

Capabilities of secondary school teachers in sub-Saharan Africa: A systematic literature review

**Authors:**

Tessa de Wet¹ 
 Sebastiaan Rothmann¹ 

Affiliations:

¹Optentia Research Unit,
 Faculty of Humanities,
 North-West University,
 Vanderbijlpark, South Africa

Corresponding author:

Sebastiaan Rothmann,
 ian@ianrothmann.com

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Orientation: Education trends in Africa indicate that key ingredients for effective education are elusive, impacting the teachers who need to remain productive, motivated and healthy in this environment.

Research purpose: Using machine learning active learning technology, the study aimed to review current literature related to the factors affecting the capabilities and functionings of secondary school teachers in sub-Saharan Africa (SSA).

Motivation for the study: The Capability Approach (CA) provides a framework for studying the sustainable employability (SE) of teachers, including what they require to be able to convert valued opportunities into the needed achievements.

Research approach/design and method: A systematic literature review was conducted following Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, using Machine Learning Active Learning Technology. Eighty six articles from 14 SSA countries were included for analysis, prioritising articles in the South African context first.

Main findings: Analysis identified four groupings of resources that are potentially useful or valuable, creating access or empowerment if utilised effectively, namely knowledge commodities, soft commodities, hard commodities, and organisational commodities. Sub-resources were also identified.

Practical/managerial implications: This research would assist policy and decision-makers to focus their interventions in the most effective way to sustain productivity and well-being in the workplace. The resource groupings should be included in a model that focuses on enhancing secondary school teachers' capabilities to promote their well-being and productivity.

Contribution/value-add: This article provides new applied knowledge related to machine learning active learning technology as a methodology, and provides further insight into secondary school teacher employability.

Keywords: capability; work; secondary school teachers; sub-Saharan Africa; 21st-century; competency; active learning models.

Introduction

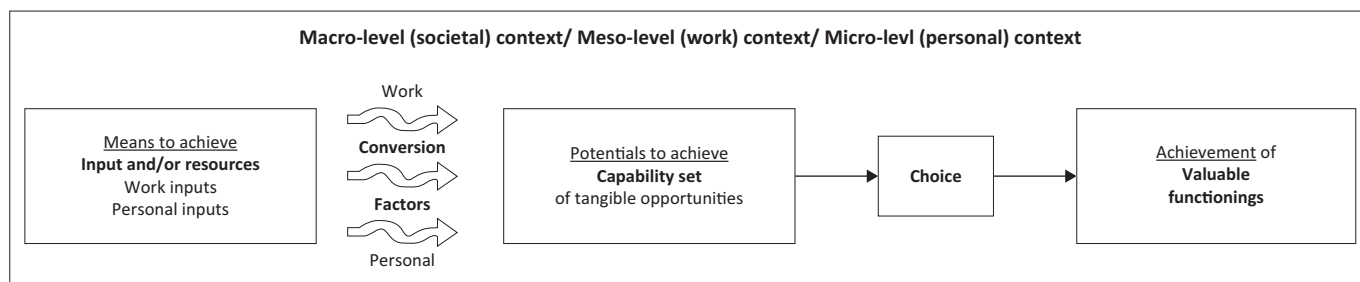
Education, broadly defined as the opportunity to have basic learning needs met (World Conference on Education for All, 1990), is arguably one of the most critical factors in the economic growth of a country (Heckman et al., 2018) and the well-being of its people (Comim et al., 2018). The sustainable employability (SE) of teachers in education has garnered much interest, not only due to the demands of the fourth industrial revolution (Schwab, 2017), but also because of the impact of the coronavirus disease 2019 (COVID-19) pandemic (Oades et al., 2021). However, education trends in Africa indicate that key ingredients for effective education are not in place, and investment in education does not seem to translate into pupils' or teachers' flourishing, with a downturn in completion rates for primary- and secondary-level children in sub-Saharan Africa (SSA; Cilliers, 2020).

The act of teaching requires an individual to let someone else learn (Walker & Unterhalter, 2007). It entails a concentrated and wide-ranging knowledge of content and an understanding of different ways to present such knowledge for it to be understandable to learners (Botha & Reddy, 2011) and to facilitate the acquisition of 21st-century competencies (Gordon, 2010). Research confirms that teacher behaviour and competence have been significant school-level predictors of learner progress and teacher employability (Armstrong, 2014; Pretorius, 2013; Van Der Berg et al., 2016; Verspoor & Bregman, 2008).

Note: Additional supporting information may be found in the online version of this article as Online Appendix 1.

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Source: Van Der Klink, J.J.L., Bültmann, U., Burdorf, A., Schaufeli, W.B., Zijlstra, F.R.H., Abma, F.I., Brouwer, S., & Van Der Wilt, G.J. (2016). Sustainable employability - Definition, conceptualization, and implications: A perspective based on the capability approach. *Scandinavian Journal of Work, Environment & Health*, 42(1), 71–79. <https://doi.org/10.5271/sjweh.3531>

FIGURE 1: The sustainable employability model.

Problem statement and research objectives

Contextual constraints experienced by teachers in the sub-Saharan African educational sphere might negatively impact on work capabilities of teachers (Murangi et al., 2022). This, in turn, impacts the stability and productivity of the employment relationship between the teachers and their employers. Sustainable employability is an interactive co-creative concept which requires workplaces that facilitate the optimisation of capabilities and the conducive employee attitude and motivation to utilise such opportunities (Van Der Klink et al., 2016). This study focuses on perspectives of secondary school teachers in the sub-Saharan African context relating to their capabilities and functionings by framing it within the Capability Approach (CA; Sen, 1999).

Current theoretical perspective

The CA (Sen, 1999) provides a framework for studying the SE of teachers by providing an extensive, if complex, theoretical structure for recounting the many-sided nature of well-being at work, understanding its roots and consequences, and investigating interconnected layers of analysis that have traditionally been largely ignored or not adequately debated (Chiappero-Martinetti, 2008). The CA concerns *agency*, that is, the ability to aim for goals that a person values and has rationale to value (Sen, 1999), as essential for SE. Closely linked to values is the concept of empowerment (also referred to as enablement), as a multifaceted concept of increased intrinsic task motivation that reflects individuals' view of their role at work and their opportunities to shape and influence the work role and context (Spreitzer, 1995). Moreover, they should have the freedom and opportunity to pursue and achieve officially determined goals of their profession.

A CA-based model (see Figure 1) that allows to look at the application of well-being of people in the workplace is the SE model (Van Der Klink et al., 2016). Sustainable employability can be defined as opportunities (in the form of capability sets) that individuals can achieve throughout their working lives, while enjoying the circumstances that allow them to make an appreciated impact through their work and maintaining their health and well-being (Van Der Klink et al., 2016). Knowing what individuals value in

their work and whether they can realise these areas supports their SE.

This model allows scientists and practitioners to probe what employees see as valued doings and beings. The model focuses on aspects such as what the means are that they have to achieve, what the work and personal factors are in converting these means into valued opportunities, what the choices are that they exercise concerning these opportunities, and whether these lead to the achievement of valuable functionings and, ultimately, have the required utility for individuals (Van Der Klink et al., 2016).

Resources (monetary and non-monetary) are personal and work-related variables valued in their own right or valued because they are means to achieve or protect other valued resources, being employed as a means to achieve a specific outcome (Bakker & Demerouti, 2006; Van Der Klink et al., 2016). Additionally, these resources should be transformed into possibilities for achieving valuable work-related goals (Van Der Klink et al., 2016). Thus, in the SE model, different resources can be affected positively or negatively, depending on the contextual moderating variables that act as *conversion factors*, functioning as neutral catalytic agents in processing resources into capabilities by either constraining or enabling these (Robeyns, 2016, 2017) – placing a demand on, or being a buffer to, the capability – thereby moderating the conversion resources into capabilities. However, conversion factors can become resources in a different context and be affected by other conversion factors. Three types of conversion factors (namely, personal, environmental, and social conversion factors) moderate the formation of capabilities in that specific context (Wolff & De-Shalit, 2007). Furthermore, dynamic interactions between personal and contextual factors affect functionings and capabilities (Chiappero et al., 2018).

While a capability is a valued opportunity to achieve, the supportive resources (potential conversion factors) are helping or hindering factors that have an impact on how the potential of the resource is translated into the capability to use the resource in achieving the desired outcome and/or functionings (Van Der Klink et al., 2016). If the conversion factors that hinder capability freedom could be mitigated and those that capacitate it could be leveraged (Wolff & De-

Shalit, 2007), an individual would have extended capability. *Capabilities* are a set of tangible opportunities and freedom to achieve and maintain these outcomes (Nussbaum, 2011; Sen, 1980) through experiences of value, enablement and ability (Van Der Klink et al., 2016). The absence of a capability would disadvantage both the job incumbent and the organisation in realising valuable functionings (Saito, 2003). Another element that acts as a catalyst in the SE model is the variable of *choice*. Choice incorporates the individual, the context and the impact on the achievement of valued functionings. Constraints on these choices link back to the capabilities and conversion factors that constrain the individual and organisation (Van Der Klink et al., 2016).

A *functioning* is voluntary behaviour that flows from an individual's and an organisation's exercise of choices about and through their broader capability set (Van Der Klink et al., 2016). Such functionings are ideally valued by both the individual and the organisation, may have multiple functions, and contribute to well-being and the perception of a life well lived (Jayawickreme et al., 2012). The outcome in the study's application of the SE model was conceptualised as the flourishing and well-being, as well as the achievement/performance of teachers and having future-ready learners as the final independently measurable variables and utility obtained through this model. Therefore, it was envisaged that this end state had to be intrinsically motivating to teachers by itself and, therefore, pursued for its own sake (Jayawickreme et al., 2012).

Rationale or value-add of the study

The CA (Sen, 1999) suggests that it is insufficient to measure the functioning of people via economic resources or predefined outcomes only. It is essential to consider capabilities (i.e. valued opportunities and freedom to be and do) and the realisation of functionings (i.e. valued outcomes). Resources alone (as inputs to create capabilities) are a limited measure of well-being and only useful if they translate into achievements. In the CA, capabilities allow that conversion to take place (Oades et al., 2021), as the value that specified outcomes have for job incumbents is considered (Robeyns, 2016), enabling or disabling the effectiveness and well-being of these (Abma et al., 2016). Therefore, conducting research on secondary school teachers' valued capabilities and understanding the factors that have an impact on these valued opportunities and freedom to be effective teachers are paramount.

Research and literature on the capabilities and functionings of teachers in SSA have focused on the primary school level (Buckler, 2016; Cooksey et al., 1991; Murphy & Wolfenden, 2013; Tao, 2014) and tertiary level (Walker, 2012; Walker & Mclean, 2010). Little is known about the capabilities and functionings of secondary school teachers from the CA perspective, specifically from what they perceive as valuable in their jobs and what they need to be enabled to effectively

do their job and be well (Chigona & Chigona, 2010). It is vital to identify the aspects that play into teachers' effective and efficient functioning, especially in the SSA region, which experiences poor educational outcomes (Cilliers, 2020).

Research design

Research approach

The study was conducted from a post-positivism philosophical worldview, where a compromise exists between qualitative and quantitative research paradigms. Ontologically, this perspective posits that reality is constructed by the individual – being value-laden – while also positing that some relatively stable relationships occur between phenomena (Djeffal, 2019).

Research method

A systematic literature review (SLR) was conducted in this study, aiming to search for, appraise, and synthesise research evidence by following a systematic process (Grant & Booth, 2009). The unit of research was secondary school teachers, and the concepts under scrutiny were the perceived resources, capabilities and functionings as identified by means of the SLR.

Targeted body of literature

Studies considered for inclusion in the original database included the following: (1) academic (peer-reviewed) articles available on electronic academic search databases and/or platforms; (2) the original study needed to be empirically grounded research – either qualitative or quantitative; (3) the original research data had to have been collected on, and be identifiable as, mainstream secondary school teachers working with Grades 8 to 12 learners (mainly, if not solely); (4) the original research needed to have collected data from the secondary school teachers' perspective; (5) the article had to be available in English or Afrikaans; and (6) the article needed to have been published between 2010 and 2019.

Electronic searches were conducted between October and November 2020 to trace relevant articles. Databases included Scopus (Elsevier), Web of Science, ScienceDirect, African Journals (Sabinet), Education Resources Information Centre (ERIC), American Psychological Association PSYCHInfo and PSYCHArticles, Journal Storage (JSTOR), EconLit and Elton Bryson Stephens Company Information Services (EBSCOhost). A keyword search was entered into each database using the delimiters mentioned above. In addition, a combination of the search phrases 'capabilities approach' OR 'capability approach' OR 'capabilities and functionings' was utilised, together with the search phrases 'secondary school teacher' OR 'high school teacher' OR 'secondary school educator' OR 'high school educator'. Results were imported into EndNote (Thomson ResearchSoft, 2005), a citation manager, which was then utilised to remove duplicates and export a database file in text format ready for screening.

Gathering the data

An automated screening with Automated Systematic Review Software (ASR) was utilised to detect relevant articles. Such machine learning active learning models for screening prioritisation with algorithms and a software development platform (Ferdinands et al., 2020) allow for time and cost savings and facilitated faster retrieval of relevant publications for a time-effective transition to the subsequent steps in the review process while providing solution to potentially missed literature in screening phase due to human errors or excluded by searching algorithms (Odintsova et al., 2019). The active learning model technology utilised for this screening process was ASReview (Van De Schoot et al., 2021). This software utilised the title and abstract of each electronic article to prioritise the article in terms of relevance. The Naive Bayes and term frequency-inverse document frequency combination were the chosen classification and extraction techniques, as these were found to demonstrate high performance on all measures across all datasets (Ferdinands et al., 2020; Odintsova et al., 2019).

Preference was given to empirical studies that focused solely on secondary-level teachers (Grades 8–12), while studies including middle schools were considered separately due to middle school being diluted or mixed with the upper primary grades (Grades 6 and 7). In addition, studies that included different school phases (e.g. primary, secondary and tertiary) were scrutinised to extract data relating to secondary school teachers. Where this was not possible, the study was discarded.

South African (SA) and SSA articles were extracted for analysis during the secondary eligibility screening phase. This secondary-phase screening was conducted to prioritise articles according to South Africa (first) and then other SSA countries (all seen as developing countries). The restriction to SSA countries recognised that teaching was inherently cultural and could vary across contexts (Gay, 2013). All articles related to educational phases other than the secondary-level educational context were removed, as were any documents that had not been published as peer-reviewed empirical data articles. Most of the articles did not explicitly focus on secondary school teachers' capabilities and functionings from the perspective of the CA. However, inferences relating to the perceived value, enablement and implementation ability of secondary school teachers could be made from these articles.

Variables that were sought for this study were narrative evidence that pointed to the following aspects: (1) the resources that were the foci of the studies (i.e. they answered the question as to what resource the article mentioned from the teachers' point of view); (2) the supporting sub-resources (personal, social and environmental) that secondary school teachers perceived as aiding and constraining their doings and beings in utilising the identified resources; and (3) any identifiable capabilities or functionings secondary school teachers perceived in the articles.

Analysis of the data

To understand the data and the resources, capabilities and functionings, structural and pattern coding were used to categorise content-based or conceptual phrases (Saldaña, 2013). Further analysis of the coded segments was then conducted. A second coding cycle structured the codes identified in the first cycle by developing category and subcategory labels that gave meaning to the sequencing and organisation of the codes (Saldaña, 2013).

The summary measures in this SLR included theme- and pattern-based coding (Saldaña, 2013), utilising ATLAS.ti (Friese, 2021) and Microsoft Excel 2010 (Microsoft, n.d.), where the variables identified from the research articles were thematically coded according to similarities. The results were synthesised by scrutinising each article for data that related to resources, capabilities and functionings.

The risk of bias in this study was mitigated by assessing each of the studies included in the literature review for the risk of containing biased information (selection bias, selective reporting or inadequate sampling). However, the risk of bias was still possible because the focus was placed solely on peer-reviewed academic journal articles that were electronically available on the different e-distribution databases mentioned before. No unpublished manuscripts (such as master's or PhD studies) were considered, and any journals not available digitally were, therefore, also excluded. Another area of risk was that the resource and outcome factors identified in the studies could be author-influenced (not teacher-generated), although other capability factors (such as the sub-resources) were teacher-generated.

Presentation of the data

Table 1 summarises the number of peer-reviewed articles regarding secondary school teacher capabilities screened as relevant to the literature review.

Of the 1256 articles that were originally sourced, 40 articles contained information relating to secondary school teachers in an SA context, and 178 articles contained studies on the rest of SSA. Of these 218 articles, 172 were found to contain empirical study data that related directly to various aspects that addressed the functionality of secondary school teachers in various contexts of SSA. However, many of the articles had either been published in non-accredited journals or contained very basic or dubious empirical data. In the end, the information in 86 articles was utilised to inform the literature review.

TABLE 1: Number of articles sourced on secondary school teacher capabilities and functionings.

| Articles (2010–2019) | SA-specific | Other sub-Saharan African countries | Other developing countries | Developed countries | Multi-national studies |
|--------------------------|-------------|-------------------------------------|----------------------------|---------------------|------------------------|
| Sourced through ASReview | 40 | 178 | 491 | 541 | 6 |
| Usable for analysis | 23 | 63 | N/A | N/A | N/A |

SA, South Africa; NA, Not applicable.

TABLE 2: Number of studies analysed by Country, Subject, and Research Design.

| SSA country | Total articles (2010–2019) | Subjects | Qualitative studies | Quantitative studies | Mixed-methods studies |
|---------------|----------------------------|-----------------------------|---------------------|----------------------|-----------------------|
| Botswana | 2 | English | - | 1 | - |
| | | Mathematics | - | 1 | - |
| Cameroon | 1 | Not mentioned | - | 1 | - |
| Ethiopia | 7 | English | - | - | 1 |
| | | Sciences† | - | 1 | - |
| | | Not mentioned | - | 5 | - |
| Ghana | 3 | Multiple‡ | - | 1 | - |
| | | Not mentioned | - | 2 | - |
| Kenya | 10 | English | - | - | 1 |
| | | Mathematics | - | 5 | - |
| | | Multiple‡ | - | - | 1 |
| | | Not mentioned | - | 3 | - |
| Malawi | 2 | Technology | 2 | - | - |
| Mauritius | 1 | Multiple‡ | 1 | - | - |
| Namibia | 2 | Not mentioned | 2 | - | - |
| Nigeria | 18 | Agriculture | - | 1 | - |
| | | Christian Religious Studies | - | 1 | - |
| | | Sciences† | - | 2 | - |
| | | Social Studies | - | 2 | - |
| | | Multiple‡ | - | 2 | - |
| | | Not mentioned | - | 9 | 1 |
| South Africa | 23 | Geography | - | 1 | - |
| | | Mathematics | 4 | 1 | 2 |
| | | Sciences† | 2 | - | 2 |
| | | Technology | 1 | 1 | - |
| | | Multiple‡ | 3 | 1 | - |
| | | Not mentioned | 4 | 1 | - |
| Swaziland | 2 | Sciences‡ | - | 1 | - |
| | | Not mentioned | - | 1 | - |
| Tanzania | 10 | Mathematics | 1 | - | - |
| | | Multiple‡ | - | 2 | - |
| | | Not mentioned | 5 | 1 | 1 |
| Uganda | 2 | Multiple‡ | - | 1 | - |
| | | Not mentioned | - | - | 1 |
| Zimbabwe | 3 | Mathematics | 1 | - | - |
| | | Multiple‡ | - | - | - |
| | | Not mentioned | 1 | - | - |
| Totals | 86 | - | 27 | 48 | 10 |

SSA, sub-Saharan Africa.

†, Sciences include Biology, Chemistry, Physics, or a combination of these; ‡, Multiple includes a variety of subjects across disciplines.

Of the 86 usable literature articles, only one (Chigona & Chigona, 2010) utilised the CA as its conceptual framework by looking at information and computing technology (ICT) capability deprivation in disadvantaged communities. Therefore, it was necessary to analyse each of the other articles for inferred capability factors, from which a preliminary capability set could be conceptualised. Table 2 provides information on the remaining articles in terms of the countries and types of studies analysed.

Trustworthiness

Reliability

The literature review was undertaken by implementing an SLR protocol, using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) process (PRISMA, n.d.). The objective of the PRISMA process is to

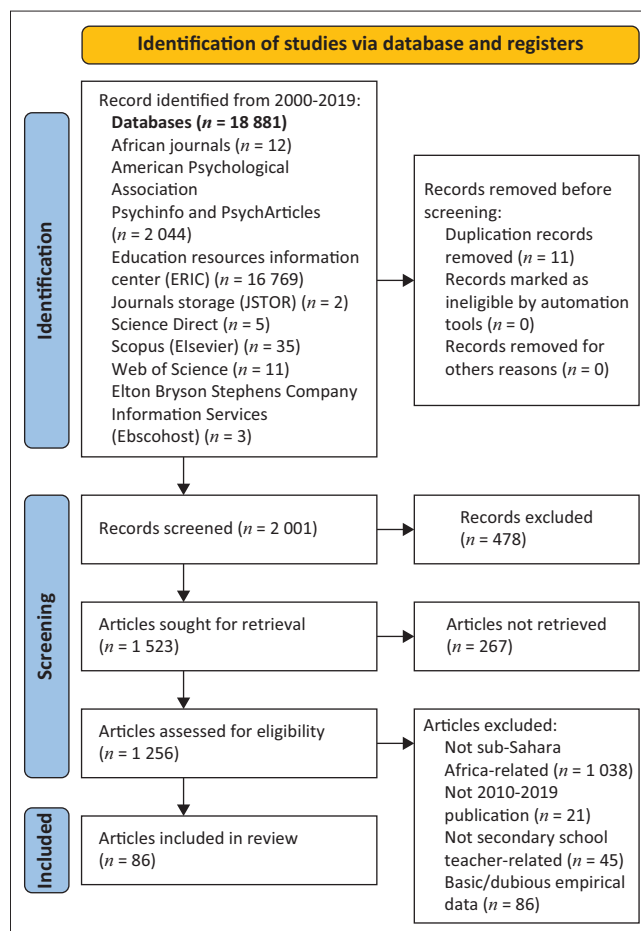


FIGURE 2: Preferred reporting items for systematic reviews and meta-analyses flow diagram for new systematic reviews.

assist authors in improving their reporting during systematic reviews and meta-analyses (Liberati et al., 2009) and has been applied effectively in social sciences research studies (Page et al., 2021), thereby increasing the reliability of the findings (see Figure 2).

Validity

The validity of the findings was ensured by working within validated social science frameworks, namely the Capabilities Approach and the Sustainable Employability model.

Discussion

Outline of the results

During article analysis, the literature was coded into resource categories and subcategories, capabilities (both value and enablement), and functionings as identified from the inputs of SSA secondary school teachers. Firstly, linking the article analysis to the Van Der Klink et al. (2016) categories, the resource subcategories were divided into three elements, namely, personal factors (relating to the teachers themselves), social factors (aspects relating to interactive dynamics involving elements and stakeholders internal to the school), and environmental factors (aspects relating to elements and stakeholders external to the school environment). Secondly, after the aspects mentioned in the literature had been consolidated, the findings were grouped

TABLE 3: Knowledge commodity capability factors identified from the systematic literature review.

| Resource category | Resource subcategory | | | Capabilities | Functionings |
|------------------------------------------------------------------------------------------------------|------------------------------------------|---------------------------------------|-------------------------------------------|-------------------------------------------------|--------------------------------------------------------|
| | Personal | Social | Environmental | Valued/enabled | |
| Knowledge, skills, and abilities – literacy/competence (technological, pedagogical, subject content) | Experience | Class size | Software/materials/laboratories/libraries | SSTs valued using ICT in teaching | Confidence/self-efficacy |
| | Complexity of cognitive level required | Time | Curriculum | SSTs valued using effective teaching strategies | Pedagogical competence |
| | Practical application | Teaching load | Guidelines (policy) | SSTs valued purpose of subject | Learner performance |
| | Pedagogy use | Subject foundation (learners) | External organisation involvement | | Providing opportunity for learners to engage |
| | Gender | Fear of subject (learners) | School category | | ICT integration |
| | Qualification | Motivation (learners) | School location | | Content knowledge competence |
| | Training | Allowing dialogue/questions (teacher) | Learner support (home) | | High subject knowledge (scores) |
| | Age | Number of teachers | Learner culture | | Proof of qualification |
| | Confidence to master teaching strategies | Supervision | Community education level | | |
| | Grade taught | Role models/mentors | Parental socio-economic status | | |
| | Motivation | ICT | Societal norms and values | | |
| | Planning | Generation differences | | | |
| | Initiative | | | | |
| | Subject/field | | | | |
| | Understanding of subject | | | | |
| Values | | | | | |
| Training and (professional) development | Motivation | Leadership support | Availability of materials and resources | Placed high value on ICT training | Learner performance |
| | Attitude | Mentors/role models | Government policy | Valued involvement in decision-making | Improvement/development in competence |
| | Experience (technology) | Time | Curriculum | Valued attentive leadership | Participation in school-based professional development |
| | Incentive for refresher | Collegial collaboration | Value attributed by external community | Valued awareness of areas to improve | Commitment to teaching |
| | Practical application | Feedback | Schooling context | Enablement of opportunity to train | Use of tools (ICT) |
| | Previous tech training | Class size | Province | | Motivation |
| | Previous training institution | Workload | Union support | | Attitude |
| | Qualification | Technology support | | | Confidence |
| | Technology educational qualification | Teaching schedules | | | |
| | Ability application | | | | |
| | Fear of criticism | | | | |

Note: Please see the Online Appendix for the full table and reference list.
SST, secondary school teacher.

according to overarching themes that are referred to as commodity groupings (in order to distinguish it from resources and prevent confusion), with a commodity being defined as a grouping of resources that are potentially useful or valuable, creating access or empowerment if utilised effectively. The identified commodity groups included knowledge commodities (Table 3), soft (skill) commodities (Table 4), hard (tool) commodities (Table 5), and organisational (school system) commodities (Table 6).

Knowledge commodity capability factors

Two main resource categories related to knowledge as a commodity (Table 3) were reported in the literature, namely, the knowledge, skills, and abilities that secondary school teachers possessed and their training and development.

Knowledge, skills, and abilities refer to secondary school teacher literacy in subject content, pedagogy (Shulman, 2013), and technology (Koehler & Mishra, 2009). A variety of sub-resources were reported that had an impact on the achievement of secondary school teacher functionings, among which the amount of teaching experience, the complexity of cognitive functionality required, the use of pedagogical strategies, the practical application of teacher knowledge, and the gender of the teacher were mostly reported as personal sub-resources. Most of the social sub-resources mentioned included time, teaching load,

class size, materials needed and equipment, while physical infrastructure, curriculum, policy guidelines and involvement of external organisations were the most-reported environmental sub-resources. In terms of capabilities, secondary school teachers reported valuing using ICT in teaching and using effective teaching strategies.

Regarding *training and professional development*, many aspects were reported once-off, with only leadership support being reported more often as a social sub-resource. Teachers placed high value on being trained to utilise ICT and being involved in decision-making with regard to training decisions that affected them. An enabling factor that was reported was a reference to being enabled to attend training to improve and develop their competence, participate in school-based development, use ICT tools effectively, and be committed to their teaching.

Soft commodity capability factors

Soft commodity capability factors were grouped as shown in Table 4. The main resource categories identified included the secondary school teacher as a person (being), attitude towards ICT, motivation, job satisfaction, confidence, stress (management), decision-making and communication.

Only personal subcategories with more than one occurrence were reported. These subcategories included the interest the secondary school teachers themselves had in their

TABLE 4: Soft commodity capability factors identified from the systematic literature review.

| Resource category | Resource subcategory | | | Capabilities | Functionings |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| | Personal | Social | Environmental | Valued/enabled | |
| Secondary school teacher being | Behaviour/habits Gender Value assigned to subject (meaning and interest) Expectations of learners Expectations and beliefs Ability application Drive Qualification Skill level Subject/field Understanding of learner contexts | Teacher-learner relationships Leaders/mentors/role models Teachers' collaboration/support School performance standards/levels School culture Support services (for learners) School staffing Teaching load allocation Time allocation/management Recognition (feedback) Tangible results | Policy support/ guidance Subject/field requirements Community collaboration Funding School infrastructure Curriculum | Valued position as systemic resource Valued order and discipline Valued transfer of knowledge Valued making a positive difference/influence Valued positive relationships with learners Valued physical health Enabled to be involved in decision-making | Confidence/self-efficacy Learner performance Achievement of subject outcomes Meaning in work |
| Attitude towards ICT | Ability application Qualification Relative advantage Extrinsic motivation Perceived usefulness Cognitive complexity level Age Behavioural control | Time (in class) Leadership support Technical support Access to ICT infrastructure and resources | - | Valued computers as educational tools Valued the teaching empowerment and confidence that came with using ICT | ICT adoption and use in teaching |
| Stress | Gender Age | Contractual problems Nature of the work Work environment Work relationships Staff shortages | - | - | Stress management Learner performance |
| Confidence (perceived competence) | Experience Level of exposure | - | - | Valued building confidence (to teach and learn) | Effective use of tools Competence |
| Motivation (teachers) | Financial incentive Study leave | Prompt salary payment Exposure to conferences and seminars Leadership inspiration | Availability of teaching materials | - | Attitude towards subject Learner performance |
| Decision-making | - | - | - | Perceived themselves as being able to add value Valued being involved in decision-making Enabled to be involved in decision-making | Involvement in selection and organisation of learning experiences |
| Communication | - | Abstractness of concepts | - | - | Innovative use of computer technology in class |
| Job satisfaction | Attitude | Income Job security | - | - | Turnover intention |

Note: Please see the Online Appendix for the full table and reference list.

subject and its meaning to them, their behaviour and habits, their gender and the level of expectations they had of their learners. Secondary school teachers valued their *position as teachers* and the capability to maintain order and discipline, while engaging in their work. There was also one reported occurrence where secondary school teachers indicated their need to be involved in decision-making that affected them, to be confident, and to achieve the outcomes of their subjects and learner performance.

Reports on sub-resources that moderated their *attitude towards ICT* (as a resource category) mainly related to secondary school teachers' ability to apply their knowledge and skills and the level of cognitive complexity required in their work. They reported valuing the use of digital technology as an educational tool and the confidence and empowerment that

came with adopting and using ICT well in teaching. *Stress* was also reported as a resource moderated by various sub-resources, of which gender was the most-reported aspect. Functionings linked to stress as a resource included managing stress well and getting learners to perform up to standard.

Confidence in their competence to teach was reported as a resource category, with the level of exposure and practical experience being reported as sub-resources in this. Secondary school teachers reported that they valued being busy with aspects that built their confidence in executing teaching and learning to effectively use the tools at their disposal and be competent at their jobs. Their *motivation* was indicated as a resource moderated by sub-resources, including various benefits and the availability of equipment and materials needed, to support them to achieve a positive attitude towards

TABLE 5: Hard commodity capability factors identified from the systematic literature review.

| Resource category | Resource subcategories | | | Capabilities | Functionings |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Personal | Social | Environmental | Valued/enabled | |
| ICT | Ability application Competence/skill level Confidence Subject field Training Attitude towards ICT Use experience Pedagogy use Motivation Age Gender Qualification Experience Subject perspective (narrow/broad) Effort expectancy Appetite for change Awareness of policies Habits Self-concept Exposure | Social influence Time Training (opportunity and/or type) Leadership support Access Learner attitude Mentors Class size Work-life balance Role conflict Impact of use on learning process Learner unfamiliarity Media habits (learners) Workload Access schedules | ICT infrastructure, facilities, and equipment Technology/technical support School facilitating conditions School policy/ budget Crime/security risk (society) School type School location Reliability of service providers (electricity and Internet) Government policy Government funding Curriculum guidelines/ materials Curriculum content load Examination focus Parent socio economic status Parent involvement Cost of devices | Perceived high value on ICT integration Enabled to benefit learners Placed high value on ICT use Enabled to use ICT Placed high value on ICT training Enabled to integrate ICT in pedagogy Valued teaching using ICT without barriers Valued context- and content-applicable pedagogical methods Enabled for ICT to be easy to use Have ICT support in all subjects Enabled to take advantage of ICT technology Enabled to deliver curriculum using technology available at school Enabled to be involved in policymaking Enabled to integrate ICT in various pedagogical methods | Acceptance and use of ICT Attitude towards ICT Interaction, communication, and collaboration Provision of quality education/ value Learner performance Enriched learning experience ICT competence Pedagogical ICT integration Autonomy Conducive learning and teaching environment Concept structure consistency Real-time process/ learning feedback Access to educational resources and storage Language assistance Time management Sponsor funding Leadership engagement |
| Curriculum | Level of subject understanding Ability application Pre-service training | Contextual fit of materials Learner level of competence Class size | Curriculum content/load Applicability of assessment Extra-curricular offering | Valued being involved in decision-making Enabled to be involved in decision-making | Effective implementation of curriculum |
| Assessment | Conceptual understanding Effort required | Cognitive/non-cognitive domains Time intensity Class size Workload | Mark inflation | Freedom to choose participation Helped learners develop | Effective assessment practices Participation in testing programmes |
| Teaching aids | Planning | - | Available materials and facilities Standards (quality) | Practical application | Learner performance |
| Teacher networks | Attendance | Regularity of meetings Interschool networking | - | - | Professional development |
| Media | - | - | Media impact on learners Availability, complexity, and depth of support materials Examination focus | - | - |
| Time | Time use | Time requirements | - | - | - |

Note: Please see the Online Appendix for the full table and reference list.

their job, thereby supporting learners to perform to their full potential.

Less-reported resources included decision-making, communication, and job satisfaction. Secondary school teachers valued and wanted to be enabled to be involved in *decision-making*, placing a high value on their ability to add value and be involved in decision-making that affected their job, and to achieve involvement in selection and organisation of learning experiences. *Communication* was reported as a resource towards the innovative use of computer technology in class, affected by the abstractness of concepts that had to be taught as sub-resource. Finally, *job satisfaction* was indicated as a resource towards reducing secondary school teachers' intention to leave, which was affected by their attitude towards their job and the income and job security they experienced.

Hard commodity capability factors

Table 5 presents the identified main resource categories: ICT, curriculum, assessment, teaching aids, teacher networks,

media and time. Of these, *ICT* was by far the most-researched resource. Personal resources that affected ICT capability and functionings included the knowledge, skills, and confidence to do so, as well as the level of competence secondary school teachers could apply, the subject field they taught, the pedagogical strategies they used, and how they experienced the use of ICT. Other personal factors reported multiple times were age, gender, qualification level, training received, and motivation to use ICT. The most-reported social sub-resources were time and the opportunity and types of training received. Leadership support, class size, and access to ICT facilities and equipment were also reported more than once.

Environmental sub-resources included availability of ICT infrastructure, facilities and equipment, technical and technological support, the location and type of school at which secondary school teachers worked, the school policy, the budget and other facilitating conditions, and government policy. In multiple articles, secondary school teachers reported that they placed a high value on being trained,

TABLE 6: Organisational commodity capability factors identified from the systematic literature review.

| Resource category | Resource subcategory | | | Capabilities | Functionings |
|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Personal | Social | Environmental | Valued/enabled | |
| Leadership (principal, vice-principal, heads of department [HODs]) | Qualification (master's) Gender Compensation Meaningfulness Expectations | Role modelling (principal) Leadership style Inspirational motivation HOD communication/ collaboration Supervision Evaluation processes Qualification (principal) Individualised consideration Idealised influence (attributed) Support given Decision-making structures Principal engagement School culture Stakeholder relationships and collaboration Shared responsibility/ accountability | Specific school Community involvement | Valued effective teaching/ learning environment Valued it as key position to affect/influence Involvement in decisions that affected their work Valued active/present leadership figures Salary and benefits | Job satisfaction Learner performance Leadership effectiveness Effective learning environment Effective pedagogical practices Job performance Professional development School development Collaboration (multi-stakeholders) Teacher support |
| Job role | Expectations Ability application Incentive/reward | Staff complement Leadership support Support/administrative services (school) Work conditions | Policy (implementation) Systemic alignment Societal acceptance | - | Teacher engagement/ commitment Affective reaction/ satisfaction Role clarity/focus Career progression |
| Learner discipline | Experience SSTs late/absent (school) View of discipline Belief about utility of different disciplinary methods Ethics Engagement | Background and behaviour/habits (learners) Power relations (learners and teachers) Beliefs about utility of different disciplinary methods (learners) Effectiveness of methods Time consumption Restlessness/inattention (learners) Low self-concept (learners) Extra-curricular activities (school) Learners' interaction/ collaboration Locus of control (learners) Class size School culture Availability of teaching resources | Ethics and justice of practices (society) Value system (society) Parent views Type of school (co-ed/ single) School location School environment (school) Rules and regulations (school) Parental support Home conditions (society) Mass media (society) Policy on discipline | Valued effective disciplinary measures Conducive learning and teaching environment Creation of order and attention in class | Learner performance Controlling classroom behaviour Awareness and use of non-violent disciplinary methods Development of good conduct (in learners) Teacher empowerment Balanced rights (justice) Order and attention in class Sustainable behavioural change/results |
| Organisational health | - | - | School sector (public/ private) | - | Learner performance |
| Organisational justice | Distributive Procedural | Politics, corruption, bribery, religion, and tribalism | - | Valued involvement in decision-making Enabled to have order and discipline in the learning and teaching environment | Turnover intention |

SST, secondary school teacher.

integrating and using ICT in their teaching, doing so without facing barriers, and using pedagogical methods that considered the context and content of their teaching. They indicated the need to be enabled to take advantage of and use ICT to benefit the learners, for ICT to be easy to use, and to integrate it in a manner that allowed for various pedagogical methods. They also indicated wanting to be involved in policymaking on ICT integration in the delivery of the curriculum, using technology at school, and being enabled through ICT support in all subject areas. The most-reported purposes of having ICT were the achievement of acceptance and use of ICT, pedagogical integration of ICT, having a positive attitude towards ICT, and having interactive classes.

The other less-reported resource categories included *curriculum*, where the fit of the materials for the context in which the secondary school teachers taught and the content load were the two main sub-resources reported. Teachers

valued being involved in, and enabled to make, decisions around the curriculum to ensure effective curriculum implementation. The category of *media* was seen as a resource mediated by its impact on learners, the availability and depth of support materials, and the focus on examinations (versus practical life application). *Time* was also a resource that was moderated by secondary school teachers' use of time, on the one hand, and time requirements by the system in which they functioned, on the other hand.

For *assessment* as a resource, once-off reports indicated various sub-resources towards the achievement of effective assessment practices and participation in testing programmes. Even though it was mediated by conceptual understanding and required effort, time intensity, class size, workload, and mark standardisation practices, secondary school teachers placed a high value on the liberty to choose to participate in assessment (or not), as well as assessment as a mechanism to

help learners in their development. Other aspects that were reported to lead to the achievement of learner performance included planning, availability, and standard of *teaching aids*, which were valued for their use in making learning practically applicable. *Teacher networks* were seen as a resource towards professional development, moderated by the regularity and attendance of such meetings and having these happen interschool.

Organisational commodity capability factors

Table 6 shows that school leadership and learner discipline were the most-mentioned organisational capability factors, but also that reports included organisational health, justice, and the teacher job role as resources.

Leadership was reported to be facilitated mainly by social sub-resources, among which leadership style, ability to inspire, communication and collaboration, and role modelling were reported most, together with secondary school teacher gender as a personal sub-resource. Secondary school teachers reported valuing leadership positions in schools as being key in influencing and having an effective teaching and learning environment, placed a high value on leadership figures being active and present in their roles, and valued leadership involving them in decisions that had an impact on their jobs. The need to be enabled to earn reasonable salaries and benefits was also reported. Leadership as resource was seen as pertinent in supporting teachers to perform in their jobs and in achieving effective pedagogical practices, professional development, job satisfaction, an effective learning environment, school development, collaboration between multiple stakeholders, and learner performance.

Learner discipline as a resource was reported multiple times as being facilitated by secondary school teachers' views of discipline and belief about the utility of different disciplinary methods. Social factors included learners' background, behaviour, habits, and beliefs about discipline and the power relations between the learners and the secondary school teachers. Other factors included the effectiveness and time consumption of the different disciplinary methods. Aspects that played a role in the environment included the value system of the particular society, its ethics and justice of practices, parents' views, and support from both the parents and the school leadership in terms of culture and regulations. Secondary school teachers indicated that they valued discipline in creating a conducive teaching and learning environment and having effective disciplinary methods. They reported needing to be enabled to create order and attention in class. The purposes reported were to achieve a controlled, ordered, and attentive classroom environment, be aware of and use non-violent disciplinary methods, be empowered as teachers, have balanced rights for both learners and teachers, develop good conduct in learners, have sustainable behavioural change results, and have learner performance that was up to standard.

The *secondary school teachers' job role* was also reported as a resource category affected by their expectations, ability to

apply their knowledge and skills, and incentive to do so. Socially, it was affected by the staff complement, leadership and administrative support, and the work conditions in which these teachers were functioning. Environmental sub-resources with an impact were reported to include policy (and its implementation), systemic alignment between government and the school context, and societal acceptance of their role. Finally, the purpose of the job role was reported as the achievement of engagement and commitment, having a positive experience (affect and satisfaction) in their job, having role clarity, focusing on what the role entailed, and being able to progress in their careers.

Lastly, *organisational health and justice* were reported as resources mediated by the school sector, type of justice (distributive or procedural), and social practices in terms of political bribery, religion, corruption, and tribalism. Secondary school teachers reported valuing being involved in decision-making on the organisational front and being enabled to experience order and discipline in the learning and teaching environment to achieve learner performance and reduce intention to leave.

Practical implications

The study aimed to review current literature related to factors that have an impact on the capabilities of secondary school teachers in SSA (see Figure 3). Of the 86 articles included in the analysis, only one author utilised the CA as framework to understand secondary school teacher capabilities and functionings. Other articles were analysed utilising structural and pattern coding, where 21 resource categories were identified, which were reported in four commodity groupings: (1) knowledge, skills, and abilities, and development and training (knowledge commodities); (2) the secondary school teacher as a person (being), the person's attitude towards ICT, motivation, job satisfaction, confidence, stress, decision-making, and communication (soft commodities); (3) ICT, curriculum, assessment, teaching aids, teacher networks, media, and time (hard commodities); and (4) leadership, learner discipline, the job role, organisational health, and organisational justice (organisational commodities). A variety of sub-resources were reported (divided into personal, social, and environmental factors), and any mentions of value or enablement (capabilities) and functionings were extracted.

The summary below provides mentions of value and enablement (capabilities) that were reported from the literature as contributing to the effective functioning and well-being of secondary school teachers in SSA, offering an entry point for understanding the intrinsic and extrinsic factors that these teachers reported as playing a role in their enablement to be well and do their work well. The following capabilities were included: (1) knowledge and skills utilisation (including being effective and competent at ICT, discipline, pedagogy, and practical application); (2) further development and training (including building confidence, learning more skills, and having the opportunity to train and gain awareness of areas

that need improvement); (3) integrating ICT in their teaching and learning (including use, training, curriculum, and pedagogy); (4) being involved in decisions that have an impact on their work and role and making valued choices; (5) having constructive relationships with leadership and learners; (6) having a conducive learning and teaching environment; (7) being able to transfer knowledge and develop learners to the learners' benefit; (8) being able to make a difference and add value (as teachers); (9) having health, income, benefits, and work-life balance; and (10) receiving support to do their jobs (from leadership, ICT, and the teaching environment).

The resource factors as reported by secondary school teachers indicated that the majority of articles analysed focused on knowledge, skills, and abilities (and the development of these), ICT, leadership, the secondary school teacher as a person (a being), self-efficacy (confidence), and learner discipline as the most-reported resources. These were buttressed by a variety of sub-resources. Personal factors as sub-resource included teacher characteristics (including experience, gender, age, subject field, training, and qualification), motivation, beliefs and expectations, and the ability to apply their knowledge and skills. These emerged as prominently reported sub-themes. In terms of reported social sub-resources, the elements reported most were class size, school culture, leadership support, time, workload,

support from various other stakeholders (technological, collegial, administrative and learner support services), and staff complement, which could have an impact on capability creation. Environmental sub-resources that were reported often included the schooling context (location, type, and community socio-economic context), government support (through policy and implementation guidance and alignment), the curriculum (contextual relevance and content load), and parental and community involvement and influence on school functionality.

Prominently reported functionings included learner performance (by far the most-mentioned aspect), teacher functionality, competence and development, and the effectiveness and well-being of teachers, schools, leadership, and relationships.

A few observations regarding the above findings are necessary. Firstly, it is important to note the number and variety of sub-resource factors that were reported in the literature. These aspects were reported as neutral entities that could (context-specific) bolster or constrain the utility of any resource, thereby potentially acting as conversion factors (Nambiar, 2013), and so either hinder or promote capability. A lack of these resources could create a corrosive disadvantage (Wolff & De-Shalit, 2007), where a disadvantage in one domain would be likely to affect other areas negatively. The

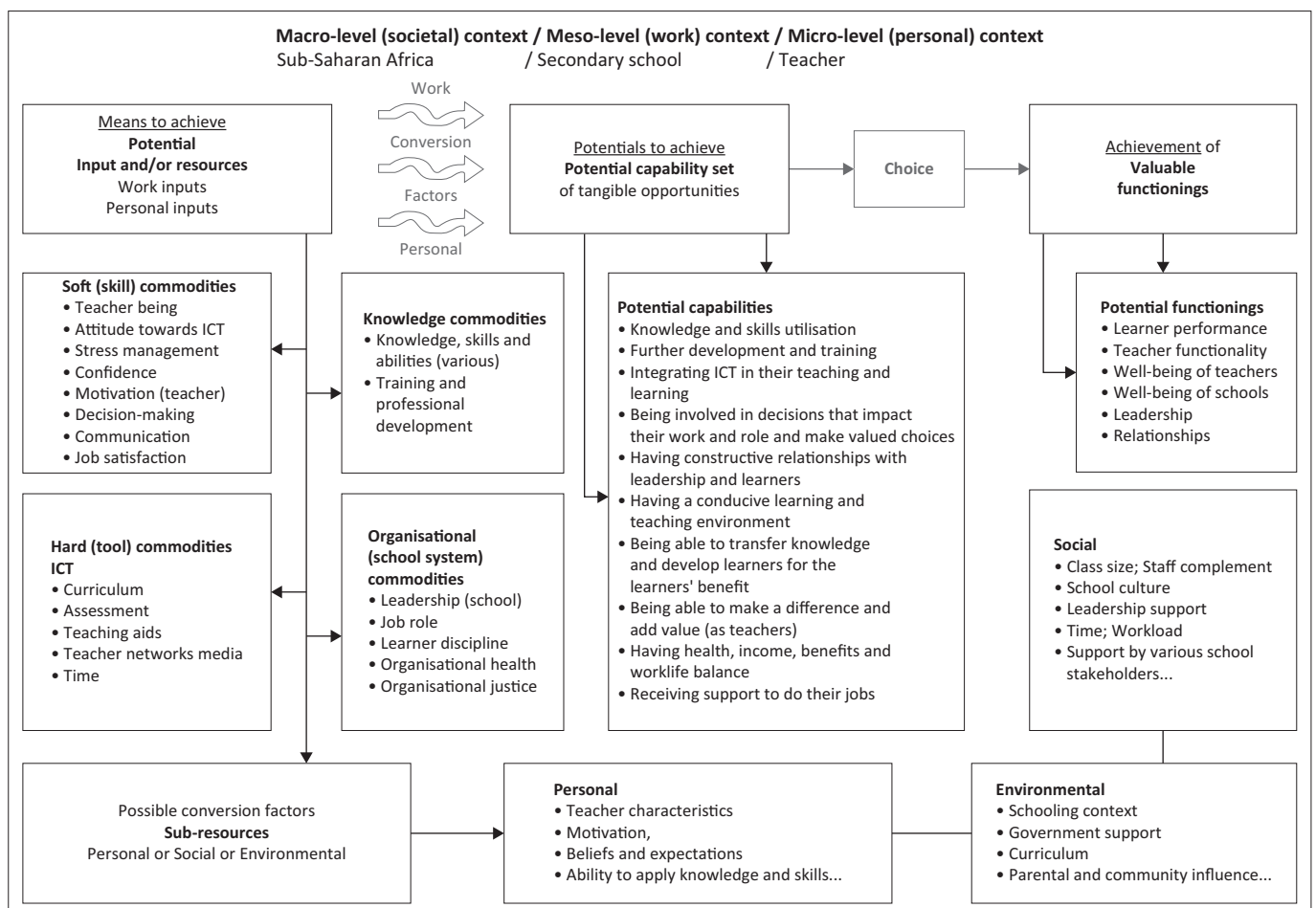


FIGURE 3: Framework of literature review findings.

study showed that this could be the case for secondary school teachers' contexts. The literature indicated that time, class size, leadership support and contextual ability application were dominant resource themes in being able to function as teachers, influencing the majority of areas. This may imply that addressing these aspects constructively can make an exponential difference in the enablement of teachers on various levels of capability enhancement. The same can be said of functionings, where the achievement of specific functionings may have a significantly larger effect overall than at the point that the functioning is addressing. These fertile functionings (Wolff & De-Shalit, 2007) should be a priority for public policymakers to anticipate the effects of corrosive disadvantages and fertile functionings. These reports may provide a necessary starting point for institutional decision-makers in the educational sphere to identify intervention areas where being cognisant of attributed value and providing enablement in those areas may have an exponential effect in creating other capabilities, as capabilities rarely improve exponentially without enabling institutions (Nambiar, 2013).

Secondly, it was not only what was reported that was of interest, but also what was not reported. If juxtaposed to the work on 21st-century competencies (Lonka, 2018), the SSA literature did not report on the role of identity building, emotional skills and maturity, thinking and learning to learn, being a member of a well-functioning society, readiness for work-life, and working life in practice (for instance) or on anything relating to culture, except for single mentions of learner background, as well as parental support and involvement, having an impact on teachers' capabilities. The Eurocentric perspective of education in Africa may have implications of which teachers may be unaware. Several Africans who had undergone Eurocentric schooling have reported that it had the effect of undercutting traditional African cultural being, on the one hand, by presenting an individualistic value system that was foreign to African communal functionings and, on the other hand, by separating learners from their native communities (Woolman, 2001). If the concept of 'neo-colonial cultural dependency as a threat to African psychological autonomy and sovereignty' (Woolman, 2001, p. 30) is taken as true, a question is raised: How do teachers who work and live in such a dichotomy manage to teach in a system that, for the most part, does not speak to their identity in their continental context? To understand contemporary African identity and education in the 21st century, such questions concerning colonial and postcolonial education are critical (Chopra & Duraiappah, 2008; Rajan, 2019).

Thirdly, secondary school teachers reported that the impact the society in which they worked had, as well as the school context, influenced their capabilities and functionings. However, little concrete information was reported on prioritising capability creation in rural and urban settings and independent and public school settings or on understanding the interplay of sub-resources in achieving the valued functionings. The reported secondary school

teacher capabilities showed some overlap with findings of studies on teachers in rural SSA contexts (Buckler, 2012). For example, the study included the capabilities for professional development, teaching and assessment, discipline, support, and relationships, but did not mention the need for capabilities around parenting, love and nurturance, religious guidance, and fundraising as reported by primary school teachers. Tao (2013) reported capabilities with regard to female teachers in one SSA country as including the personal capabilities to take care of their family, live in an acceptable home, and have good health and the occupational capabilities to help learners learn, upgrade their own qualifications, and be respected. Tao (2014) found that female teachers working in rural schools valued the capability to live with family, satisfactory accommodation, access and empowerment for health, safety and security, adequate and timeous income, dealing with productive students and supportive parents, and physical mobility. When comparing these findings with those of the current study, there are overlaps in capability creation, but also distinct differences between the capability needs reported by teachers.

Fourthly, the identified capability factors seemed to be aligned with at least some of the 21st-century competencies identified by practitioners in developed countries. For example, secondary school teachers reported a preference for capability in using and developing a variety of knowledge and skills and ICT competence, which is related to multi-literacy and ICT competence (Transversal Themes 4 and 5) in the 21st-century competency framework (Lonka, 2018). This may indicate teachers' awareness of the need for, and engagement in, 21st-century competencies. Furthermore, the number of occurrences in the results that referred to relevance and development of teacher knowledge and skills indicated the substantial priority teachers gave to being and feeling competent for the job at hand. This is also aligned with applied research on the SE model (Abma et al., 2016), which indicated both use and development of knowledge and skills as part of a set of seven generic SE work values that had been indicated to form the basis for capability generation for individuals at work. Another finding in line with the application of the CA focused on 21st-century competencies included multiple mentions of teachers seeing the value of these competencies (Andoh, 2019; Bansilal et al., 2012; Govender, 2013). However, the value ascribed to these competencies was constantly reported as being seemingly higher than the actual implementation and usage of the competencies.

Lastly, although SE was used to provide a framework for categorising the different capability factors, most of the reporting was done from a primarily utilitarian point of view that focused on the aspects of resources and functionings. The current study did not take an in-depth look at the capabilities that would create the necessary value and enablement of the sustainable and effective employment of secondary school teachers in the context of SSA in the 21st-century. Many of the variables included in a developed-country model such as Lonka's (2018) were reported to be

sub-resources (therefore, potential conversion factors) rather than primary foci of teachers.

Limitations and recommendations

A possible methodological limitation is that information might have been missed due to articles being screened out because their abstracts did not contain information on the above. The use of active learning model technology necessitated a heavy reliance on the ability of the author of each article to provide the necessary information in the abstract, which could have influenced the researcher's effectiveness in distinguishing between relevant and non-relevant items. It might not be effective to use active learning model technology in multidisciplinary studies or to use it in fields in the early stages of development.

In terms of contextual bias, this study only considered the perspectives of secondary school teachers in the literature review. Further studies could include comparing these views to other stakeholder perspectives on the teacher-mentioned capabilities factors and generating empirical data to validate whether the perceptions and behaviours are aligned. A further limitation is that this study included studies from different countries in SSA, giving a generalised view of capability factors, whereas differences might occur between countries and the education systems within countries.

Further studies are needed to understand the capabilities of secondary school teachers in SSA. Future research could include measuring SE capabilities in this context. Conceptualising and measuring the role and manifestation of conversion factors in creating or hampering capability are also untapped aspects of teachers' functionality. Research is needed to conceptually grasp the exercise of choice as a catalytic function between the capabilities and the functionings. Moreover, it is necessary to identify secondary school teachers' perceptions regarding the priority of identified capabilities and conversion factors in different contexts. Also, understanding the impact of practically addressing capabilities in the secondary school work context and measuring the utility of incorporating capabilities into decision-making could be valuable. Lastly, research focusing on precarity and capital (Baart, 2021) in the work contexts of teachers would be valuable in understanding the prioritisation of capability creation in work contexts.

Conclusion

Capabilities imply that there is more to education than the development of specific teacher competencies. By including the enhancement of the perspectives, well-being, values, and freedom of the teachers (Walker, 2012), it is possible to identify what makes them vulnerable to poor functioning and not delivering quality education. From the perspective of the CA, education strives to go deeper than focusing on inputs and resources and performance standards alone. It focuses on enhancing the capability of individuals in the education realm to raise the functionings of individuals and

systems. The type of schooling system that best enunciates the concept of the CA from Sen's point of view seems to make stakeholders (teachers included) more self-directed and, at the same time, advances their judgement about capabilities and how to use them (Saito, 2003).

The value of a theoretical framework such as the CA is its ability to recognise complexity, represent many-sided phenomena, and investigate exhaustive relationships, causes, and effects among the plurality of dimensions involved. Complex concepts should not only be considered for the existence of a multidimensional nature, but also by giving attention to the connections and links among the analysis levels. In the CA, multidimensionality and the absence of potentially constrictive, predefined limits are seen as strengths rather than constraints or faults.

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Competing interests

The authors declare that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.

Authors' contributions

T.D.W. and S.R. conceived of the presented study design. T.D.W. performed the systematic literature review. S.R. validated and supervised the findings of this work. Both authors discussed the results and contributed to the final manuscript.

Ethical considerations

This study formed part of a larger research project. Even though the systematic literature review did not require ethical clearance, ethical approval was granted by the Health Research Ethics Committee (HREC) at the North-West University (NWU-00430-19-A1) for the research project as a whole and permission was obtained from the Gauteng Department of Education's (GDE) research division.

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Data availability

Data sharing is not applicable to this article, as no new data were created or analysed in this study.

Disclaimer

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