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Why skills anticipation in African VET systems needs to be decolonized: The wide-spread use and limited value of occupational standards and competency-based qualifications

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ABSTRACT

The shift from manpower-planning to labour market analysis and skills anticipation has been analyzed since the 80 s in this journal and elsewhere, with the aim of improving.insights into how education can contribute to economic growth and development. This paper considers recent trends in policies for skills anticipation and curriculum reform in Africa, with a focus on technical and vocational education and training (TVET) systems.The data consists of 2 continent-wide surveys of a range of TVET stakeholders, document analysis of skills and TVET policy as well as industrial policy where available.online, and 21 in-depth interviews with key roleplayers and experts in 13 countries. Our research found considerable activity developing pre-determined rules and tools that don't work in their own right, and are inappropriate for African labour markets because they are not used in formal work, and have little engagement with informal work. A set of 'rules and tools', such as occupational standards, qualifications frameworks, and part qualifications/ modularization, is promoted by international organizations. These pre-developed and uniform solutions continues to dominate policy agendas. We found considerable focus on developing and (to some extent) using these rules and tools for forward planning, system improvement, and curriculum design. Most noticeable was a strong emphasis on competency-based qualifications, which are described as a tool for skills anticipation as well as curriculum reform, drawing on employer input into skills requirements. There is considerable focus on employer-identified skills needs as the tool for both understanding current and emerging economic demand for skills as well as medium to longer term skills needs. The dependence on employer-specified competencies means there is little engagement with the reality of informal work in the African context—other than strong rhetorical emphasis on entrepreneurship as an add on in curriculum design. Amongst other problems, the 'rules and tools' which are being implemented in many countries start from an idealized vision, and are more preoccupied with their own internal logic than the systems with which they are dealing. The rules and tools present a level playing field for individuals and for countries, constrained only by a lack of skills, and a world view in which everyone could come out on top.

1. Introduction

Vocational education and training (VET) faces a conundrum in Africa: it is seen as key to economic development, as well as for facilitating young people's access to labour markets; yet, it is also seen as a key hindrance to both of these objectives, because it is weak, despite many reform efforts over the last decades. There is widespread agreement among researchers and policy makers that a key problem is that VET systems don't meet the needs of economies and labour markets. Hence, skills anticipation and systems to reform curricula with a view to making them more aligned with labour market and economic needs are policy priorities for many governments, as well as the donors and development agencies who work with these governments. This paper explores how labour market needs are anticipated and responding to in VET systems in a selection of African countries, from the perspective of different roleplayers.

The paper presents insights from a continent-wide survey of different actors in VET systems (responses from 34 countries) and a set of 25 interviews with policy makers and VET actors in 13 countries. The research study aimed to learn about how African VET systems are geared to respond to the changing needs of workplaces, in particular in response to trends such as digitalization and the imperative to mitigate effects of

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the climate crisis. We wanted to understand how decisions are made to develop new qualifications and programmes, the nature of industry and employer engagement in VET systems and how this shapes VET programmes and curricula, and the extent to which and ways in which economic development planning informs skills planning. While the research started from the specific challenges of digitalization and the climate crisis, this paper has a broader focus: it considers the insights gained into the systems for making decisions about developing new qualifications or changing qualifications and curricula, using digitalization and responses to the climate crisis as examples of areas requiring forward planning.

The picture that emerges is a focus on occupational standards and competencies as key tools for understanding and analyzing skills needs and for curriculum and programme planning in VET, and clear indications that these tools are ill-suited to both in the African context. While neither competency-based qualifications nor occupational standards are formally or directly part of skills anticipation systems, VET policy makers discuss them in this way in interviews, arguing that they are the key point at which employers can be involved in specifying skills needs. The survey responses suggest that most roleplayers see occupational standards as playing a similar role, with little indication of how skills anticipation can best be implemented for the immediate demand as well as medium to longer term demand. Nor is there much emphasis placed on how VET planning is shaped by national or sectoral economic planning. Interviews and survey responses indicate a view that stakeholder engagement is important and is functioning to some extent, but in the main, structures are described as under development, and are not discussed as key to ensuring planning for skills.

There is a large body of research internationally that explores problems with competency-based qualifications as a mechanism for reforming VET provision. One key argument is that competency-based curricula tend to be overly narrow, because they start from task specification. This paper suggests that the ways in which they are being used in the African VET context are particularly inappropriate—and hence, need to be decolonized. Our research found three key problems with seeing competency-based qualifications and occupational standards as central to skills anticipation in the VET systems that we explored. At best they rely on information on the current workforce of formal sector work. This firstly misses out on most work in most African countries, which is informal. Secondly relying on employer-specified skills gaps to design qualifications is not forward looking at all. Any educational process that involves development of a qualification and curriculum will never be responsive to the immediate needs of workplaces, because qualifications and curricula take time to develop, let alone to be offered to students. Aside from occasional short courses, formal VET is by its nature aimed at medium to longer term economic and labour market needs—but the mechanism for determining these needs is tasks specified by employers as needed right now in workplaces. In other words: the labour market analysis and the education planning are operating at different time frames. Thirdly, while international research suggests that employer-involvement at the level of qualification design is very difficult to achieve, in the African context, occupational standards are a particularly poor tool for reforming VET, as they appear to have little meaning in workplace contexts, and are primarily seen as educational tools. Our interviews suggest that the development and implementation of these systems, which originate in formal VET provision in the global North and are now backed by international agencies and development organizations, is absorbing an enormous amount of energy from actors in African VET systems, at the expense of more contextually driven approaches.

In terms of other approaches to skills anticipation, we found sporadic labour market analysis and little classical manpower planning—unsurprising in the context of weak data systems and widespread informality. Employer engagement is discussed either in relation to national or sectoral structures for coordination and dialogue, as well as in competency-based training type reforms. Structures for dialogue and employer engagement were also mentioned in some countries, but in the main interventions or reforms were described as being in the process of being set up. Participants expressed confidence in or great hope for systems that had recently been set up, or reforms that had been introduced, but little evidence of successful interventions or systems was provided.

Is this yet another bleak article about African VET? Not necessarily. Our research suggests that there is much energy and focus on VET, and there are things that can be done to improve skills anticipation, if the starting point is the reality of African economies and VET systems. Directions for policy and research include a more focused agenda for dialogue and engagement; a clearer differentiation between time horizons, including more differentiation between tools suited to immediate short-term interventions, and what is needed for medium to long term planning; and more research into the economic and social factors that shape skill formation systems, as well as the nature of occupations and areas of work in the informal sector. These may allow for better analysis of how VET can be integrated into economic planning and development, as opposed to seeing VET as following or catalyzing economic development.

The paper has four main sections. It starts with a review of literature on African VET systems and their linkages to labour markets, followed by a very brief outline of the methodology followed in our research. The findings section then elaborates on the points discussed above, followed by a discussion section, which relates the findings to broader VET literature, and considers implications for African VET, as well as alternatives in terms of how it can be better linked to labour markets and work.

1.1. *African VET systems and labour market linkages*

In Africa VET is seen as both an important priority and a stubborn problem (Oketch, 2007, 2014; King, 2013; ICQN/TVSD, 2014; Walther and Boukary, 2016; Arias, Evans and Santos, 2019; McGrath et al., 2019; Allais, 2020, 2023). Country-level and continent-wide descriptions of the weaknesses of VET systems abound, as do policy documents expressing great hope for what VET should be able to achieve: the AU (2018), p. 8) describes African VET systems as 'under-resourced' and 'obsolete' with 'damaged infrastructure' and 'inadequate inter-sectoral linkages', but goes on to argue that 'VET has to be sold as the magic instrument that converts youth into experts and entrepreneurs' (p. 39).

Many authors argue that a key problem is the disconnection between formal VET systems in African countries and the needs of labour markets and economies (McGrath et al., 2019; Santos, Alonso Soto and Sosale, 2019; Bankolé, 2020). In part this is because formal education and training mainly caters to wage employment in very small formal sectors (Arias, Evans and Santos, 2019). Further, formal provision of on-the-job training seems to be very low, although data are not available in many cases (Arias, Evans and Santos, 2019).

Informal training is large in some countries, and may be argued to be where skills training in Africa is the most directly related to the needs of workplaces (Palmer et al., 2007; Walther and Filipiak, 2007; Nübler, Hofman and Greiner, 2009; Palmer, 2009; Aggarwal, Hofman and Phiri, 2010; Adams, Johansson and Razmara, 2013; Hoffman and Okolo, 2014; Billetoft, 2016; McGrath et al., 2019; Ngatia and Rigolini, 2019). Informal training and training for the informal sector are important because around 85% of workers in Africa being estimated to be in informal employment by the ILO, although with considerable variation by region and country (ILO, 2018, p. 28). There is of course, wide variation in uptake—from an estimated 6% of young adults in Uganda to 35% in Ghana (Filmer and Fox, 2014). Informal apprenticeships are most extensive in West Africa, although informal training, including apprenticeships, does occur in some of the informal sectors of Eastern and Central Africa (King, 2014). And informal apprenticeships are very heterogenous, varying in length, contractual arrangements, quality of training, and costs. They mainly attract young people with low educational achievement—less than primary education in Cote d'Ivoire,

Ghana, Rwanda, Sierra Leone, Tanzania and Uganda; primary education in Tanzania; as well as some with junior secondary education in Ghana (Filmer and Fox, 2014). Filmer and Fox argue that the age of entrants—around 21—suggests that this pathway is not a first choice.

This is in a context in which secondary education is becoming a requirement for formal wage jobs, although, increasingly many with some secondary education will not obtain wage employment (Fox and Thomas, 2016). Every year growing numbers of people enter labour markets in Africa with higher levels of education—resulting in even more educated youth struggling to find stable well-paid employment in skilled occupations and professions (Elder and Koné, 2014). University graduates are still very small fraction of the labour force in most countries—on average about 3–4%. They come from the richest households and have the best job prospects (Fox and Thomas, 2016, p. 29).

In the absence of structural economic change, graduate unemployment, which started to appear as early as the 1980 s in some countries (Colclough, 1989), has been increasing in many countries (Ogege, 2011; Broecke, 2012; Rose, 2015; Amani, 2017; Pheko and Molefhe, 2017; Zinabu, 2019). The ILO school to work transitions survey found that for all countries in which the survey was undertaken, the young person with the lowest level of education is the least likely to be unemployed—these young people are likely to work in subsistence agriculture.

Labour force data is weak in most African countries (Cramer, Sender and Oqubay, 2020). Fox and Thomas (Fox and Thomas, 2016, p. 19) similarly point out that data on the structure of employment in sub-Saharan Africa are very difficult to obtain. Many countries do not collect these data very frequently, often the data are not released until long after they have been collected, the quality of data is often poor, and is inconsistent across countries. Furthermore, labour market analysis is often conducted using concepts from developed countries, despite the fact that the characteristics of labour markets and the institutions associated with them are very different where most work is not regulated (Ghose, 2003). This has the further implication that the notion of skill and skilled labour varies according to context: as Meschi and Vivarelli (2009) (2009) argue, the notion of skill is relative to each country and therefore its meaning may change, especially in developing countries.

Unsurprisingly, many VET related policy interventions of governments in African countries, supported by international development agencies and donors, are focused on attempts to align educational provision with economic and societal needs, in the hope that this will support development and growth of economies as well as employment prospects of individuals. Three major directions of policy intervention are skills anticipation mechanisms, structures for stakeholder (mainly employer) engagement, and competency-based curriculum reforms; I discuss each briefly below.

Skills anticipation is seen as crucial to improve responsiveness; the idea of shifting from 'supply-led' to 'demand-led' VET can be found in many policy documents across the continent. The ILO describes skills anticipation as 'assessing the future prospects on the labour market and the potential imbalance between the demand for and supply of skills' and that skills needs anticipation 'refers to activities to assess future skills needs in the labour market in a strategic way, using consistent and systematic methods' (ILO, 2015, p. 3). In a report that included 9 African countries, the ILO (2017) finds many ad hoc and unsystematic approaches. For example, in Tanzania, assessments of labour market need are said to be based on individual institution needs and reflect ad hoc and piecemeal engagement; descriptors for education and training programmes are not easily aligned with industry and occupational groups. In Uganda, while there is involvement of international development agencies in skills exercises, there is no regular assessment led by government. One of the more advanced countries according to the ILO report is Zambia, where the Ministry of Labour leads skills forecasting and assessment. The ILO cites the Ministry of Education as saying that 'skills intelligence' is used to 'establish new skills training centres, to promote certain sectors to build a demand for skills (such as construction and tourism), and to assess which skills are demanded and trained by companies' (ILO, 2017, p. 59). The Ministry of Labour has a labour market information steering committee, established in 2008. However, the report also cites the national employer organization as arguing that training institutions do not train adequately to meet labour demand.

Stakeholder engagement is also seen as important for improving the responsiveness of education and training by engaging employer organizations and worker organizations in dialogue about priorities for workplaces. There are various initiatives in African countries to attempt to formalize and facilitate the involvement of social partners in education and training. For example, Senegal has a law that formalizes the participation of the social partners in TVET, leading to a number of formal structures with social partner representation (Ministère de la Formation Professionnelle, de l'Apprentissage et de l'Artisanat, 2018). Botswana and South Africa both have Human Resource Development Councils (Human Resource Development Council of South Africa, 2014; Allais, Marock and Ngcwangu, 2017). Malawi, Mauritius, and Tanzania, among others, also have coordinating bodies and autonomous agencies for oversight, legislation, and agreements to ensure coordination of VET include, but the structures may not always be operational (Santos, Alonso Soto and Sosale, 2019).

Sectoral skills bodies are being established in Ethiopia, the Gambia, Ghana, Kenya, Mozambique, South Africa, and Tanzania (ILO, 2021). They usually have governance structures that consist of representatives from employer and worker organizations as well as government, but some (the Gambia, Ghana, South Africa) have representation from additional constituencies as well (ILO, 2021). Ongoing employer engagement is found to be a problem, as is finding the right level at which to involve employers; another problem occurs where governments select employer representatives, as Powell (2015) argues was the case in the attempts to build formal representative structures in Mozambique. Recent ILO research shows that employer associations and employers reported involvement of employers mainly at the level of national systems and national policy (Allais, 2023).

Qualifications frameworks, sometimes linked to occupational standards, are being introduced in many African countries, in some cases for VET, in some for higher education, and in some for the entire education and training system, with considerable backing from international agencies. According to the official documents available, the core policy intent in Africa is to support mobility of workers. A recent report commissioned by the AU (African Union, 2020) provides an overview of the development of qualifications frameworks: out of the 40 countries examined, 17 had approved national qualifications frameworks; 10 were engaged in consultation and initial development of design and policies; 10 had started planning the development of qualifications frameworks; and three had started the first steps of reflection and analysis towards NQF. The majority of qualifications frameworks that are to some extent operational were found in southern Africa.

Qualifications frameworks are sometimes linked to competency-based curriculum reforms, particularly when they focus on VET. A wave of competence-based reforms is currently in evidence, although many countries all over the continent have engaged in similar reforms for decades already (African Union, 2020). A recent evaluation in seven African countries (UNESCO, IIEP and IFEF, 2020) found, in common with much research literature in this area, that with a few rare exceptions such as in the upgrading of the traditional apprenticeship in Benin, private sector presence was limited. While partnerships with employers are seen as one of the key benefits of competence-based training, the study found little meaningful involvement, with a few exceptions mainly in engineering and in taking in trainees or trainers for upgrading. The study also points to a gap between legislation and policy and actual implementation, and a strong role for donors.

There is a long tradition of research that both problematizes and attempts to support skills anticipation in the global north (Little, 1986; Psacharopoulos, 1991; ILO, 2015). Similarly, as mentioned above,

competency-based training and qualifications frameworks have been researched and critiqued (Wolf, 1995; Guthrie, 2009; Wheelahan, 2010; Young, 2011; Winch, 2021). The limited research on these issues on the African continent suggests similar, if not more complex issues and problems (Allais, 2011, 2012; McGrath, 2012; ILO, 2017; Bankolé, 2020; UNESCO, IIEP and IFEF, 2020). Our research attempted to gain insight into what the current focus is with regard to improving linkages between formal VET and labour markets, as well as how VET systems are looking forward to changes in the world of work.

1.2. Methodology

The research had two main components: a survey was of a wide range of TVET actors on the continent, and 25 interviews with key roleplayers. A prior step, in addition to reviewing the research literature, was an analysis of publicly available policy documents to build insights into the nature of systems.

The survey focused on how decisions are made to develop new TVET qualifications and programmes. Issues covered included where (in terms of sectors) actors perceive a demand for new qualifications, how such identification happens, how occupations are related to qualifications, and the extent to which and ways in which curricula are developed and modified in response to new qualifications and competencies. Early in the survey respondents were asked to categorize themselves into one of a large range of possible roles in a TVET system; the majority were from government bodies or TVET providers, at a secondary and tertiary level. There was no specific sample; rather, we attempted to reach as many types of actors as possible, and therefore it does not make sense to talk about a response rate. We obtained 223 responses, which is by no means representative, especially given imbalances across stakeholder groups and countries, but is a large enough number to give insights into what is happening in a range of countries on the continent. The responses are from 34[1] countries. Of these 139 responses are from the Southern African Development Community (SADC) region, and 29 specifically from South Africa.

The 25 interviews were conducted with key roleplayers and experts in 13 countries—Botswana, Cameroon, Eswatini, Ghana, Kenya, Mauritius, Namibia, Seychelles, South Africa, Tanzania, Zambia, Zimbabwe. We focused on ministries, government authorities, TVET institutions, and qualifications authorities from three regions, however, except for Cameroon, only in English-speaking countries.

1.3. Findings

The main empirical findings can be summarized in four main points. Firstly, while most countries have national structures that in many cases focus on employer-engagement or consultation, they are mainly described as not-yet-functional or spoken of in the future tense. Similarly, while most countries do some analysis of labour market trends, in the main, these were described as not up-to-date. Thirdly, and particularly in relation to VET, competence-based training and qualifications frameworks are expected to solve labour market anticipation and curriculum responsiveness problems; they are seen as capturing or codifying employer needs, and therefore, as functioning like skills anticipation systems. This partly explains the fourth finding, which has two parts: skills anticipation systems are focused on current and emerging skills not on the changing world of work, and are focused on the formal economy at the expense of the informal—where the bulk of work in most African countries sits. These four points are explored below. I start with the third, as the clearest trend across the interviews, corroborated by aspects of the survey responses, followed by the fourth. The first two findings are briefly discussed together.

1.4. Qualifications, competency-based curriculum reforms, and occupational standards

Qualifications frameworks, and related systems such as occupational standards and competency-based qualifications emerged as the basis for both identifying current and emerging skills needs **and** integrating them into qualifications, because they are the key system for employer engagement. While the review of research and policy documentation suggested that competency-based training reforms of VET systems as well as on qualifications frameworks are seen as silver bullets to improve responsiveness and quality, we were surprised by how strongly they were discussed as core to skills anticipation systems. The assumption seems to be that if employers are involved in specifying the competencies that they need, providers will shift the content of their provision, and graduates will meet labour market needs. Fairly extensive systems exist in most countries, with a strong emphasis on the role of employers in qualification design—this is seen as ensuring that the correct 'competencies' (or skills, knowledge, and so on) will be identified and included in qualifications. Qualifications frameworks and competency-based training reforms present employer engagement with qualification design as both part of the process of identifying skills gaps, and part of the process of integrating required skills into qualifications and curricula.

For example, one interviewee explained that the National Qualifications Framework Information Management System provides a basis for the identification of the need for a specific new qualification. In line with qualifications framework requirements, submissions must identify 'the skill set, and the knowledge areas that need to be focused on, the attributes that a graduate should have, as well as the competencies that make up this'. The organization also takes the role of advising on the relevance of the qualification, particularly, when it is oversubscribed:

> … so if we see that there is a number of graduates from a specific type of program, and we see that in the market, it seems there is a flooding of that specific field of study, we will advise that our institutions be considerate of that, and, in fact, so much so that they need to provide us with the evidence of demand for need for that specific field of study. And that is also obtained through consultation with the stakeholders, as well as the planning needs analysis that they have to do as the qualification developers, and they have to align it also overall to the country's human resource development plan and the skills area or gaps identified therein.

The interviewee went on to say that the National Qualifications Framework Information Management System 'has all the details qualifications and the graduates, it really gives us an idea of the number of skilled labor workforce we have, and it can show certain trends, but it's not really showing labor market requirements'. It was mainly discussed in the future tense. Another interviewee argued that the shift from 'knowledge based' to 'competency based' curricula would address skill mismatches, and attributed such mismatches to lack of practical knowledge:

> That is the reason why we eventually felt that there was a need to move from what we originally called the knowledge-based programs to competency-based programs. …. And most of these curricula, we do them in collaboration with the industry players, and we therefore hope that the issues of skills mismatch will eventually be overcome.

The majority of survey respondents report that their countries have qualifications frameworks, and pointed to the use of the occupational classification systems for curriculum design. One survey respondent (categorized as an expert) commented: 'Classification of occupations inform the fields and levels of qualifications, and standards for the

[1] Angola, Benin, Botswana, Burkina Faso, Cabo Verde, Cameroon, Chad, Comoros, Congo—Democratic Republic of, Eswatini, Ethiopia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Seychelles, South Africa, Tanzania, Togo, Uganda, Zambia, Zimbabwe.

curricula'. Respondents who reported being involved in curriculum design in the main reported that they use occupational standards in, as shown in Fig. 1 below.

The details presented above are similar across most of the countries interviewed; the systems in Cameroon seemed the least in line with this type of competency-based model, although there was still a strong emphasis on engaging with employers. While interviewees emphasized that employer engagement is key, they also conceded that it was not easy. As explained by an interviewee, 'I think most companies that are really involved are the government companies.' He went on to say, 'sometimes when you get to companies like that they think, maybe they think that you are coming to, I don't know, to steal their knowledge, or something like that. Maybe you are coming to take it and give it to the other company'.

The 'at best' picture of current employer needs appears to be seldom achieved—all interviews discuss difficulties with employer engagement. In all countries, there was a degree of conflation about the processes and tools for understanding current and emerging demand and developing qualifications and curricula. Occupational standards don't appear to have meaning for employers in hiring, promotion, training, or any other workplace processes. They are not tools that codify what is agreed about areas of work, then providing information to educational providers. In a European context, where occupations are stable and have developed over time, in formal sector work, occupational standards have more meaning to employers. In the African context, although they are introduced by development agencies as a link between education and work, in fact they are they are educational tools—and not good ones, because they don't originate in any logic of education systems. This leads to the next finding—an emphasis on current and at best emerging skills, but little focus on future needs.

1.5. *Time frame disjuncture and focus on formal sector*

The nature of employer engagement appears to create a disjuncture between analysis of *current and emerging economic* demand for skills on the one hand, and those for *medium to longer term skills anticipation* on the other hand. This problem came out clearly in an interview with a policy maker who emphasized consultation with industry approximately every five years, through 'Industry Skills Committees'; yet, the result of this consultation, which would draw on employers' needs at the time, directly shaped qualifications and curricula:

> And one of the reasons for this is really to ensure that all qualifications registered in our system on the framework is relevant, fit for purpose and, you know, basically endorsed by the industry as what they need. The main reason why we have qualifications and we, you know, we keep on designing new qualifications is because we need to make sure that the quality, the skill set that any graduate obtains through, you know, the learning exercise, that certified skill sets in line with the needs of the industry, occupation, career, and, you know, competencies required for you to carry out that career successfully.

Any educational process that involves development of a qualification and curriculum will never be responsive to the immediate needs of workplaces, because qualifications and curricula take time to develop, let alone to be offered to students. Aside from occasional short courses, formal VET is by its nature aimed at medium to long term economic and labour market needs—but the mechanism for determining these needs is tasks specified by employers as needed right now in workplaces. In other words: the labour market analysis and the education planning are operating at different time frames.

Fig. 2 below presents respondents' perceptions of the responsiveness of qualifications and curriculum systems. The largest group see new qualifications as the response to changes in occupations, followed by national changes to curricula against existing qualifications, and amendments to qualifications. While both are important, neither allow for rapid responsiveness.

In some, but not all countries, policy makers discussed unitization through workplace tasks as key to flexibility in the VET system Again, workplace tasks relate to current workplaces. Units, or competency standards, are developed based on employers' specification of tasks, and these are combined into qualifications, against which curricula are developed for each task contained in the units or standards. One problem with this is that it is focused on current workplaces, but systems for developing units of qualifications are inevitably slow, so that inflexibility emerges through a system aiming at flexibility. Another is that it can lead to fragmentation where curricula components are developed per task instead of holistically. Qualifications are not the best place for ensuring relevance to current labour market needs. But other aspects of systems do not appear focused on flexibility and responsiveness: for example, the survey responses suggests that curricula are relatively inflexible, and providers have little autonomy to make customized changes, thereby making it difficult to respond to short-term demands from employers. The responses suggest that there are tensions between the need for common standards (which could explain a centralized curriculum in all VET systems), and the need to develop new qualifications for new occupations and responsive curricula to suit changes within current occupations.

Further, the dependence on employer-specified competencies also means there is little engagement with the reality of informal work in the African context—other than strong rhetorical emphasis on entrepreneurship as an add on in curriculum design, particularly at the level of survivalist skills. There is little systematic evidence of consideration of the higher-level skills which may be required for successful entrepreneurship, or the other types of support which would be required for successful small businesses. Further, there is no evidence that the primary problem for people in informal economies is a lack of skills as opposed to, say, lack of capital, or barriers to market entrance.

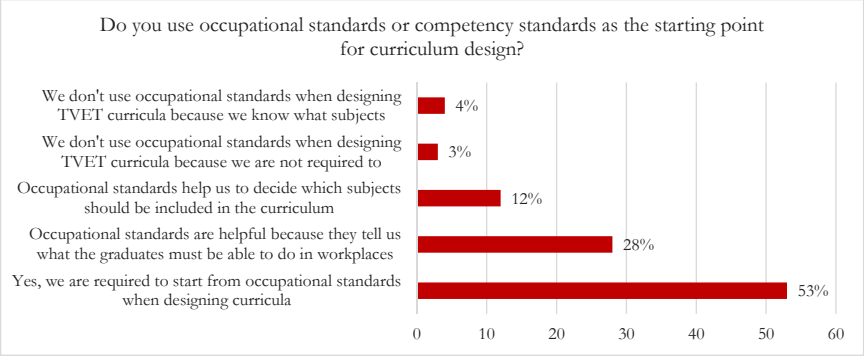


Fig. 1. : Use of occupational standards in curriculum design.

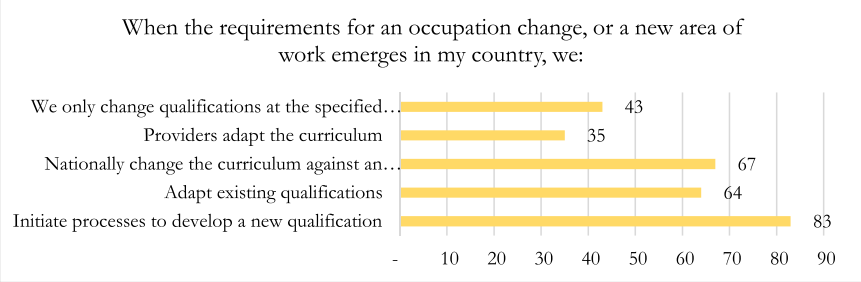


Fig. 2. : Responsiveness of qualifications and curricula.

1.6. Stakeholder engagement is about-to-be-functional, and labour market analyses are out-of-date

In terms of other mechanisms for skills anticipation, high-level employer and stakeholder engagement, government and provider representatives described a strong role for employers in their systems. Botswana and South Africa, for example, have Human Resource Development Councils. The mandate of the council in Botswana is to 'plan and fund education and training,' but a respondent argued that research for TVET in Botswana 'that will make you aware of what the need is, including economy or any TVET space' is 'very weak, and priorities are not set and clear'. However, with respect to national structures, agencies, and systems, in most cases policy makers described these as recently having been established, or about to be established; many interviewees spoke about labour market analysis as outdated, or about-to-be-done, or about-to-be-improved.

Sector skills bodies, a popular policy intervention, because they aim to create intermediaries bodies with a strong role for employers (ILO, 2021), were also mainly spoken about in the future tense, as about to be functional or in the process of being set up. In Ghana interviewees emphasized the roles of sectoral skills bodies, both in terms of current labour market analysis and specification of 'what needs to happen to the curriculum'. We found very little indication of industrial policy and national or sectoral economic development strategies seeing skills as part of how they are planning and conceptualizing transformation in the sector.

Again, we found very little differentiation about time frames in terms of the work of these organizations. In the survey, we asked separately about which national or sectoral structures and organizations analyze *current and emerging* labour market requirements for qualifications and competencies and which national or sectoral structures and organizations try to anticipate or forecast future needs. The responses on both questions were very similar—seen in Fig. 3 and Fig. 4 below.

It is possible that the same institutions do this work separately, but it also may be the case, and this was suggested in our interviews, that the distinction between labour market analysis for *current and emerging needs* on the one hand, and *anticipation of future needs* on the other hand, was not understood, and/or that countries don't distinguish between the two in their systems. Interviewees discussed both as the same.

National ministries and government agencies are seen as the main players responsible for identifying both, followed by national representative structures—presumably, such as Human Resource Development Councils, which came up in interviews. Employer organizations play some role, with trade unions and TVET providers playing a much smaller role. While some survey respondents agreed that there are national or sectoral economic development plans, there was very little feeling that skills planning is part of these.

When provided with a set of sectors that have high demand for new VET qualifications, survey respondents primarily selected 'Agriculture, forestry, and fishing' as the sector which respondents believe to have the greatest need for new qualifications (Fig. 5 below provides an overview). According to survey respondents, the next sectors with the next highest levels of demand in order, are Construction, Manufacturing, Mining and quarrying, and Information and communication. The absence of service-oriented sectors is striking, although to some extent demand could be embedded in other options (such as information and communication; professional, technical, and scientific activities, education, and water and electricity supply). It is also worth noting some patterns when we disaggregate: the Portuguese respondents, which mainly represent Mozambique, emphasize manufacturing considerably more than agriculture; this was strongly reversed in the French-speaking countries, with a rather low prioritization of manufacturing, and agriculture strongly emphasized, followed by construction.

The emphasis on Agriculture, forestry, and fishing is perhaps expected in the sense that it is the biggest sector in which people work in many African countries, but, on the other hand, work is primarily informal or subsistence agriculture. It could be, therefore, that respondents see it as an area that lacks qualifications, and hence, new qualifications should be designed; or, it could be a focus in terms of rural economic development, or an area that is changing—because of the climate crisis, because of value-added agricultural production, or because of focus on new areas such as fish-farming for food security (as indicated in the interviews). One other possible explanation is that agriculture is dominated by female (poor) workers and new

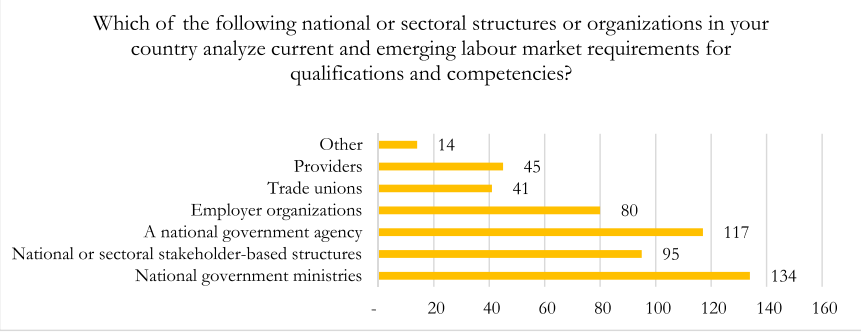


Fig. 3. : *Structures that analyze current and emerging labour market requirements.*

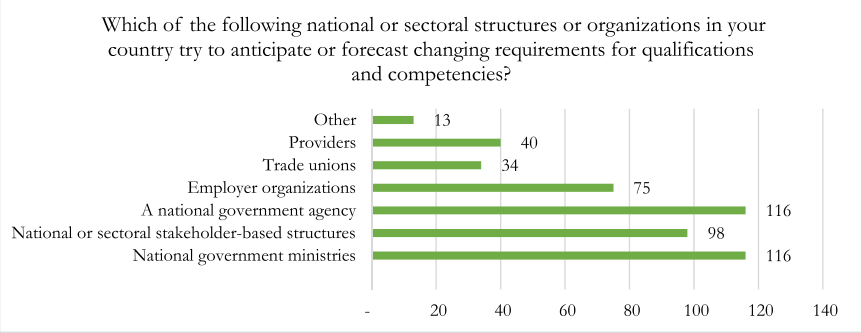


Fig. 4. : Structures for skills anticipation.

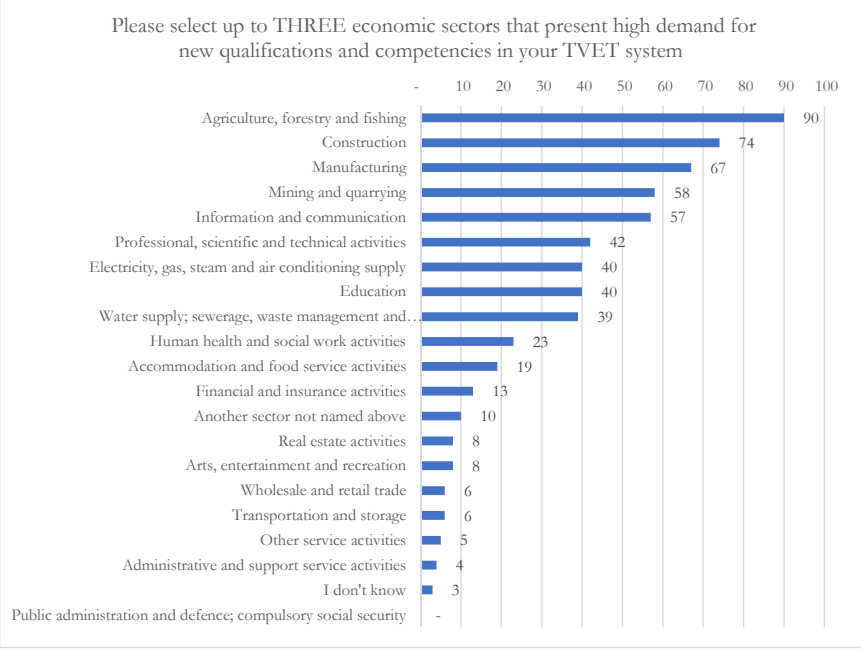


Fig. 5. : Economic sectors with high demand for new TVET qualifications and competencies.

qualifications could be seen as a matter for social mobility, for breaking the cycle of poverty. One respondent commented,

> Most people are moving away from Agriculture despite being the main source of livelihood in Kenya and Africa [as a whole]. Agriculture is becoming a gender issue for only women and local poor. Hence resultant food insecurity and famine.

By contrast, agriculture was mainly not emphasized by interviewees, and indeed one (from Namibia) suggested that the aim of economic development is precisely to move away from agriculture.

While some countries do analysis of labour market trends, in the main, these were described as not up-to-date, or, again discussed in the future tense. The interviewee from the Seychelles, for example, explained that at the level of Ministry of Employment, they are building a Labour Market Information System to 'be able to forecast the requirements in terms of the quality and the quantity of labour'. In Namibia, interviewees explained that the Ministry of Labor conducts a Labor Market Survey, but they argued that it was not done consistently, saying, 'So, we definitely need to do more studies now, just especially because of all the changes that are happening now'. Some interviewees spoke about research that is conducted, but without a concrete sense of how it informs educational planning. A few interviewees mentioned tracer studies—in particular Tanzania, where a recent study found that most students are employed or self-employed. This information is seen as supplement to 'labour market survey's conducted in Tanzania to decide on which new qualifications are needed. Two regulatory bodies, one for lower level and one for higher level TVET, conduct these market surveys but colleges also do their own. These surveys are discussed as preceding 'the process of curriculum development and accreditation'.

Across all the points discussed above was a gap between policy aspiration and actual implementation: experts and policy makers interviewed spoke at length about policy intention, the goals of new systems, the direction of change. Where there was the least input was on translating the (rather weak) information about skills needs into actual skills provision; this is not surprising given that research consistently finds weak capacity in TVET institutions and systems. We did not hear emphasis on strengthening provision from interviewees, perhaps because of the reliance on qualifications reform. The assumption seems to be that once the qualifications are changed, teaching these new qualifications is relatively straightforward. Employers are involved at the level of qualification design, instead of being embedded in the skill formation system with an ongoing relationship with providers that enables real responsiveness. Taking greening seriously highlights why this is the case: current labour market needs will change if we transition to different types of economies, with different types of work and work organization. Digitalization reveals a different set of issues: technology

is simply changing too fast for complex qualification and curriculum systems to respond to.

1.7. Alternative directions

In sum, skills anticipation policies and reforms being implemented in VET systems in many African countries seem to take inadequate cognizance of the reality of African economies, labour markets, and workplaces; at the same time as being inadequately informed by serious analysis of the complexity of designing curricula required for educational preparation for work. There is little emphasis on building adaptive capacity within VET institutions and other organizations.

But the positive energy and focus, and the plethora of structures being created for employer engagement, does create some possibilities for improvement. There are things that can be done better. There are structures and systems in many African countries that could play a better role if they were less ambitious and more focused. High level engagement with industry leaders and large employers can be useful—for analysis of the formal sector as well as possible changes in the economy, which could assist in, for example, prioritizing sectors for focus. However, policy makers would need to start from the reality of formal VET provision, which is small and niche; without enormous investment, it is unlikely to provide training beyond highly specific areas in the formal economy.

Better clarity about time horizons would also improve the relationship between skills anticipation and educational planning. Employers tend to have the most insight into short term specific skill requirements. They could be assisted to meet these requirements through funding that supports company-based training; so far skills levy mechanisms in African countries don't seem to have enabled this, despite employer involvement on boards and governance structures (Walther and Uhder, 2014; Palmer, 2020). More assistance could be given to VET institutions to work actively with employers to provide short-term highly specific training. This would require funding and institutional capacity building, and a shift away from the notion that short-term funding mechanisms will lead to demand-led training; strong enduring institutions are crucial for quality, innovation, and responsiveness (Buchanan et al., 2009; Allais and Marock, 2020).

It also needs acceptance that medium and longer term education programmes cannot be narrowly driven by employer-identified skills and competencies—particularly where there is little agreement in workplaces, formal and informal, on the core standards of performance in occupations and work. We need curricula with a long term outlook based on broad bodies of knowledge that underpin broad occupational areas. Technical and vocational education and training systems as well as the variety of forms of provision that develop vocational skills must be embedded into industrial, social and especially professional and occupational development. Research on occupations, work, labour process, and expertise, foregrounds the ways in which the organization and regulation of occupations, divisions of labour between and within occupations, work organization and labour process, and expertise and skills are interwoven with each other (Abbott, 1988; Freidson, 2001; Standing, 2009; Allais and Shalem, 2018). This body of research is crucial in informing analysis of curricula that aim to prepare people for work but is very underdeveloped in relation to work outside of formal labour markets, the reality for most African people. The object of analysis should be specific occupations and areas of work, and the expertise that is developed in education programmes as well as in work. For example, there could be greater focus on occupational fields that seem to dominate in the informal sector—in terms of job families and areas of work. Educational preparation for work must be based on some notion of occupational areas, wherever people are working—or, the focus should be on general education. But the focus on occupations and vocations needs to take into account the economic and social conditions that make the work different, and similar, to work in different occupational areas in the formal sector.

This may be more successful than the misguided focus on entrepreneurship education. Formal education institutions are never likely to be the best places to teach entrepreneurial behaviour and skills, but they can develop expertise for people working in occupational areas or areas of work, even in the absence of institutions, collective bargaining, and occupational councils. A body of literature which opens promising possibilities concerns skills ecosystems. Emerging from approaches to local economic development, the concern here is relationships between education providers, employers, and individuals in small (municipal, city, or village) geographical areas (The VET 4 Collective, 2022). Its importance is foregrounding the ways in which different roleplayers shape possibilities for each other, as well as in pinpointing points for intervention.

We also need better insight into the factors shaping skill formation systems at a national level in African countries—the object of analysis here is education and training at a systemic level, including workplace-based and informal learning, and its interaction with economic and social institutions. There is a rich body of research that analyses skill formation systems in wealthy countries, that foregrounds ways in which both economic factors, including labour market regulation, collective bargaining regimes, welfare policy, and industrial policy; and political factors, including degree of federalization and type of election system, shape the demand for skills and lead to specific institutional arrangements and different types of provision and programs (Thelen, 2004; Iverson and Stephens, 2008; Busemeyer and Trampusch, 2012; Martin, 2012; Oliver, Yu and Buchanan, 2019). With a few exceptions (Ashton et al., 2002; Maurer, 2012; Allais, 2020), this body of literature is very underdeveloped in low- and middle-income countries.

What is particularly concerning is the extent to which international organizations are focused on developing and supporting qualifications frameworks, occupational standards, and competency-based qualification and curriculum reform as key tools for reforming VET and linking it to labour markets. Gessler and Peters (2020) argue that donors and development agencies favour competency-based training reform because of the apparent simplicity of this approach, which they further argue is actually an over-simplification, and this same logic may explain its appeal to governments even in the absence of donor pressure. Perhaps they are appealing because they appear to be a systemic intervention, as opposed to supporting a specific institution, programme, or group of young people. Also, the 'rules and tools' present a level playing field for individuals and for countries, constrained only by a lack of skills, and a world view in which everyone could come out on top; an attractive vision for international agencies. Perhaps, though, they are appealing because they have more meaning in more regulated economies. Occupational standards may be a useful place to start when they are embedded in and used by workplaces. But in the systems we examined, occupational standards appear to have no meaning in workplaces, even in the formal sector. They are purely educational tools—which renders them of little value if their core role is linking education and work.

Decisions about industrial transformation and skills are inter-related and vocational skills development can't be seen as exogenous to policy for industrial development and growth (Allais, 2022). So from a research perspective, we have to look much more systematically at the different pieces of the system that are needed to support both the demand for skills and the development and utilization of skills, and most importantly, we need policies for structural economic change (Chang, 2003; Cramer, Sender and Oqubay, 2020). We need better insight into likely current trajectories of economic and social development, as well as possibilities for changing current trajectories and achieving sustainable and inclusive growth and development.

This is in a context in which African countries face an enormous challenge in preparing young people for a world that is changing rapidly. We can't continue to use tired tools that never worked particularly well in the global North, and clearly are not working in Africa. The ecological crisis is already fundamental, as are attempts to mitigate

and reverse ecological collapse. Other key issues will be changing life courses (especially changing gender relations); technological change (especially automation and increasing use of data in algorithm-based information analysis) and inequality. Strengthening education and training systems to provide the expertise and skills to ensure that young people can access work, displaced workers can access new jobs, and economies can grow and develop requires insights into the structural changes that support and/or constrain skills needs of future work.

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