perceptions about the value of different forms of learning, knowledge and qualifications. Some of these accounts raise important questions about how both VET's current status and potential to play a transformative role are dependent on issues of knowledge and learning and how these are structured by the effects of power.

Challenges still remain in these new theorisations, not least in making the most of the creative bringing together of these traditions. Before looking at these theoretical challenges, we need to stress the limitations of VET or indeed any education policy as an engine of development. VET can support but cannot generate development on its own.

As nine co-authors, we do not agree entirely on what relative emphasis we would place on different elements of the accounts presented here. It is apparent that we still do not have strong enough accounts of how VET can support development that is human, communitarian and sustainable, including in post-conflict contexts, as well as answering more conventional economic concerns about jobs and income.

These literatures are beginning to overcome some of the existing biases in the field, for instance in terms of gender and rurality. However, less progress has been made in other areas of exclusion, such as disability and language. Linked to language, knowledge is a thread that runs through this article and we must return here to the ways in which coloniality and aid continue to skew the literature, and the extent to which we are shaped by our own backgrounds as

writers. Whilst African debates on higher education are powerfully influenced by decoloniality discourses, there are still only early nods in this direction in the VET literature (e.g. Powell and McGrath 2019a).

Theoretical and methodological bifurcations remain in the literature in terms of scale between the macro and the micro levels; between productive and human/sustainable purposes; between urban and rural foci; and between formal and informal work and learning. Moreover, whilst we believe that what we present is a far richer set of theorisations than exist in the orthodoxy, a major challenge remains in breaking the dominance in development thinking of economics and of engaging policymakers and practitioners in the project of building a transformative VET as part of a transformative approach to development.

However, crucial to the success of building transformative VET is active engagement with economic transformation in Africa, as well as in the relationships between Africa and the rest of the world. This must include a critical engagement with seeking to maximise how such economic transformation balances the imperatives of prosperity, people and planet. New theorisations of VET are important in this endeavour.

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