The Connection of Education for Sustainable Development and Language in African Educational Institutions – A Systematic Literature Review

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Abstract

Education for Sustainable Development (ESD) gained global momentum in recent years. However, little is understood about the connection of ESD and language, which has been identified as being among the most underestimated and under-researched parameters of sustainable development. In order to fill this gap, this paper systematically reviews scholarly literature on the connection of ESD and language. Of the 33 papers examined for this review, which exclusively dealt with language and ESD in an African educational setting, the majority took a theoretical rather than empirical approach. Most of the existing research focused on a general educational context, followed by primary and secondary education, and lastly higher education. Almost all authors recommended further research into African languages, highlighting the need to integrate African languages and indigenous knowledge systems in order to support various development agendas. Further neglect of the language factor might otherwise endanger the implementation of the Sustainable Development Goals.

Introduction

Education for Sustainable Development (ESD) gained global momentum in recent years (UN, 2020). While the Decade of Education for Sustainable Development (DESD) from 2004 to 2015 "triggered changes worldwide" (Michelsen & Wells, 2017, p. 8), more work remains to be done "in order to move societies towards sustainability" (UNESCO, 2014, p. 185). Through its research, higher education plays a pivotal role as a driver of sustainability (Leal Filho, 2015). However, various authors highlighted the dearth of sustainability studies in educational institutions in the Global South (Weiss & Barth, 2019) and in Sub-Saharan Africa in particular (GUNi, IAU, & AAU, 2011). Karatzoglou (2013) found no publication from the African continent in the major international journals when undertaking an in-depth literature review considering the contribution of universities to ESD. Manteaw (2012, p. 376) similarly argued that ESD is "neither seen nor heard of in most of Africa". Thus, further research is needed in areas such as the engagement of higher education staff with ESD (Amado et al., 2017) and the sustainability activities African Higher Education Institutions engage in (GUNi et al., 2011; Ulmer & Wydra, 2020).

Another largely ignored research area within ESD is its relationship with language. Language represents "one of the most underestimated and under-researched" parameters of sustainable development (Wolff, 2016, p. 44). Several authors underlined the importance of language in the development process in Africa (Robinson, 1996; Toboso & Kandagor, 2018; Vuzo, 2018).

These authors highlighted that in many African countries only a tiny fraction of the population is able to speak a former colonial language, which still serves as one or as the only official national language (Negash, 2005). Other authors criticised the generally low priority attributed to languages in the development cycle (Djité, 2008; Ugwu, 2020), ultimately leading to their invisibility (Footitt, Crack, & Tesseur, 2018; Heugh, 2006). According to Erastus (2013) and Prah (2012), this invisibility of languages represents the missing link yet to be acknowledged in both development work (Tilbury & Mulà, 2009) and education (Wolff, 2006).

In order to investigate what is known about the connection of language and sustainable development in African educational settings, a systematic literature review was undertaken. The review's focus lies on the existing scientific literature regarding the connection of sustainable development and language in the African educational context, from primary to higher education. The underlying theoretical assumption of this study builds upon Ayo Bamgbose's (2011, p. 4) paper "African Languages Today: The Challenge of and Prospects for Empowerment under Globalization", in which the author notes that "only a small part of the populace can be involved in a development strategy based on the use of an imported official language". Babaci-Wilhite (2013, p. 1996) concurred that despite the major focus of national and international development efforts to make "the right to education a universal human right", mere access to education proved insufficient. Instead, the "average citizen" needs to understand what is being communicated by choosing both the right language (Abdulai, Kagumire, & Geoghagan, 2018, p. 27) as well as non-scientific language (Franchetti & Knobel, 2018; Van Breda, Musango, & Brent, 2018).

Definition of ESD and the Link to Language

The *Our Common Future* report (Brundtland, 1987, p. 37) defined sustainable as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." ESD is defined as a lifelong learning process which "empowers learners to take informed decisions and responsible actions for environmental integrity, economic viability and a just society, for present and future generations, while respecting cultural diversity" (UNESCO, 2018, p. 4). While UNESCO's definition states *what* the process of ESD entails, it does not elaborate *how* the necessary knowledge can be successfully imparted. The negligence of this *how* was criticised by numerous authors (Mweri, 2020; Toboso & Kandagor, 2018; Ouane & Glanz, 2010) because education contains the transmission of knowledge through some form of language, in either spoken, written or sign form. Brock-Utne (2014, p. 4) described the language of instruction conundrum present in several African countries as "the most important and least appreciated issue" in education, and criticised donors for predominantly focusing on learning outcomes while disregarding the way of achieving these outcomes. Former colonial and now officialised languages (Wolff, 2021) such as English, French or Portuguese still serve as the language of instruction in many African classrooms, leading to the mislabeling of African countries as anglophone, francophone or lusophone (Heugh, 2006; Skattum & Brock-Utne, 2009; Wolff, 2021) instead of afrophone (Brock-Utne, 2014; Wolff, 2016). The rhetoric surrounding the SDGs "stresses inclusiveness, multidirectional communication, and reaching the world's least advantaged citizens" (Marinotti, 2017, pp. 2-3). This inclusive aspiration, however, stands in stark contrast to the missing integration of language into development agendas, which was described as key "to close the gaps and meet key targets" (Romaine, 2013, p. 1). Neither the

Millennium Development Goals (MDGs) nor the SDGs mentioned language as prerequisite to reach the respective goals, which exemplifies the aforementioned invisibility of language.

Research Methodology

Against this background, a systematic literature review was undertaken, aiming to scope the types of papers and the approaches taken in this under-researched field. This paper is informed by prior research and identifies possible future directions of research in order to fill identified gaps (Munn et al., 2018) and to give a contemporary overview of existing research in the field of ESD and language. A systematic literature review aims for "exhaustive, comprehensive searching" and analyses what is known, what remains unknown and gives recommendations for future research (Grant & Booth, 2009, p. 94). This type of research method was chosen since it allows to comprehensively answer the following two research questions:

1) What is known about the connection of language and sustainable development in scholarly literature in an African educational context?

2) What are the recommendations for future research in this field?

In order to answer these research questions, the following sub-questions were examined:
- What are the institutional affiliations of the authors and in which countries are these universities based, respectively?
- What is the temporal distribution as well as geographical focus of papers published, and was there an increase in research output after the introduction of the Sustainable Development Goals (SDGs) in the year 2015?
- What are the main findings and recommendations of the reviewed papers?
- In case of empirical studies: in which language was the research conducted, apart from being published in English?

And lastly, since no single discipline can claim ESD as its own (UNESCO, 2018), what is the disciplinary background of the journals the papers were published in, and is there a predominant type of journal?

Based on the findings, further possible fields for future investigation are suggested in the conclusion. Articles were obtained through searching for key words in the following search engines and databases, in alphabetical order:

- *African Education Research Database (ESSA)*
- *African Journals Online (AJOL)*
- *Bielefeld Academic Search Engine (BASE)*
- *Council for the Development of Social Science Research in Africa (CODESRIA)*
- *Google Scholar*
- *Science.gov*

These search engines and databases were chosen since they refer to millions of papers in various databases (*BASE*, Google Scholar, Science.gov) as well as explicitly to African Journals (*ESSA, AJOL, CODESRIA*). Key words entered into the search engines and databases included *Africa* Sustainab**, *Language* and *Education*. The list of references in each obtained paper was screened for further thematically linked papers. Rowley and Slack (2004, p. 33) noted that books can be a "good place to start" a systematic literature research. The book *The*

Sociolinguistics of Development in Africa by Pauline G. Djité (2008) is frequently cited in scientific literature and was therefore also read and its list of references screened. In the evaluation of this literature review, however, only peer reviewed papers published in scientific journals were taken into account. Due to their synonymous use in literature (Sartori et al., 2014), emerging search results including "Sustainable Development" and "Sustainability" were both taken into account. The literature search was undertaken in English language.

Because a systematic literature review focuses on *exhaustive, comprehensive searching,* all published papers until submission of this paper in February 2022 were considered. Duplications of the same papers obtained through different search engines were counted only once, leading to a total of 203 potentially thematically relevant papers. The papers were screened according to the inclusion and exclusion criteria derived from the two research questions above, as illustrated in Table 1. A logbook with all 203 search results was kept in order to maintain a systematic overview of the reasons a paper was excluded or included into the later analysis. Out of the initially obtained 203 papers, 170 papers were subsequently excluded because they were either not peer-reviewed (such as books or book chapters, editorials and conference proceedings) or not set within an African educational context, or because they had no reference to sustainable development and the linguistic dimension, respectively. The remaining 33 papers were then grouped into the three categories general education, higher education as well as basic (comprising primary and secondary) education, the latter including primary and secondary education, and analysed as per sub-questions mentioned above.

Table 1: Processing steps and actions of the systematic literature review according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines

Processing step	Processing action
Search engines and databases	Keywords: *Africa* Sustainab**, *Language, Education*
Identification	Manual identification of 203 potentially thematic relevant papers published in various journals
Abstract screening & eligibility according to including/excluding criteria	- Peer reviewed papers published in scientific journals - English language - Published until February 2022 - Connection of language and sustainable development in an African educational setting, meaning authors explicitly researched the connection of these three topics in African institutions of (higher/basic) education, evident from either the respective keywords (e.g. education, language, sustainable development) or the abstract
Analysis & interpretation	Analysis of remaining 33 papers

Limitations of the study

Since this systematic literature review focused on scientific papers published in English language, there is a potential bias towards research undertaken in and on so-called anglophone

African countries. Papers written and published in other languages could possibly lead to different results, as the situation in non-anglophone African countries might differ. Various authors, however, reported similar challenges regarding students' ability to understand the subject matter in so-called francophone (Djité 2008; Gove & Cvelich, 2011; Samuelson & Freedman, 2010) and lusophone African countries (Marinotti, 2017; Skattum & Brock-Utne, 2009; UNESCO, 2011). A literature search considering francophone and lusophone African countries could thus elicit similar results considering the missing empirical evidence and a focus on theoretical considerations instead. This supposition, however, would need to be confirmed by respective future studies. Further, in their study regarding Higher education research in Africa, Zavale and Schneijderberg (2022) found that only 2 % of the articles were published in French or Portuguese, making English the dominating scientific lingua franca. Lastly, a systematic literature review is characterized by potentially missing important information because reports or other grey literature are disregarded (Nakano & Muniz, 2018). In order to understand the scientific body of knowledge in this field, the focus of this paper lies on peer-reviewed journal articles.

Results

The following section presents the results of this systematic literature review.

Author affiliation

The literature review revealed a relatively equal relation of authors affiliations, with a prevalence of authors affiliated with African Universities (24) versus non-African Universities (19). One author was affiliated with two universities in South Africa and United Kingdom, respectively. Contrary to Zavale and Schneijderberg (2022) we conclude that there are more scholars from African countries interested in the connection of ESD and language than from non-African countries. Adams et al. (2010, p. 10) argued that African countries should use their substantial resources in order to solve the enormous challenges the African continent faces, so that "indigenous research could help provide both effective and focused responses." Adams et al.'s (2010) argument is corroborated by existing research centres affiliated with universities in various African countries researching indigenous knowledge systems, ecological knowledge and African languages (Ulmer & Wydra, 2020). These findings indicate that there is plenty of linguistic research in respective African countries which might not be published in international journals due to various challenges respective authors are facing (Basedau, 2020; Ngongalah et al., 2018).

The distribution of African and non-African universities, as opposed to more scientific output by African universities as could have been expected given the geographical focus on Africa, can be explained by some African scientists publishing under their institutional affiliation in so-called developed countries. When publishing under institutional affiliations outside of Africa, the "African diaspora provides powerful intellectual input to the research achievements of other countries but returns less benefit to the countries of birth" (Adams et al., 2010, p. 3). In other words, papers published by African authors do not get recognized as African contributions to world scientific output (Pauw & Van Zyl, 2011) because these authors are either affiliated with universities outside of Africa or because authors publish in local journals not accessible through electronic databases (Tijssen, 2007). Lotz-Sisitka (2011) further highlighted that due to financial inequalities, international initiatives or research partnerships between Western and African countries may have more influence on Sustainable

Development research than locally constituted initiatives. The World Bank (2014) similarly underlined the existing financial asymmetry of North-South partnerships: collaborations between African institutions and those in so-called developed countries tend to rely on "funding of and hence be driven by the needs and research interests of the latter" (World Bank, 2014, p. 46).

Temporal distribution of published papers

In general, the temporal distribution of publications confirms findings by Zavale and Schneijderberg (2022, p. 230) who described higher education research in several African countries as "still sparse or non-existent". The earliest published paper obtained for this literature review is by Bodomo (1996) on language and development in Ghana followed by Owuor's (2008) research in a Kenyan educational setting eleven years later. Figure 1 depicts the temporal distribution of papers published in the timeframe from 1996 to 2022. Research in this area could have been expected to have gained more momentum after 2015 when the SDGs followed the DESD, especially considering SDG 4 which aims to ensure "inclusive and equitable quality education and promote lifelong learning opportunities for all" (UNESCO, 2017, p. 7). However, there are no signs of an uptake of the yearly research output after the year 2007, or after the introduction of the SDGs in the year 2015. Instead, a rather steady number of yearly publications ensued. The spike of publications in the year 2009 can be explained by a special issue in the South African journal *Language Matters: Studies in the Languages of Africa*, which focused on the theme African languages, education and sustainable development.
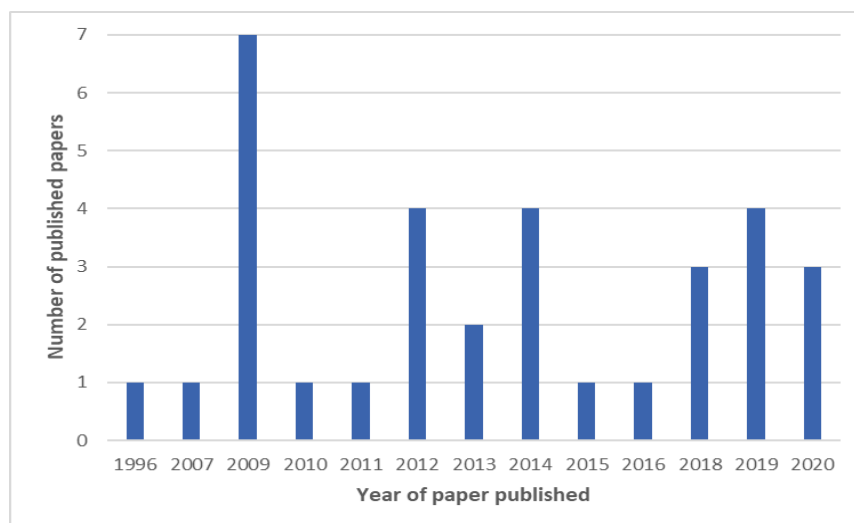

Figure 1: Year and number of published papers (n = 33)

Research methods: Theoretical discourse versus empirical evidence

Most authors pursued a theoretical approach (28), especially those researching language, education and sustainable development in a general educational setting. The arguments presented in the theoretical papers have therefore been based on an "intuitive understanding" (Yahya-Othman, 1990, p. 51) and discourse rather than empirically grounded research. The

prevalence of theoretical approaches therefore supports Tilbury's (2011, p. 106) argument of ESD not only as being "poorly researched", but particularly as "weakly evidenced". Only six of the papers included a methodological section, while the authors of the remaining papers (27) did not explain the underlying methodological considerations. Table 2 subsumes the different themes under four overarching categories:

Table 2: Theoretical papers and their respective approach

Theoretical papers	no.	%
1) Critical account of the relationship between language, education and SD	**9**	**27.3**

Critical…
    …account of the relationship between education policy and SD in Africa
    …discourse analysis of ESD and language and the meaning of SD in Africa
 Exploration of…
    …English as a tool for education and SD
    …the links between language, development and literacy
    …the links between language, education and development
    …the link between language and SD: case study of the situation in Nigeria
    …national-level policies, local languages and development
    …the relationship between language and SD: special focus on Nigeria
    …the relationship between African languages and SD		

2) Analysis of languages in development agendas and policies	**9**	**27.3**

Analysis of…
    …the MDGs and their complex linkages with language
    …the sustainability concept, discussion of education document
 Argument…
    …for African languages to be part of the MDGs
    …to focus on indigenous languages in order to achieve the 2030 agenda
 Discussion of the role of African language in the actualization of the MDGs
 Examination of the role of language in achieving the SDGs
 Exploration of language practices in Botswana
 Linguistic implications & complications of SADC Protocol / Education training
 Role of language in development agendas (case study MDGs and NEPAD)		

3) Argument for integration of and need for African languages	**8**	**24.2**

Argument for…
    …African languages for ESD implementation
    …African languages to be promoted and enhanced
    …the introduction of language technology to include underserved populations
    …recognition of the linguistic diversity in Nigeria for a sustainable future
 Call for African languages to be integrated into education systems for SD
 Demonstration of the need for African languages and belief in development
 Discourse on African languages in science and technology
 Position paper: defense of linguistic rights and integration of African Languages		

4) Propositions/rationales		**6.1**
Exploration of the meaning of and provide rationale for Indigenous Knowledge Proposition of development communication, case study Ghana		
Total theoretical approaches	**28**	**84.9**

Abbreviation: NEPAD = New Partnership for Africa's Development; SADC = Southern African Development Community, SD = Sustainable Development

In total, five papers approached the topic empirically: three of them used stakeholder interviews either in the context of primary (Babaci-Wilhite, 2012) and secondary education (Vuzo, 2018) in Zanzibar/Tanzania as well as secondary education in Botswana (Mafela, 2009). Another empirical paper used a Delphi study and administered an online questionnaire to 32 experts working in universities in 16 African countries (Ulmer & Wydra, 2020). The last remaining empirical paper focused both on a review of theory and practice of language and human rights in education, and completed this theoretical foundation with a primary education case study in Zanzibar (Babaci-Wilhite, 2013). Empirical research mostly occurred at the level of primary education. There was only one paper found considering the connection of language and sustainable development in both the secondary and higher educational context, confirming findings by Zavale and Schneijderberg (2022) claiming the Higher Education systems in most African countries have not yet been studied. This prevalence of theoretical approaches in a general educational setting hints to the need of more empirically grounded research, especially in the context of secondary and higher education in order to empirically support the *weakly evidenced* basis. Table 3 gives an overview of the overall and specific themes explored in the respective paper, with two main approaches:

Table 3: Empirical papers and their respective approach

Empirical papers		%
1) Interviews, observations and document review		**9.1**
In-depth interviews with key actors, observation Interviews with key actors, observation, document and literature review Interviews with key stakeholders		
2) Questionnaires, observations and discussions		**6.1**
Delphi method, online questionnaire with 32 experts in 29 HEIs General and specific observations, questionnaires, discussions		
Total empirical approaches	**5**	**15.2**
Total theoretical and empirical papers	**33**	**100**

Abbreviation: HEIs = Higher Education Institutions. Percentages of theoretical and empirical approaches do not total 100 due to rounding.

Country focus

Most papers focused either on Africa or Sub-Saharan Africa (21), while the remaining studies focused on a specific country (12). Nigeria represents the most researched country (5), followed by the Zanzibar Island, as part of Tanzania, which was the most researched country in the empirical papers (3). It could be argued that the focus on Africa as a whole instead of specific countries is due to searching for the key word *Africa**. However, there was barely a difference in search results when entering specific African country names in the search engines. Some papers include *Africa* or *Sub-Saharan Africa* in their key words even when investigating a specific country (e.g. Babaci-Wilhite, 2013; Robinson & Vũ, 2019). The same is true for the key word *education* and more specific forms like *higher education*. The tendency of authors to investigate (Sub-Saharan) Africa as a whole indicates the need for

more country specific empirical studies considering language and ESD, as opposed to the prevailing theoretical studies in a general African context.

Main findings and recommendations

All of the papers noted the importance of language in development processes and agendas, and recommended that local languages and the respective language of instruction need "to be strongly factored into the development agenda" (Vuzo, 2018, p. 803; see also Bodomo, 1996). Authors especially endorsed the integration of indigenous knowledges, including local languages, into the respective curriculum in order for students to understand what they are being taught, and recommended further research to focus on the connection of African languages and sustainable development (Mweri, 2020; Ulmer & Wydra, 2020). This recommendation was corroborated by other authors arguing that the 2030 Agenda for Sustainable Development (Mweri, 2020; Toboso & Kandagor, 2018) and other development agendas (Kaya & Nkondo, 2017; Romaine, 2013; Wiseman & Simuforosa, 2014) may face possible implementation challenges in case the linguistic aspect in education is further disregarded. One author highlighted the importance of the English language in order to facilitate sustainable development in the Nigerian context (Obiegbu, 2015), whereas Ugwu (2020) identified English as a hindrance to sustainable development in Nigeria. These findings are therefore in line with the recommendations of various other authors advocating the need to concentrate research efforts on language in development (Erastus, 2013; Prah, 2012). The language the respective empirical study was conducted in was therefore of particular interest.

Language used in empirical papers

In her studies regarding the change of the language of instruction in primary schools on the Zanzibari island, Babaci-Wilhite (2012; 2013) used Swahili for the interviews undertaken with Zanzibari key actors. Vuzo (2018) similarly conducted the research considering the language used in secondary education in Zanzibar in Swahili. In their study on Sustainability in African Higher Education Institutions, Ulmer and Wydra (2020) used English for the questionnaires for African experts in their Delphi study. No information could be obtained considering Mafela's (2009) interviews with stakeholders considering the Botswanan secondary education context, neither in the paper nor after contacting the author. These findings considering the language used in empirical papers link to Tilbury and Mulà (2009, p. 46) who highlighted that documents considering ESD "are usually available in the official languages of the country", and rarely "translated into minority or non-official languages".

The tendency of not translating documents into African languages potentially leads to a solely academic rather than necessary public circulation of the findings. Similarly, studies undertaken in English as opposed to a local language may represent a hindrance in gathering relevant scientific information, depending on the respective research context. While English as the international scientific language is recognized as being "valuable for connecting internationally" (Odora Hoppers, 2017, p. 28; see also Hameso, 1997), its use can simultaneously create "a serious communication gap between the formal education system and its social environment" (Ouane & Glanz, 2010, p. 9). Various authors backed up this assertion and criticised higher education in Africa as still representing an elitist system (Cloete & Maassen, 2015; Darvas et al., 2017; Senkoro, 2005), meaning they are

disconnected from broader society (Cloete, Bunting, & Van Schalkwyk, 2018; UNDP, 2004; UNESCO, 1975).

Type of journal

In general, a broad spectrum of journals was identified. The 33 obtained papers were published in a total of 24 different journals, whereas eight different disciplines were identified. The interdisciplinarity of ESD in connection with language implies that "no single discipline has a monopoly of interest in it" (Kamwendo, 2009, p. 1). However, a prevalence of educational journals (10), followed by journals in the area of linguistics (8), arts, humanities and social sciences (4) as well as sustainability (4) was observed. Table 4 shows an overview of these disciplines and respective journals. Five journals focus on Africa in particular, namely one journal based in South Africa, one in Tanzania and one journal based in the United States of America. The remaining two journals reside within the sub-discipline of African studies. The relatively few papers in sustainability journals compared to the prevalence of educational and linguistic journals indicate that language issues are not yet integrated into sustainability sciences. In a special issue of the *International Journal of Sustainability in Higher Education* (Volume 17, Issue 2), titled "*Sustainable Development at Universities: Trends From Africa*", none of the authors researched language in connection with sustainable development, highlighting again the argument of a largely ignored research field.

Table 4: Thematic areas and titles of journals reviewed papers were published in

Journal area and journal title	No. of papers	Percent
Education	**10**	**30.3**
International Journal of Educational Development	3	
International Review of Education	3	
Asia Pacific Education Review	1	
International Education	1	
Journal of Contemporary Issues in Education	1	
World Studies in Education	1	
Linguistics	**8**	**24.2**
Language Matters: Studies in the Languages of Africa	3	
Applied Linguistics Review	1	
Journal of Multilingual and Multicultural Development	1	
Kioo cha lugha	1	
Linguistics and Literature Studies	1	
World Studies in Education	1	
Arts, Humanities and Social Sciences	**4**	**12.1**
Scholars Journal of Arts, Humanities and Social Sciences	2	
Human Ecology	1	
*Alter*nation	1	
Sustainability	**4**	**12.1**
Journal of Sustainable Development in Africa	2	
International Journal of Sustainability in Higher Education	1	
Sustainability	1	
Scientific and Research	**3**	**9.1**

European Scientific Journal	2	
International Journal of Scientific and Research Publications	1	
African Studies	**2**	**6.1**
Nordic Journal of African Studies	1	
The Journal of Pan African Studies	1	
Computer Science	**1**	**3.0**
Computer Science	1	
Political Science	**1**	**3.0**
Open Journal of Political Science		
	Total: 33	**100%**

Percentages do not total 100 due to rounding.

Discussion

The results of this research indicate potential issues in sustainable development communication with implications for both the societal as well as the scientific level: Since all national and international development agendas are in one way or another linked to and aimed at people, "languages of the Africa[n] masses" inevitably need to be part of those agendas (Toboso & Kandagor, 2018, p. 114). The vast majority of the populations not fluent in former colonial languages have been and will be marginalized for decades to come in case research findings are not heeded (Qorro, 2013). In order to heed research findings and to determine own research priorities, funding systems and corresponding research agendas, possibly from outside of Africa, need to be addressed. As elaborated under the section 'author affiliation', Africa's low performance in international research output (Duermeijer et al., 2018) can be traced back to African authors' university affiliation and dependencies in funding rather than intellectual poverty (Zambakari, 2011). A self-critical call by Romaine (2013), Alexander (2003) and Williams and Cooke (2002) could be seen as a possible antidote to this bleak societal prospect: These authors urged educational and linguistic researchers to strengthen their efforts to communicate their findings more effectively to both researchers of other disciplines as well as policy makers and also international funders. Reoccurring recommendations in reviewed papers considering the need to address African languages and (sustainable) development, however, suggest that this self-critical call did not achieve the intended impact. The prevailing tendency towards disciplinary research needs to be translated into inter- and transdisciplinary approaches (Moore, 2005) in order to reflect the multifaceted nature of sustainable development. Researchers therefore need to find new ways to build bridges between academia and policy leaders (Bothun, 2016), so that scientific results may be better harmonized with and reflected in educational and developmental policies.

Conclusion and Further Research

This systematic literature review analysed the scientific body of knowledge considering the connection of language and sustainable development in an African educational context. Table 5 presents a summary of the key findings of this literature review. The results indicate that language represents a largely ignored factor and a hidden aspect (Benjamin, 2014) in the sustainable development agenda, with no signs of an uptake of research in this field since the introduction of the SDGs in the year 2015. Wolff's (2016) characterisation of language and sustainable development as *under-researched*, particularly in the empirical sense, is corroborated by both the predominantly theoretical methodical approaches as well as the

focus on Africa as a whole in most research papers. The majority of authors pointed to the need of further research in this area, especially considering the importance of African languages in the (sustainable) development process.

Table 5: Summary of key findings

Subcategory	Summarized findings
Author affiliation	There is a slight prevalence of authors affiliated with African (24) versus non-African (19) universities.
Temporal distribution	Research output peaked in 2009 due to a special issue in a South African journal; no increase of papers after the introduction of the SDGs.
Research methods	Prevalence of theoretical (28) over empirical (5) approaches. Methodological considerations were elaborated only in a few papers (6), while the authors in the remaining papers (27) did not elaborate their method in a separate section.
Country focus	Mostly in a general, educational (Sub-Saharan) African setting. A prevalence of country-specific research was mainly found in empirical papers.
Main findings and recommendations	Almost all authors noted the importance of language in development, highlighting the neglect of the linguistic sphere in sustainable development. Recommendations included, *scientifically*, to research the connection of African languages and sustainable development and, *pragmatically*, to make African languages an integral part of curricula and developmental agendas.
Language used	In case of empirical papers: Swahili (3), one English and one unknown.
Type of journal	There is a prevalence of journals in the disciplines of education; linguistics; arts/humanities/social sciences; and sustainability, together totalling more than 81%.

Hence, based on the key findings presented in table 5 as well as based on emerging themes while analysing the 33 papers, the authors of this paper propose future research to delve deeper into the areas presented in table 6. This future research should, first and foremost, investigate why language does not attract enough attention at the political level, which includes major international institutions when establishing development agendas, although the importance of language is scientifically well established. Due to the "complexity of the notion of ESD" (Kamwendo, 2009, p. 2), even more so in connection with language, the list cannot be seen as exhaustive, but should rather be used as a pointer for future research.

Table 6: Research areas for further research in ESD and language

Area	Guiding question(s)
ESD and language	Why does language not attract enough (scientific, societal, political) attention in ESD, while its importance in knowledge acquisition is well established (Wolff, 2006)?
	Which actors and institutions need to be involved in order to uncover language as the hidden aspect of ESD, especially in countries in which only a minority of the population has a sound command of the official national language?
Language and development agendas	How does language affect the implementation of each respective SDG (similar to research undertaken by Romaine (2013) and Toboso & Kandagor (2019) in the case of the MDGs)?
African languages in curricula	Was there progress considering the integration of African languages into curricula as requested by several authors and, if so, what was the approach taken by the respective government?
Empirical evidence	Do empirical research approaches corroborate theoretical reflections considering the connection of language and ESD?
	What's the experience and perception of different education stakeholders considering the connection of language and sustainable development?
	What is the awareness and perception of students in different countries of the SDGs, and how do they integrate and translate the SDGs in their own research?
Educational focus	What is the role of African higher education institutions in connecting language and sustainable development?
Research in other languages	Will systematic literature reviews in francophone and lusophone African countries yield similar results as this systematic literature review undertaken with a focus on English scientific literature?
	Does research undertaken in local languages enhance and/or corroborate insights compared to research undertaken in former colonial languages?

Given the current prevalence of theoretical methods, it is proposed to approach all suggested questions in table 6 predominantly from an empirical point of view. Research grounded in evidence (UNESCO, 2014), with specific countries and specified forms of education at the centre of their investigation, could support the drafting process as well as the implementation of national and international development agendas such as the SDGs. Research should also be undertaken in languages other than English in order to access data which may otherwise be blocked by the language barrier. Joint scientific efforts based on empirical approaches may support both the liberation of language from its current position as the hidden aspect in development in general, and specifically African languages from their invisibility in the sustainable development process.

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