Policy diffusion and transfer of the Bologna Process in Africa’s national, sub-regional and regional contexts

Elizabeth Agbor Eta
Department of Education, University of Turku, Finland

Zachary Y Mngo
College of Sciences and Human Studies, Prince Mohammad Bin Fahd University, Saudi Arabia

Abstract
This article traces the process of diffusion and transfer of the European Bologna Process reforms in Africa’s national, sub-regional and regional contexts and examines factors that drive these processes. Considering that African countries are not official signatories but are aligning their systems of education to the BP, and in the absence of a coordinated effort and the use of digital technology to produce and present data that documents and maps out progress, tracing the diffusion process in this context is challenging, which is the reason for limited research in this area. Based on a review of existing literature, this article argues that in Africa, the dissemination and transfer of BP-related reforms started as individual projects by national governments as early as 2000 before metamorphosing into sub-regional and regional initiatives. The article identifies economic, political and discursive factors as well as the selective and silent processes that shaped Bologna transfer at these different levels in Africa.

Keywords
Bologna Process, LMD system, policy transfer, policy diffusion, Africa, higher education

Introduction
It is probably evident by now, based on literature, that the Bologna Process (BP) reforms signed in 1999 (Bologna Declaration, 1999) by 29 European countries to harmonize European educational systems, enhance comparable and compatible systems of higher education (HE), promote mobility...
of students and staff, and the competitiveness and attractiveness of European systems of education vis-à-vis the rest of the world, has had a spillover effect beyond Europe’s continental boundaries. The BP emanating from the declaration has been recorded to have influenced systems of education in South East Asia, Latin America and Africa (Crosier and Parvela, 2013; Knight, 2013; Vögtle and Martens, 2014; Zgaga, 2006). Digital technological tools (Landri, 2018) such as the European HE area (EHEA) website that documents the year of adoption of the BP by different signatory countries, makes it easy to trace the process of diffusion within this context.

However, in other contexts such as the continent of Africa, where the countries are not official signatories but are aligning their systems of education to the BP, and in the absence of a co-ordinated effort and the use of digital technology to produce and present data, tracing and mapping out the diffusion process in this context has been challenging. Research on the impact of the BP in Africa has focused on colonial relations and historical and socio-political impulses that made its adoption inevitable (Khelfaoui, 2009; Sall and Ndjaye, 2007; Zmas, 2015); the level of the BP’s impact on HE reforms in Africa (Alemu, 2019; Croché and Charlier, 2012; Obasi and Olutayo, 2009; Shawa, 2008; Teferra, 2005); and the place of Africa in the development of the Process and power relations (Charlier and Croché, 2009; Croché and Charlier, 2012). Attention has also been paid to single-country studies (Diop, 2016; Eta, 2015, 2018a; Eta et al., 2018; Eta and Vubo, 2016; Hindeya, 2014; Mngo, 2011; Provini, 2017; Vuban, 2018). Some studies which have examined BP’s diffusion beyond Europe have compared different regional responses to the BP (Huisman et al., 2012; Vögtle and Martens, 2014; Woldegiorgis et al., 2015; Zmas, 2015). A few studies have examined BP diffusion in Africa highlighting that the BP reforms spread to Africa through sub-regional frameworks (Alemu, 2019; Woldegiorgis, 2018). As discussed later, although this is true, this article argues that BP adoption in Africa started as individual projects of nation-states and gradually transformed into sub-regional and regional initiatives.

This article contributes to research on the external dimension of the BP with a focus on Africa in two ways. First, from a policy diffusion perspective, the article traces the pattern of the diffusion of BP-related reforms in Africa’s national, sub-regional and regional contexts. Second, from a policy transfer perspective, it examines the different forms of what has driven its transfer to Africa.

In what follows, we outline briefly the external dimension of the BP. Next, we will focus on the theoretical framework derived from policy diffusion and policy transfer literature, followed by a section on methodology. Then the findings are presented, first by tracing the diffusion pattern and then by analysing the forms of transfer.

**Build-up to the BP and its external dimension**

The external dimension of the BP was used in the early years to refer to the possible articulation of the relationships between the emerging EHEA and the surrounding world (Zgaga, 2019). The BP has been described as a very bold experiment that has the potential to change HE in ways probably not envisaged by its creators (Armstrong, 2009). This change is visible in the extent of its attractiveness and spread to other global regions (Eta, 2018a; Klemenčič, 2019), ‘affecting the global HE spheres’ although originally conceived to ‘provide solutions for internal European problems’ (Zahavi and Friedman, 2019: 23). These results have been achieved largely through the external dimension of the BP (Klemenčič, 2019; Zgaga, 2019).

The Prague Communiqué (2001) reiterated the importance of enhancing the attractiveness of European HE to students from Europe and other parts of the world, while the Berlin Communiqué (2003) highlighted the need for cooperation with other regions and the need to open up Bologna seminars and conferences to these regions and other European countries that were not yet part of the process. At the Berlin conference, for example, there were representatives from the follow-up
committee of the European Union (EU) and from the Latin American and Caribbean regions. From 2005, especially with the Bergen Communiqué under the title ‘The attractiveness of the EHEA and cooperation with other parts of the world’ (Bergen Communiqué, 2005), the external dimension of the BP to other regions was more explicit and outward-looking. As noted in the Communiqué, the EHEA is ‘a partner of HE systems in other regions of the world, stimulating balanced student and staff exchange and cooperation between HE institutions’. The Communiqué outlines some of its goals to enhance understanding of the process on other continents through the sharing of reform experiences, through discussions on topics of mutual interest and through the identification of partner regions to share ideas and experiences (Bergen Communiqué, 2005).

This outward-looking approach to stretch the influence of the Bologna model to other parts of the world was further emphasized by the London Communiqué (2007) which highlighted the global aspirations of the reform with the caption ‘The European HE Area in a global context’. The follow-up conference in 2009 at Leuven (Louvain-le-Neuve Communiqué, 2009) emphasized the ‘international openness’ of the BP through collaboration with other global regions, especially through its organization of ‘Bologna Fora’. The 2009 Bologna Fora welcomed participants from Australia, Brazil, Canada, China, Egypt, Ethiopia, Israel, Japan, Kazakhstan, Kyrgyzstan, Mexico, Morocco, New Zealand, Tunisia and the United States, as well as the International Association of Universities.

While some literature has argued that African countries showed the need to harmonize their HE systems to facilitate student and staff mobility decades before European countries did (Mohamedbhai, 2007), they did not promote harmonization at the regional level until the Europeans adopted the Bologna harmonization reform. Africa’s first major efforts at harmonization began with the adoption of the 5 December 1981 Arusha Convention on the Recognition of Qualifications in HE (Obasi and Olutayo, 2009). The Arusha Convention objectives, which included the mutual recognition of qualifications to promote regional cooperation through academic mobility of lecturers and students, were, unfortunately, never implemented. The BP harmonization reform thus served as a motivating factor to finally harmonize HE in many African countries and in the region.

Education reform, which is inextricably linked to economic and trade reform in Europe, has remained a process of gradual integration and enlargement of the EU and the Council of Europe. The creation of the BP was the result of the logical development of timid but incremental moves towards the harmonization of European HE. Reluctance by national governments to accept interventions in their national education systems led education leaders and the European Commission (EC) to adopt incremental moves towards facilitating the readability and transferability of degrees, and the mobility of students and faculty within the EU (Reinalda and Kulesza, 2006). Another less controversial programme, Community Action Scheme for the Mobility of University Students, commonly known as Erasmus, was started by the EC in 1987 to aid the drive towards European HE harmonization. The creation of the Socrates Programme in 1995 was an indication that the drive towards convergence in European HE had become unstoppable. This programme encouraged innovation and improved education quality through closer cooperation between educational institutions in the EU and the European Economic Area (Reinalda and Kulesza, 2006). The Council of Europe Lisbon Treaty of 1997, while emphasizing fairness and standardization in the evaluation of qualifications across Europe, was also another important catalyst towards the BP agreement.

The 1992 Maastricht Treaty was the first European treaty that made a comprehensive reference to the contribution of the EU to education (European Parliament, 2001) and was certainly another important piece in the building of Europe’s HE harmonization puzzle. Article 126 of the 1992 Maastricht Treaty became an important clause in the 1997 Treaty of Amsterdam which preceded the Bologna Declaration. This Article gives member states the responsibility for the content and organization of their education system per their cultural and linguistic diversity.
Unlike the more simplified African experience of harmonization, adopting the Bologna HE reforms model led the various governing bodies of the EU on a lot of twists and turns to harmonize the process under the Bologna accords and to create a common EHEA. Programmes created in the leadup to the BP, such as Erasmus, have continued to play a complementary and supportive role in the implementation of reforms in Europe. Erasmus, for example, has grown from a structure to support student exchange programmes in Europe to Erasmus Plus with stronger links to the ‘labour market, enabling students to spend traineeship periods in companies or organizations abroad and through non-formal learning experiences preparing young people for the job market and for participation in civic life’ (European Commission, 2014).

Even though it has been two decades since the launch of the BP and the realization of the EHEA has been largely successful, there are still ongoing debates and controversies about the BP generally, and the external dimension in particular (Zgaga, 2019). This article, unlike most studies of the external dimension of the BP, does not question the pertinence and applicability of certain policy models in specific contexts, such as the implementation prescriptions produced by the External Dimension of the BP. We do not question whether the models adopted might be the best alternatives or whether the instruments used will necessarily lead to policy success. Rather, our focus is on the diffusion models and the patterns of transfer in various contexts in Africa.

**Policy transfer and policy diffusion in focus**

There is a richness of concepts used in describing transnational policy spread and convergence. These concepts include policy transfer, policy diffusion, policy mobility and policy learning. These terms are often used interchangeably although they carry some nuances with regards to meaning and level of convergence (Marsh and Sharman, 2009). For example, while policy transfer and policy diffusion entail neutrality of policy outcome, policy learning, as observed by Steiner-Khamsi (2012), denotes an excessively positive connotation. Policy transfer and diffusion were chosen in this article because of their focus on the process of spread and speed of BP adoption, rather than on the actual outcome of the adopted policy. In other words, the effect of this transfer on the success of HE reforms in countries that have adopted the BP is not the focus as is the assessment of the patterns of adoption/adaptation deployed and their efficacy or lack thereof.

We define policy transfer as a process in which ‘knowledge about policies, administrative arrangements, institutions and ideas in one political setting (past or present) is used in the development of policies, administrative arrangements, institutions and ideas in another political system’ (Dolowitz and Marsh, 2000: 5). On the other hand, diffusion is ‘a process by which an innovation is communicated through certain channels over time among the members in a social system’ (Rogers, 2003: 5). An innovation is a perception by an individual or other entity that an idea, practice or object is new, even if they already exist elsewhere. Communication involves not just the production of information by adopters but also the sharing of information about the innovation with other adopters. Time looks into the ‘earliness/lateness’ an adopter adopts an innovation compared to others, and the rate of diffusion is measured in terms of the number of adopters over a certain time period. The social system represents ‘a set of interrelated units’ which through collaboration seek joint solutions to a common problem to achieve a common goal (Rogers, 2003: 23).

Although policy transfer and policy diffusion focus on the spread of policies/ideas/practices, they also have their differences and limitations, which can be strengthened through cross-fertilization. For example, while policy transfer prioritizes agency, policy diffusion emphasizes structure (Marsh and Sharman, 2009). Diffusion studies rely heavily on quantitative approaches to identify policy adoption patterns – number of adopters across time (Marsh and Sharman, 2009; Newmark, 2002) – without paying attention to alterations that take place during implementation.
(Anderson-Levitt, 2003; Karch, 2007; Newmark, 2002; Stone, 2010) and the selective nature of adoption (Steiner-Khamsi, 2014), which are central to policy transfer. Furthermore, while policy diffusion takes an interest in pattern-finding, policy transfer privileges process tracing (Marsh and Sharman, 2009).

From policy diffusion our focus in this article is on time to identify and map out adoption patterns, thus paying attention to the temporal dimension of diffusion. In mapping out this pattern, Rogers (2003) observed that in the initial stage of adoption, a few individuals (called innovators) are open to a new idea and adopt it, then communicate the idea to more people who become open to it, leading to the development of a critical mass who adopt the new idea until it reaches saturation point. A distinction is thus made between early and late adopters (Rogers, 2003). Early adopters (a few adopters) adopt during the slow growth phase while late adopters adopt when an innovation has already been adopted by a substantial number of adopters. Watts (2003) further categorized these phases into the slow growth phase, explosive phase and burnout phase (Watts, 2003), as illustrated in Figure 1.

As Rogers (2003: 23) notes, ‘when the number of individuals adopting a new idea is plotted on a cumulative frequency basis over time, the resulting distribution is an S-shaped curve’. Thus, in the beginning (slow growth/early adoption), a few countries adopt the new idea and the curve starts climbing as more countries adopt it, towards the explosive phase. With fewer members of the social system still left to adopt, the curve starts to level off (late adoption/burnout stage) and finally gets to a straight-line point, leading to the end of the diffusion process.

Some important questions left unanswered from the categorization of the different phases of diffusion are: what happens to an innovation or policy as they move? How, why and what drives this process? Policy diffusion has been criticized for its lack of, or minimal focus on, these issues (Karch, 2007). Policy transfer, especially its receptiveness (Steiner-Khamsi, 2016) on local contexts is helpful here in answering these questions. In comparative education research, Cowen (2009) highlights the transformations and changes a policy or idea undergoes during policy transfer in the expression ‘as it moves, it morphs’. In other words, policy transfer is selective and never

![Lazy-S curve](Watts%20(2003%3A%20172).)
wholesale (Steiner-Khamsi, 2016). Drawing from diffusion studies, Steiner-Khamsi (2006: 666) observed that late adopters adopt a global reform at the burnout stage when the reforms have been ‘deterritorialized, and the reform has become “everybody’s and nobody’s”’ leading to selective transfer and local variations (Anderson-Levitt, 2003; Sahlin and Wedlin, 2008). Using the metaphor of the octopus, Steiner-Khamsi (2006) illustrates how local actors engage in policy transfer by grabbing the octopus arm closest to their own agenda. Rappleye (2012: 125) calls this process a political production, illustrating how political players write their own scripts and act out the drama, thereby producing particular effects.

Policy transfer can be explicit (direct references to international agendas) or silent (unrecognized policy-transfer processes) (Waldow, 2009). Transfer can be motivated for academic, political and economic reasons. From an academic perspective, policymakers transfer models from other contexts to improve academic provisions in their local systems (Burdett and O’Donnell, 2016; Eta, 2018; Ibrahim, 2010; Phillips and Ochs, 2004). In the context of the BP, Eta (2018) highlights how the adoption of the BP in Cameroon was used to legitimize the harmonization of the dual French and Anglo-Saxon systems of education with regards to the degree structure and the credit system as well as enhancing intra-university mobility. Although from a political perspective, the reason for policy transfer is often associated with the need to meet international standards, there is another dimension – the discursive aspect of policy transfer. With the discursive aspect, it is assumed that only the associated discourses rather than actual practices are transferred (Silova, 2004). This is because educational experts borrow guidelines from abroad as a strategy to implement other related reforms (Sahlin and Wedlin, 2008). From an economic perspective, it is assumed that external aid dependency is one of the reasons some systems, especially developing countries, engage in policy transfer. However, Steiner-Khamsi (2013) observed that policy transfer that occurs for economic reasons may only last for the duration of the external funding. In this article, we develop our arguments by drawing from policy diffusion and policy transfer to make the point that the differences in these two approaches can complement each other.

**Methodological perspective**

A qualitative approach rooted in the constructivist paradigm (Creswell, 2009) was adopted in this article to gain an in-depth understanding of the process and pattern of BP diffusion and transfer in Africa. The constructivist paradigm views reality as a social construct that relies on individuals’ views. This implies that all understandings are not only filtered through human beings but that people also ‘construct and interpret knowledge, and therefore knowledge is relative and specific’ (Kezer, 2006: 343). To trace the process and pattern of BP diffusion and transfer in Africa, we relied on meanings and perceptions drawn from documentary evidence mainly gathered through a web-based search. We started the web search with broad search words such as ‘HE reforms in Africa’, which produced huge results, mainly focusing on the effects of globalization on HE, issues of expansion, funding and access to HE. A few of the results that touched on the BP or the Licence-Master-Doctorat (LMD) mostly recognized that African universities have been influenced by it but provided limited information about the adoption process. We then purposefully narrowed down our search words to ‘Bologna Process in Africa’ and ‘LMD in Africa’ to reflect their appellation in English-speaking and French-speaking Africa respectively. This search produced articles that dealt with the issue mostly from the African continental level, sub-regional initiatives with limited literature that dealt with Bologna or LMD adoption in individual countries in Africa. We did a further search including individual countries. Also, we received articles on single countries from colleagues via email. We also embarked on email exchange with some authors and experts in the field for clarification and further information. The process was beneficial as it produced literature that
helped trace the process and pattern of the diffusion and transfer of Bologna-related reforms in individual countries, sub-regional and regional levels. The data consisted of strategy papers, declarations, academic literature (journal articles, book chapters and dissertations) and media texts.

The data sources used for the national contexts comprised mainly academic literature which has been duly referenced. For the sub-regional level (Central Africa), for example, the Libreville declaration of 2005 by the CEMAC heads of state was used alongside academic literature. The 2004 Fortaleza declaration (in Portuguese) as interpreted by authors such as Vögtle (2010), and Vögtle and Martens (2014) was used as a valid source of data for BP adoption in Portuguese speaking Africa because of the authors’ proficiency in Portuguese and because the articles are peer-reviewed and published in reputable journals. An example of a data source used at the regional level is the African Union (AU) strategy paper on the Harmonization of HE Programs in Africa. The authority of the authors of the documents comprises regional actors (AU), sub-regional actors (heads of state, associations), and academic actors (published peer-reviewed literature in local, national and international journals), which informed our decision to accept them as valid sources of data.

These documents were analysed through process tracing to map the process and pattern of BP diffusion and transfer in Africa. Process tracing is an analytical tool for identifying, systematically describing and elaborating policy events and the different parts by which they come about from diagnostic pieces of evidence often understood as part of a temporal sequence of events (Collier, 2011). In other words, the focus of process tracing is to systematically describe and reconstruct how events and situations unfold over time. To map out the unfolding of events, process tracing relies on different sources of data such as text documents and interviews (George and Bennett 2005; Tansey, 2007). In this article, however, we relied solely on existing literature because of their availability, in addition to the richness of the content of the literature we found.

To reconstruct the diffusion pattern of BP-related reforms in Africa, we first analysed the documents with a focus on the year of adoption in the different national, sub-regional and regional contexts and input the data into an Excel worksheet. To situate the Bologna diffusion in Africa within the European context, we used the year of adoption of official Bologna signatory countries (only those found on the official BP website) and input the data into the Excel worksheet. Informed by diffusion of innovation studies, we then used the information to plot a curve that shows Bologna diffusion pattern in Africa, but positioned within the context of its adoption in Europe (see Figure 2). Second, because our interest in this article was also to examine why and what drives transfer, we analysed the documents from both an ‘interpretative’ (connotative) and literal (denotative) understanding of the texts (Wellington, 2000) to gain a better insight into the factors and circumstances that conditioned the forms of transfer.

Identifying the diffusion pattern of the BP reforms in Africa

The Bologna diffusion timeline in Africa shows a noticeably active period between 2000 and 2008 when at least 23 African countries, mostly French-speaking and Portuguese-speaking African countries, introduced BP-related reforms in their educational systems, with most of the adoption taking place between 2005 and 2007. The adoption by these 23 African countries in addition to the 48 countries that adopted the reforms in Europe brought the number of adopters to 71 between 1998 and 2015 (see Figure 2). In Figure 2, African countries are labelled by their three-letter acronyms and listed in footnote 1 to this article, while European countries (listed as official signatories on the official BP website) are represented with the cumulative number of adoptions and listed in footnote 2 to this article.

The identification of BP diffusion patterns in Africa is more meaningful when divided into two trends – Francophone and Lusophone Africa and Anglophone Africa. The two trends are not
unconnected with the colonial history of Africa. African countries at independence adopted the education systems of their former colonial masters. As a result, while Anglophone countries already had the British model of degree structures like the BP structures and adopted mostly selective implementations, Francophone and Lusophone adoption underwent full system changes. Sall and Ndjaye (2007) associate the history and growth of HE in the various regions of Africa with their respective colonial histories, cultures and politics. These ties are so strong that change in the countries of Europe that colonized African countries automatically triggers similar changes in their former African colonies.

The urgency for change in French and Portuguese-speaking countries explains their leadership position, which in turn could be explained by the fact that they operated on a multiplicity of degrees and their educational systems required major reforms to comply with the Bologna standard (Vögtle, 2010; Woldegiorgis, 2018). Their English-speaking counterparts, however, already operated on the three-cycle degree structure and the credit system along Bologna lines because their existing British-style systems were close to the Bologna model but with Anglo-Saxon inspiration (Neave, 2003). The adoption of the Bologna model in Africa beginning in 2000 was on either a national (individual), sub-regional or regional initiative.

Countries such as Morocco, Algeria, Tunisia, Senegal and Ethiopia adopted or incorporated elements of the BP individually. Others started as individual countries (Benin, Burkina Faso and Togo), but the need for a framework to merge their efforts led to the creation of the Network for Excellence in HE in West Africa, which today comprises seven countries. Others adopted the BP as part of sub-African regional initiatives (Cameroon, Central African Republic, Chad, Republic of Congo, Equatorial Guinea and Gabon as part of the CEMAC). Some others adopted it as part of
communities bounded by language (Community of Portuguese-speaking Countries (CPLP): Brazil, Portugal, Angola, Cape Verde, Guinea-Bissau, Mozambique, São Tomé and Principe, and East Timor). In conformity with the harmonization recommendations of the AU, the entire African region adopted some versions of the Bologna reforms. Except for Ethiopia, these earlier adopters of the BP were Francophone, Lusophone and Hispanic countries. Understandably, the diffusion pattern in these countries was significantly different from the Ethiopian pattern, which was limited and nominal.

As illustrated in Figure 2, Bologna reforms found their way into Africa as early as 2000 with Morocco, followed by Algeria (2001), Egypt (2002) and Senegal (2003). Morocco was the first country outside the EU (Rose, 2015) and the first in Africa to adopt BP reforms through the LMD. Discussions on the LMD started in Morocco in October 1999 (with the text by the National Education Training charter) (Benchenna, 2009) four months after the June 1999 Bologna Declaration that launched the BP. This led to its adoption in 2000 by a national commission – Commission Spéciale d’Éducation et de Formation (COSEF) (Ghouati, 2009) under law 01-00 with French recommendations (Benchenna, 2009) – of the parliament (Masrar, 2015). In Algeria, LMD was recommended in 2001 by the Commission Nationale pour la Réforme du Système Éducatif installée par le pouvoir (CNRSE) and a reform plan was adopted by the cabinet on 30 April 2002 (Reguig, 2014). This led to the ministry of HE and Scientific Research approval of a 10-year strategy (2004–2013) to develop the sector and implement an HE reform which would be responsive to the challenges imposed by globalization, meet the expectations of the labour market and cope with the rapid development of science and technology by establishing a new architectural education, including upgrading various educational programmes, and organizational structure (Reguig, 2014).

In Senegal, LMD was adopted by the assembly of the University Cheikh Anta Diop of Dakar (UCAD), on 30 July 2003 (Diop, 2016; Sall, 2012). Its adoption came to solve reoccurring problems of effectiveness and quality in the Senegalese education system. In Tunisia, its introduction in 2005 was the result of a decision by the former president, Ben Ali (Ghouati, 2009; Jeune Afrique, 2012). In Ethiopia, as observed by an insider through an email exchange, the BP was not directly adopted or introduced into the Ethiopian HE system. Instructed by the Ministry of Education, universities were engaged in serious reforms in 2007–2008 to redesign their work process, which ended up being modularization or competency-based education. In due course, the curricula included elements of the BP such as the European Credit Transfer System (ECTS), competency-based education, modularization, mobility and flexibility of learning and recognition of prior learning. The introduction of the BP elements in Ethiopia, although never officially endorsed, has continued to be progressive, inconsistent, nominal and somewhat limited. While undergraduate programmes have transitioned to the ECTS under the name EtTS (Ethiopian Credit Transfer System), graduate programmes in Ethiopian universities continue to use the old credit system.

Mali acceded to the LMD in 2008 by Decree No. 08-790 / RM of 31/24, when the government adopted a draft decree introducing the LMD at the University of Bamako. The Faculty of Science and Technology was chosen to pilot the reform from the academic year 2007–2008 while its extension to other faculties was planned for 2011. A ministerial Circular Letter No. 2014-00674 / MESRS-CAB of 29 July 2014 requested all HE institutions to switch to the LMD from the 2014–2015 academic year (Koné, 2017).

The presentation thus far indicates that the adoption of Bologna-related reforms started in Africa as an individual and isolated project by national governments and individual universities (as in the case of UCAD in Senegal). However, by 2002, sub-regional initiatives started with the CPLP. This initiative started with the Association of the Portuguese-Speaking Universities’ (AULP) seminar in 2002 in Luanda, Angola, where the experiences of Bologna were proposed for the region (Vögtle,
The AULP later expanded to include the CPLP – Brazil, Portugal, Angola, Cape Verde, Guinea-Bissau, Mozambique, São Tomé and Príncipe, and East Timor (Vögtle, 2010). In 2004, the AULP presented a proposal on the conversion of qualifications, which led to the Fortaleza Declaration. The Fortaleza Declaration aimed to create the CPLP HE area with the objectives of promoting recognition of degrees in the CPLP area, student and academic mobility, the compatibility of HE systems (Vögtle, 2010), harmonization of degree structures, building solid relationships among the CPLP members, and building mutually acceptable and internationally recognized quality assurance structures (Woldegiorgis, 2018).

Although adopted separately, the Maghreb countries, Morocco, Algeria and Tunisia, came together and officially held the first seminar on the LMD on 18–19 November 2004 in Marseille, co-organized by the Agency Universitaire da la Francophonie (AUF), and the Conference des Presidents D’Université-France (CPU). The seminar organized under the theme ‘Les réformes de l’enseignement supérieur des pays du Maghreb et la perspective du processus de Bologne’ (AUF/CPU, 2004) was the gateway for a joint reflection on the reforms of HE of the Maghreb countries inspired by the BP. In the seminar, discussions focused on prospects for cooperation in HE between the EU and the Maghreb countries and the formation of a ‘Euro-Mediterranean area’ (Benchenna, 2009). According to Michel Laurent, the vice president of the CPU-France:

"The European area of HE . . . could be prolonged by a Maghrebian space of HE, with the constitution of several interlocking spaces . . . The Maghreb countries would then appear as the model referent of a successful mutation, able to export its own know-how to the countries of the South, and would then play a privileged North-South interface role. (AUF/CPU, 2004: 7)"

The location of the conference (Marseille) and the involvement of the CPU in its organization are suggestive of the role played by France in the promotion and export of the LMD to the Maghreb. The CPU, according to the French Code of Education, is composed of directors of universities, national polytechnic institutes, écoles normales supérieures, grandes écoles, and research and HE clusters in France (CPU, 2019).

Institutions involved in drafting and implementing the LMD reforms in the Maghreb have been working in a spirit of international cooperation. Not only have the three countries of the Maghreb consulted closely, but there has also been a high degree of cross-Mediterranean consultation and discussion, much of which has been undertaken to extend the EHEA beyond the physical boundaries of Europe to incorporate the three countries of the Maghreb in what would become the Euro-Mediterranean HE and research area (World Education News and Reviews, 2006). The integration of the BP was also presented as a necessity without which the university systems of the Maghreb countries would be isolated (Benchenna, 2009). The role of France in the diffusion of the LMD in the Maghreb is also an attempt to internationalize the French HE system (Benchenna, 2009). The Catania Declaration (2006) created a Euro-Mediterranean HE and research area, intended to promote collaboration between Europe and North African countries and establish common education and training paths, transferable credits and easily readable qualifications.

The Trans-European Mobility Programme for University Studies (Tempus) also played a significant role in Bologna adoption in North Africa, which also includes the Maghreb and North African countries. The EC, UNESCO, the World Bank and the OCED contributed to subtle marketing and publicizing the BP in other regions, including in Africa, by presenting the BP model as a valid reference in international meetings. In 2005, for example, the EC financed a study on the ‘Image of European Education in the Rest of the World’, which included the ‘needs and preferences of potential users’ (Croché and Charlier, 2012: 461). The EC in its Tempus project promoted the Bologna study cycle to establish collaborations between the EU countries with their
countersparts in other regions including Africa, especially the Maghreb. The BP action lines later became explicit objectives of the Tempus programme that established cooperation with third countries (Charlier and Croché, 2011). Thus, although many of the participating nations in the Tempus programme are not signatories of the BP, much of their work, through the influence of the EC, incorporates Bologna principles as part of an overall HE reform. The Tempus programme has fostered cooperation between HE institutions in the EU and partner countries and has encouraged the convergence of HE systems in these countries with EU policies and strategies including the BP. Phase three of the Tempus programme (2000–2006) extended the programme to also cover the Mediterranean region. Thus, North African and Middle Eastern countries – Algeria, Libya, Morocco, Tunisia, Egypt, Israel, Jordan, Lebanon, Palestine and Syria – have been part of the process. Egypt, Israel, Jordan, Morocco and Tunisia took part in the 2010 BP Forum to discuss how to enhance worldwide HE cooperation. A report by a BP special working group indicates North Africa as a region of interest (Zgaga, 2006).

A year after the Fortaleza Declaration, in 2005, heads of state of the Economic and Monetary Community of Central Africa (CEMAC) signed the Libreville Declaration, which adopted BP reforms through the LMD system, creating the CEMAC Space for HE Research and Professional Training (Libreville Declaration, 2005). According to the Declaration, the LMD aims to promote student and staff mobility at the national, regional and international levels, facilitating the equivalences of certificates, harmonizing study programmes, qualifications and awards, enhancing the attractiveness of HE in the sub-region, integrating graduates into the regional and global labour market, and integrating the entire CEMAC region. In 2005, the same year as the CEMAC countries adopted it, the Network for Excellence in HE in West Africa was formed. This initiative started with university officials from Benin, Burkina Faso and Togo but soon transformed into a network for excellence because of the need to develop a framework to combine their efforts to ‘truly and properly align with the Bologna declaration’ (Mignanwande and Hounmenou, 2016).

In 2007, though, Bologna-inspired reforms found their way into the entire African continent following the launch of the AU’s HE Harmonization Strategy. The 2007 AU Meeting of the Bureau of the Conference of Ministers of Education ended with the release of a policy document titled ‘Harmonization of Higher Education Programs in Africa: A Strategy for the African Union’. The document stated the AU’s strategy for harmonization, which is consistent with its vision of integration, peace, prosperity and peerage in the global community. It was also compatible with its regard for education as a key instrument in achieving its vision of developing quality human resources and contributing to increased mobility of Africans around the continent. The ministers acknowledged that within Africa there are many different systems of education, based on different legacies across the continent. The diverse cultural and colonial legacies, they argued, have led to a lack of mutual recognition of different forms of certification, little cooperation and very low student mobility within Africa. The strategy thus aimed to:

- Facilitate the comparability of qualifications awarded across the continent and help drive quality assurance measures which will ultimately contribute to greater quality of education in Africa. Creating a mechanism for benchmarking and comparison of qualifications will allow for professional mobility for employment and further study, as well as expanded job markets. Developing widely accepted standards for quality will also facilitate the creation of centres of excellence. Harmonisation will benefit Africa, since it will allow for greater intra-regional mobility, thereby fostering increased sharing of information, intellectual resources, and research, as well as a growing ability to rely on African expertise rather than skills from elsewhere in the world. (African Union, 2007)

Four major instruments were designed to propel the Africa harmonization strategy: the Nyerere Mobility Programme (which facilitates intra-African mobility of students and the retention of
African human resources); the African Quality Rating Mechanism and Accreditation (for self-evaluation of institutions and programmes, benchmark progress in quality development and helping African universities meet international standards, thereby making them competitive in the global knowledge economy); Pan-African University (which promotes research and innovation in science and technology and contributes to creating world-class human resources at the master’s and PhD levels); and Tuning Africa (to enhance international comparability of standards in terms of methods of curriculum integration, degrees, credit accumulation, transfer systems, student/graduate mobility and employment) (Woldetensae, 2013). The harmonization of the AU, on a broader level, has the potential to create the African HE and research space (AHERS) (African Union, 2007), similar to the EHEA (Eta, 2018a) and facilitate a systematic approach to counteract the challenges of dealing with individual institutions and countries (Zgaga, 2006). This implies that from 2007, at least every country or sub-region in Africa was already in the early phase or advanced stage of implementing Bologna-related reforms.

**Early adopters of Bologna reforms in Africa and the economics of policy transfer**

Figure 2 shows that the diffusion pattern of the BP in Europe and in Africa did not experience a sharp slow growth phase as in Watts’ (2003) categorization. The fact that the BP very quickly became a European intergovernmental initiative in 1999, rather than an initiative of individual nation-states in Europe, could explain the speed of the spread. We begin by tracing the diffusion of the BP from 1999 when the Bologna Declaration was signed to create the EHEA by the 29 European countries. France, Germany, the UK and Italy are included in this BP pattern tracing in Figure 2, not to represent the slow growth phase but as the innovators of the process when they signed the Sorbonne Declaration in 1998 and invited other countries to join the process, leading to the signing of the Bologna Declaration in 1999. The years 1999–2000 are considered as the slow growth phase. The years 2001–2005 can be categorized as the explosive growth phase when the number of adopters moved from 31 to 64. From 2006, fewer countries adopted the BP as the curve began to level out. The curve starts to follow the straight line from 2007 towards the burnout stage.

Given our focus on the early adopters of the BP in this sub-section, we further make a distinction between the early and the late adopters from Figure 2. Countries that adopted between 1999–2004 are identified as early adopters, while those that adopted from 2005 are interpreted as late adopters. The timeline of the diffusion also indicates that while African countries (Morocco, Algeria, Egypt, Senegal) were early adopters of a reform conceived and designed for European systems, some European countries were late adopters (an analysis of the European countries is however beyond the scope of this article). An important question here is how and why did these countries become early adopters of a European reform?

As already mentioned, BP reforms were adopted in Morocco in 2000 before spreading to other (French) African countries. Internal, external and economic reasons were behind such early adoption in Morocco particularly, and Africa generally. Internally, the adoption in Morocco was part of a deliberate political effort to internationalize the university sector of the country, especially in attracting foreign institutions to Morocco (Rose, 2015). Furthermore, Morocco is active in the Tempus and Erasmus Mundus programmes and is a significant exporter of students to France, accounting for 66.5% of a total of almost 43,000 (Rose, 2015). Externally, France is seen to have played a major role in supporting HE reforms in Morocco as part of a broader cooperation policy. The benefit of this cooperation policy is two-fold. On the one hand, it enables ‘France to strengthen its international position, by forming around itself allies consisting mainly of its former colonies’. On the other, it allows ‘France to play the role of a “translator” of European orientations, in terms of education and training, with partner countries of Europe’ (Benchenna, 2009: 122). France,
thus, played a significant role in the early adoption of the LMD in French-speaking Africa because of Francophone Africa’s attachment to the models left behind by France in the former colonies (Mngo, 2011).

From an economics of policy transfer perspective, France allocates through its Ambassador in Morocco an annual budget of €10m per year to fund reforms in the Moroccan education system (Benchenna, 2009). The French CPU played an important role in LMD adoption in Morocco (Benchenna, 2009; Kohstall, 2012). Support for the reform of the Moroccan HE is part of the French public development aid (ODA) under the Priority Solidarity Fund (FSP), which is the project aid instrument of the Ministry of Foreign Affairs. As the largest bilateral donor, France provides Morocco with 49% of total bilateral ODA for all donors combined, with an average annual bilateral aid of US$188.2m over the period 2001–2005. France thus tries to keep its first place as aid donor in Morocco because it considers Morocco as its ‘bridgehead in the Maghreb and Africa’ (Benchenna, 2009). The LMD in Morocco was financed with €7.755m, distributed between Morocco (€3m) and France (€4.755m) (Benchenna, 2009). Morocco is perceived by French diplomacy as a belt of transmission of the reforms to be supported in the other French-speaking countries of the South, and more particularly the countries of the Maghreb and the African countries (Benchenna, 2009).

The economics of policy transfer also played a massive role in LMD adoption and implementation in selected universities in Burundi, Madagascar and the Democratic Republic of Congo. The aftermath of post-conflict in these countries left them with the dire need to revitalize their agricultural sector to ensure food security, improve livelihood and promote economic growth. These countries (selected universities) implemented the LMD as part of a project financed by the European Union-The African, Caribbean and Pacific Group of States (EU-ACP) to establish and pilot a post-graduate training programme in these post conflict countries aimed at strengthening agricultural training capacity and also to assist these countries in developing quality HE relevant to labour market needs (Majaliwa et al., 2016).

In Burundi, LMD adoption was also pushed by the economics of policy transfer, mainly financed through cooperation with France (Provini, 2017). To help rebuild the Burundian HE system following the lack of recognition of their university diplomas and the destruction caused by the civil war, French cooperation in partnership with the Burundian Ministry of HE allocated €2m in addition to technical support to ‘improve the recognition of the University community’ and better integrate it in the global knowledge economy (Provini, 2017: 7).

The EC, the World Bank and donor countries have been actively involved in the financing of the African harmonization strategy (Woldegiorgis et al., 2015; Woldegiorgis, 2018). For example, the Nyerere mobility programme, one of the arms used by the AU to push forth its harmonization agenda, is mostly funded by the EC to the tune of €35m for a four-year term (Woldegiorgis et al., 2015). Because of excessive external aid dependence, it has been argued that most African governments lack ownership of the reforms and have not fully committed to them (Woldegiorgis et al., 2015).

However, the real issue with pressures from international financial institutions on African HE led by the World Bank has never been one of ownership. Rather, the demands for a complete overhaul have not always been accompanied by sufficient financial support capable of resolving the endemic problems in African HE institutions. Mismanagement of limited funds by government leaders has only exacerbated the situation. World Bank funding has been conditioned by commitments to resolve issues such as reductions in overcrowding due to record rates of enrolment, accelerated privatization, increasing the relevance of education and research, and encouraging the production of technical skills and applied research capabilities that will promote competitive industries (Brock-Utne, 2003; Teferra, 2015). While these recommendations sound reasonable, they are difficult to achieve because BP models that would ascertain the realization of these goals
are not accompanied by adequate investments in clinical facilities, library resources, infrastructure and personnel.

The BP and the politics and discursive power of policy transfer

Discourse, as used in this article, is a social practice through which meanings are constructed dialogically in the community (Saarinen, 2007). In transnational policy processes, discourses are produced by a variety of actors, including international, regional and non-governmental organizations, transnational corporations, think-tanks, and consultants, government officials, civil servants, pressure groups, policy entrepreneurs and experts. Discourses produced by these actors highlight economic and political relations and factors (selectiveness, scope and reach of the discourse, the differential capacities and power of social agents) that determine whether a specific discourse ‘wins’ or ‘loses’ and how the discourse is constructed in specific contexts (Fairclough, 2005).

Our analysis indicates that the most cited political reason for the adoption of Bologna-related reforms in Africa has been the need to meet international standards and the international recognition of certificates. Bologna is thus seen as a step towards linking one peripheral and regional system to the international and global system (Goudiaby, 2009). However, the LMD was also used as a political tool in some African countries to resolve existing conflicts. In Burundi, the LMD model:

[p]resents an opportunity for political and academic stakeholders to reshape the system of elite formation and the delicate balance [of power] between Hutu and Tutsi in the administration, which is the core question of the HE system in the Burundian post-conflict situation. (Provini, 2017: 9)

Provini describes how with the reforms, debates strategically shifted from an academic question to the question of the appointment of university administrators. In Cameroon, LMD adoption could also be interpreted as an alternative to the long-held dichotomization of the challenges posed by the dual French and Anglo-Saxon systems of education. Thus, the LMD could have been used as a tool to neutralize or displace the conflict between the two traditional systems. It could also have been viewed that LMD was a compromise between the two conflicting groups (Eta, 2018a). Mngo (2011) concluded that faculty in Cameroonian universities showed positive knowledge and beliefs about the LMD reform and harmonization while underscoring that such a new positive attitude could be explained by the fact that the reform is a replica of the European Bologna reform, which was already largely embraced by the architects (France/UK) of the two educational systems adopted in Cameroon after independence. This probably, he added, ‘meant that the fear, in both Francophone and Anglophone Cameroonians, of adopting a reform that will limit instead of enhancing the chances of student and faculty exchange with France and Britain was no longer justified’ (Mngo, 2011: 193).

We also identified instances where LMD was used to implement controversial reforms or legitimize them. In Burundi, the reform is ‘grasped by the government as a political opportunity to finally implement the National Commission for HE’ guidelines (Commission Nationale de l’Enseignement Supérieur (CNES)). The CNES controls the certification of the private institutions and the authenticity of their diploma for students (Provini, 2017: 13). Tempus played an important role in the adoption of Bologna reforms in the Egyptian HE system. The EU uses Tempus as a soft governance tool to better understand Egyptian society, because the position of Egypt in the Muslim world and its key role as a mediator in the Israeli-Palestinian conflict made Egypt an important ally for the EU and a vehicle for soft diplomacy in the region. The understanding here is that a better-educated neighbourhood can create more stability and prosperity in a region (Botonero, 2012).
Cameroon, the LMD was also used to legitimize the harmonization of the dual French and Anglo-Saxon degree structure, given that earlier proposals for Cameroon to use only the Anglo-Saxon bachelor–master’s–PhD degree structure in its HE system were at one time resisted (Eta, 2015, 2018a). Mngo (2011) concluded that prior resistance on the part of French-speaking HE stakeholders in Cameroon to the Anglo-Saxon-style degree structure was a result of their strong attachment to an HE system entirely of the French tradition. The French embrace of the Bologna model in Europe certainly weakened the resistance and, consequently, the embrace of the LMD reform.

In some African countries, LMD was used to introduce neoliberal, market-oriented controversial reforms. This can be seen in the introduction of the professionalization agenda in universities through professional degree programmes, programmes that are designed and taught by university officials and actors from the business world (Eta, 2018b; Goudiaby, 2009). Eta (2018b) observed that in Cameroon (as well as other CEMAC countries), LMD has been used to transform universities into a marketplace. Eta describes the role played by the market in identifying the need for professional degree programmes and the high tuition fees students pay. The high tuition fees seem to be justified on the supposed economic benefits for graduates from professional programmes compared with students from the traditional academic-oriented path.

**Explicit and silent transfer processes**

For the most part, LMD transfer to Africa was explicit, with direct references made to the European reforms either as the BP (common with English-speaking Africa) or as the LMD (common with French-speaking Africa). In some cases where Bologna/LMD was explicitly acknowledged as a European innovation, we also identified cases of direct copy and paste, which we illustrate with an excerpt from Burundi:

> First, there is the task of doing literature research. Which means, for instance, at the Faculty of Law [of the University of Burundi], we use the example of the Faculty of Law of [the French University] Nanterre. And we study the structure of the organisation of the teaching units, the included teaching elements, and after that, depending on the needs and the priorities of the country, we then see which courses we have to adjust and which one we pick. That is the way we proceed. We do not invent the wheel which is turning.

(As described by a special advisor for the reform of the Chancellor of the University of Burundi, cited in Provini, 2017: 8–9)

As noted by Croché and Charlier (2012), in French-speaking Africa the BP was confused with the LMD reforms in France, which is the French application of the BP. In some French-speaking African countries, the use of the LMD rather than the explicit reference to the BP could be because some nationalists and politicians were sensitive to all that comes from France as a former colonialist (Boufeldja, 2013: 271). In some others, the use of LMD rather than the outright use of the BP could be an attempt to conceal the fact that is an ‘emulation or blind political conformity’ (Khelfaoui, 2009: 28).

Notwithstanding, we also found instances of silent transfer (where no direct reference was made to the BP/LMD) which deserve attention. It was interesting to observe that the first country to adopt Bologna-related reforms outside the EU was Morocco and that they started the process, in October 1999, as a form of silent transfer. Benchenna (2009) pointed to the Moroccan National Education Charter published in October 1999 at the initial phase of the silent transfer. The charter made no mention of LMD architecture and the BP. Benchenna (2009: 124–125) explained the case of a silent transfer that:
Articles 81, 82, 83, 84 and 85 of the Charter describe an architecture in three cycles: first and second, in two years each, and the third cycle for doctoral studies... The text of Law No. 01-00, promulgated on May 19, 2000, does not refer to the LMD architecture either.

However, the process soon shifted from silent to explicit transfer through LMD. This was observed in 2002, in the seminar in Rabat, where explicit reference was made to the changeover of the Moroccan universities to the LMD (Benchenna, 2009).

Similarly, a process of silent transfer was observed in the reforms in Ethiopia. The BP was not officially adopted or introduced in Ethiopia, but elements of the BP can be found in the Ethiopian education system. In 2007, universities in Ethiopia were instructed by the Ministry of Education to redesign their work processes, which ended up being modularization or competency-based education. Later, all universities were directed by the Ministry of Education to harmonize or modularize their academic curricula. As time passed, more elements of the BP were incorporated into the Ethiopian system. According to author (personal communication, 29 May 2018), the revamping of the Ethiopian HE curricula was based on the elements of the BP, even though not explicitly stated. They point to the fact that:

In due course, the curricula included elements of the BP such as European Credit Transfer System (ECTS), competency-based education, modularization, mobility and flexibility of learning and recognition of prior learning. These elements are/were reflected with their limitations and of course with limited scope. In the process, the Ministry set up a national team to develop a guideline for developing/revising academic curricula to alleviate the observed gaps among universities which might have an effect later in the labour market (as universities were following their own way).

The inexplicit transfer of BP elements into the Ethiopian HE system is again evidenced in the non-mention of the BP in the Ethiopian Ministry of Education’s 13-year development plan (Ministry of Education, 2018). The silence on the BP in this 2018 Ethiopian Education Development Roadmap (2018–2030) document, which can hardly be interpreted as an omission, is indicative of the inconsistent and silent transfer of aspects of the BP reforms constituting an official approach to HE reforms in Ethiopia.

**BP and the selective nature of policy transfer**

Our analysis indicates that the adoption of Bologna-related reforms in Africa was a case of selective transfer, evident in its name and content of what was adopted. The title, LMD, which resonated in French-speaking Africa, is an example of selective transfer. Croché and Charlier (2012) hold that the version of the BP adopted is the French-assimilated version, known as the LMD, which has been presented to former colonies as HE reforms, notwithstanding the versions implemented in other European countries.

It has been argued that the transfer of Bologna reforms to Africa was more in content rather than practical implementation of the lines of action (Woldegiorgis, 2018). Content-wise, what is mostly emphasized in available literature is the conversion to two semesters, three-cycle studies, the credit system (Sall and Ndjaye, 2007) and mobility (Zmas, 2015). In Senegal, LMD was articulated around quality, relevance, cooperation, financing and management, information and communication technology (UCAM Strategic Plan 2011–2016: 12). In Cameroon, the emphasis was mostly on the degree structure, the credit system, employability and mobility (Eta, 2018a). The lines of action of the Bologna reforms that resonated in Algeria were the degree structure and staff and student mobility (Boufelfdja, 2013). In the pre-LMD system, in Algeria, the degree structure consisted of
four years for the Licence degree, two years for the Magister and four subsequent years for the Doctorate (Reguig, 2014).

There is an ongoing debate about the emphasis on mobility within the context of the BP in Africa. Mobility is one objective that drives Bologna adoption not only among individual countries but also sub-regional and regional initiatives. According to CAMES, the promotion of mobility of students, teachers, researchers and other university staff is one of the most important components of the LMD (Houessou, 2007). Citing the case of Algeria, and by extension Africa in general, Metatla (2016) posits that it is surprising to imagine that LMD was introduced to facilitate graduate mobility to Europe. While international mobility has witnessed an increase in the rate of emigration towards Europe, as better conditions of study attract the best students and scholars to work in Europe, no changes have been witnessed concerning national mobility (Boufeldja, 2013). The focus on mobility is due to the benefits that come along with such movements especially to lecturers and students, as it allows students to pursue studies in universities in Europe (Jeune Afrique, 2012) and academics and civil servants benefiting from ‘per diem in foreign currencies’ (Khelfaoui, 2009: 29).

Programmes such as Tempus and Erasmus Mundus also enabled the focus on mobility within the context in Africa, as these programmes offer financial support to institutions and scholarships to individuals through academic cooperation. Citing the case of the Erasmus Mundus programme, Clark (2007) notes that the programmes focus more on exchange at the graduate level and promote Europe as a destination for highly talented students and scholars. The promotion of mobility is also one of the pillars of the AU harmonization strategy through the Nyerere mobility programme. However, unlike the Tempus and the Erasmus programmes that have mobility options from Africa to Europe and vice versa, the Nyerere programme initiated in 2007 by the AU Commission enhances mobility among African universities. This focus enhances intra-African student mobility and the retention of high-level African human resources. One could also argue that the focus on mobility via the Nyerere mobility programme is due to its externally driven financial support which comes mostly from the EC. This would not be a farfetched argument considering that African universities have been historically dependent.

**Conclusion**

There is no gainsaying that the European BP reforms have impacted education policies in Africa in a significant manner. The mode of transfer, the motives and the resources available for the implementation of the BP reforms has influenced and will certainly continue to influence the form and content in varying degrees in different universities, countries and regions of Africa claiming to harmonize. This study is positioned within the literature on BP diffusion and transfer with a focus on diffusion and transfer in Africa as a variable that is dependent on the necessity for survival in an HE landscape dominated by European and US models of HE. Existing HE systems in the various countries and regions of Africa played a role in determining not only the speed of diffusion and patterns of transfers but also their scope and depth.

The BP reforms transferred to the African continent are grouped into economic, discursive, explicit, and silent and selective transfer patterns. The patterns adopted in each country, sub-region and region are influenced by factors identified by research to facilitate policy transfer including a common language, similar ideologies, and relationships among personnel and actors involved in the process.

Francophone and Lusophone Africa were influenced indirectly by adopting the BP credit system, not because of its alignment with the existing system but because of the necessity to align with France, going mostly from silent to explicit to copy and paste transfer formats. Even though public
HE leaders in these countries had been actively discussing the need to revamp their education systems, the embrace of the BP by former European colonial masters served as an endorsement for the change they had long needed (Woldegiorgis, 2018).

Unlike in Francophone and Lusophone Africa, the experience in Anglophone Africa was different considering that the existing HE structures were already credit-based as a result of colonial and post-colonial diffusing and transfer of British HE models into the colonies (Mngo, 2011). Selective transfer in Anglophone countries and regions made the most sense as there was no need for entire system changes. As posited by Karch et al. (2016), this approach to policy transfer can lead to pro-innovation bias, a tendency to broaden understanding of these processes. This hypothesis holds ground in the case of Anglophone countries and regions of Africa as some salient aspects of BP policy diffusions could easily be swept under the rug under the presumption that they were already part of the existing structures. Nevertheless, this approach has its merits in that the natural process of policy transfer always involves frequently combining elements from distinguished places/experiences in order to produce versions of models regarded as innovative (Rose, 1991). In the case of BP policy transfer in Francophone and Lusophone Africa, the nature of transfers mostly involves transfers of entire models using mostly explicit and copy and paste patterns rather than adaptations, without consideration of local realities such as limited resources, infrastructure and personnel (Mngo, 2011).

This article has drawn attention to the politics, discursive and economic factors that drive transfer processes. As highlighted in the article, especially with the aid dependence of the AU and other countries on external funding in the transfer of BP reforms, it remains to be seen how long these countries will continue with the implementation of BP reforms after the funding period is over. Besides the fact that education systems selectively adopt global policies and, in the process, make alterations, in this article we draw attention to the idea that selective transfer is bound to occur when countries and institutions align by adopting a reform model which has key components that match their existing model.

The silent and selective nature of transfer discussed in this article are attributes of the temporal dimension of diffusion. One could argue that most African countries (except for Morocco, Algeria, Senegal and Egypt) adopted BP reforms during the burnout phase, at a time when reforms had been adopted by many countries and when the reforms were already deterritorialized. It also seems that the lack of confidence in the outcomes and unwillingness, for socio-political reasons, to be associated with originators of ideas, led countries to engage in silent transfer processes. However, when the reform gained popularity and reputation, silent adopters quickly became explicit adopters.

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ORCID iD

Elizabeth Agbor Eta https://orcid.org/0000-0002-9622-6826
Notes

1. The countries in order of appearance in Figure 2: Morocco, Algeria, Egypt, Senegal, Guinea Bissau, Angola, São Tomé and Príncipe, Cape Verde, Mozambique, Tunisia, Cameroon, Gabon, Chad, Central African Republic, Republic of Congo, Equatorial Guinea, Benin, Burkina Faso, Togo, Ethiopia, Burundi, Madagascar (MDG) and Mali.

2. The 48 European signatory countries to the BP include: France, Germany, Italy, the UK, Austria, Belgium, Bulgaria, Denmark, Estonia, Finland, Greece, Hungary, Ireland, Iceland, Lithuania, Latvia, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Czech Republic, Romania, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Liechtenstein, Croatia, Cyprus, Turkey, Albania, Andorra, Bosnia and Herzegovina, the Holy See, Russia, Serbia and Montenegro, the former Yugoslav Republic of Macedonia, Armenia, Azerbaijan, Georgia, Moldova, Ukraine, Republic of Montenegro, Kazakhstan and Belarus.

References

African Union (2007) Harmonisation of HE Programmes in Africa: A strategy for the African Union Summary Report, Addis Ababa: Meeting of the Bureau of the Conference of Ministers of Education of the African Union. African Union.

Alemu SK (2019) African higher education and the Bologna Process. *European Journal of Higher Education* 9(1):118–132.

Anderson-Levitt K (2003) A world culture of schooling? In: Kathryn A-L (ed.) *Local Meanings, Global Schooling: Anthropology and World Culture Theory*. New York: Palgrave Macmillan, 1–26.

Armstrong L (2009) The Bologna Process: A significant step in the modularization of higher education. *World Education News & Reviews* 22(3). Available at: www.wes.org/ewenr/09apr/feature.htm (accessed 10 January 2019).

AUF/CPU (2004) Les réformes de l’enseignement supérieur des pays du Maghreb et la perspective du processus de Bologne. Available at: www.cfu.fr/wp-content/uploads/2013/09/Actes_Marseille_2004.pdf (accessed 23 January 2019).

Benchenna A (2009) L’appui de la France à la Réforme de l’enseignement supérieur (ES) au Maroc: quelles finalités et quels enjeux? *Journal of Higher Education in Africa* 7(1–2): 121–140.

Bergen Communiqué (2005) The European HE Area: Achieving the goals. Communiqué of the Conference of European Ministers Responsible for HE. Available at: http://www.ehea.info/Upload/document/ministerial_declarations/2005_Bergen_Communique_english_580520.pdf (accessed 19 January 2019).

Berlin Communiqué (2003) Realising the European HE Area. Communiqué of the Conference of ministers responsible for HE. Available at: http://www.ehea.info/media.ehea.info/file/2003_Berlin/28/4/2003_Berlin_Communique_English_577284.pdf (accessed 19 January 2019).

Bologna Declaration (1999) The Bologna Declaration of 19 June 1999. Bologna Secretariat, European. Available at: https://media.ehea.info/file/Ministerial_conferences/02/8/1999_Bologna_Declaration_English_553028.pdf (accessed 19 January 2019).

Botonero EMR (2012) EU HE as soft power in neighbouring countries: A projection of influence by compelling means. Master’s thesis, Faculty Economic, Social and Political Sciences and Solvay Business School, Vrije Universiteit, Brussel. Available at: https://ecpr.eu/Filestore/PaperProposal/f472b41a-3915-4106-9c7b-6354988a033e.pdf (accessed 2 January 2019).

Boufelfdja G (2013) Constraints of applying BP reforms in Algerian universities. *Dirassat Insaniya wa Ijtima’iya* 2(2): 261–277.

Brock-Utne B (2003) Formulating higher education policies in Africa: The pressure from external forces and the neoliberal agenda. *Journal of Higher Education in Africa* 1(1): 24–56.

Burdett N and O’Donnell S (2016) Lost in translation? The challenges of educational policy borrowing. *Educational Research* 58(2): 113–120.

Catania Declaration (2006) Euro-Mediterranean area of HE and research. Available at: www.miur.it/userFiles/2209.pdf (accessed 4 December 2018).

Charlier J-M and Croché S (2009) Can the BP make the move faster towards the development of an international space for HE where Africa would find its place? *Journal of HE in Africa* 7(1–2): 39–59.
Charlier J-M and Croché S (2011) The Bologna Process: A tool for Europe’s hegemonic project on Africa. *Power and Education* 3(3): 304–316.

Clark N (2007) The impact of BP beyond Europe, Part I. *World Education News & Reviews* 20(4). Available at: http://www.wes.org/ewenr/bolognaprocess.htm (accessed 19 July 2020).

Collier D (2011) Understanding process tracing. *Political Science and Politics* 44(4): 823–830.

Cowen R (2009) The transfer, translation and transformation of educational processes: And their shape-shifting? *Comparative Education* 45(3): 315–327.

CPU (2019) Qui sommes-nous? Available at: www.cpu.fr/cpu-les-établissements-membres/ (accessed 7 January 2019).

Creswell JW (2009) *Research Design. Qualitative, Quantitative and Mixed Methods Approaches*. Thousand Oaks: Sage.

Croché S and Charlier J-E (2012) Normative influence of the BP on French-speaking African Universities. *Globalisation, Societies and Education* 10(4): 457–472.

Crosier D and Parvela T (2013) *The BP: Its Impact on HE Development in Europe and Beyond*. Paris: UNESCO.

Diop B (2016) La réforme LMD au Sénégal: le point de vue des étudiants. *Journal of Higher Education in Africa* 14(2): 21–48.

Dolowitz DP and Marsh D (2000) Learning from abroad: The role of policy transfer in contemporary policy-making. *Governance: An International Journal of Policy and Administration* 13(1): 5–23.

Eta EA (2015) Policy borrowing and transfer, and policy convergence: Justifications for the adoption of the BP in the CEMAC region and the Cameroonian HE system through the LMD reform. *Comparative Education* 51(2): 161–178.

Eta EA (2018a) *Educational Policy Borrowing: Adoption and Adaption of BP Ideas in the Cameroonian HE System*. Turku: University of Turku Press.

Eta EA (2018b) Enhancing graduate employability in Cameroonian universities within the context of the adoption of the BP through License-Master-Doctorate Reform. *HE Policy* 31(3): 309–332.

Eta EA and Vubo EY (2016) Global references, local translation: Adaptation of the BP degree structure and credit system at universities in Cameroon. *Globalisation, Societies and Education* 14(4): 492–512.

Eta EA, Kallo J and Rinne R (2018) Process of transfer and reception of BP ideas in the Cameroon HE system. *European Educational Research Journal* 17(5): 656–675.

European Commission (2014) Erasmus+. Available at: https://ec.europa.eu/programmes/erasmus-plus/about_en (accessed 21 July 2020).

European Parliament (2001) Education, vocational training, and youth policy (European Parliament Fact Sheets). Available at: www.europarl.europa.eu/factsheets/4_16_0_en.htm (accessed 21 July 2020).

Fairclough N (2005) Critical discourse analysis in transdisciplinary research. In: Wodak R and Chilton P (eds) *A New Agenda in (Critical) Discourse Analysis*. Amsterdam: John Benjamins, 53–70.

George L and Bennett A (2005) *Case Studies and Theory Development in the Social Sciences*. Cambridge, MA: MIT Press.

Ghouati A (2009) Réforme LMD au Maghreb: éléments pour un premier bilan politique et pédagogique. *Journal of Higher Education in Africa* 7(1–2): 61–77.

Goudiaby J-A (2009) Le Sénégal dans son appropriation de la Réforme LMD: déclinaison locale d’une réforme ‘globale’. *Journal of Higher Education in Africa* 7(1–2): 79–93.

Hindeya GH (2014) Influence of the BP on African HE: Ethiopian HE in focus. *International Journal of Research Studies in Education* 3(4): 85–98.

Houssou P (2007) Determinants of Failure at the University of Abomey (Benin): *Inventory, Analysis and Perspectives*. Thousand Oaks: Sage, 218–242.

Huisman J, Adelman C, Hsieh CC, Shams F and Wilkins S (2012) Europe’s BP and its impact on global HE. In: Deardorff DK, de Wit H, Helyl J-D and Adams T (eds) *The Sage Handbook of International HE*. Thousand Oaks: Sage, 81–100.

Ibrahim A (2010) The politics of educational transfer and policymaking in Egypt. *Prospects* 40(4): 499–515.
Jeune Afrique (2012) Universities: In the Maghreb, an LMD reform with grouping. Available at: www.jeuneafrique.com/141881/archives-thematique/universit-s-au-maghreb-une-r-forme-lmd-t-tons/ (accessed 25 January 2019).

Karch A (2007) Emerging issues and future directions in state policy diffusion research. State Politics and Policy Quarterly 7(1): 54–80.

Karch A, Nicholson-Crotty C, Woods ND and Bowman AD (2016) Policy diffusion and pro-innovation bias. Political Research Quarterly 69(1): 83–95.

Kezer A (2006) To use or not to use theory: Is that the question? In: Smart JC (ed.) Higher Education: Handbook of Theory and Research. Dordrecht: Springer, 283–344.

Khelfaoui H (2009) Introduction: The BP in Africa – Globalisation or return to colonial situation? Journal of Higher Education in Africa 7(1–2): 21–38.

Klemenčič M (2019) 20 years of the Bologna process in a global setting: The external dimension of the Bologna process revisited. European Journal of Higher Education 9(1): 2–6.

Knight J (2013) Towards African HE regionalization and harmonisation: Functional, organizational and political approaches. In: Wiseman AW and Wolhuter C (eds) The Development of HE in Africa: Prospects and Challenges (International Perspective on Education and Society Series). Bingley: Emerald Publishing, pp.347–373.

Kohstall F (2012) Free transfer, limited mobility: A decade of HE reform in Egypt and Morocco. Revue des mondes musulmans et de la Méditerranée. Available at: http://journals.openedition.org/remmm/7624 (accessed 17 December 2018).

Koné ML (2017) Une étude sur le système LMD. Available at: www.actudroit.ml/2017/03/une-etude-sur-le-systeme-lmd_17.html (accessed 7 January 2019).

Landri P (2018) Digital Governance of Education: Technology, Standards and Europeanization of Education. London: Bloomsbury Academic.

Libreville Declaration (2005) Declaration de Libreville sur la construction de l’espace CEMAC de l’enseignement supérieur, de la recherche et de la formation professionnelle. Libreville: CEMAC.

London Communiqué (2007) Towards the European HE Area: Responding to Challenges in a Globalised World. Available at: http://www.ehea.info/Upload/document/ministerial_declarations/2007_London_Communique_English_588697.pdf (accessed 19 January 2019).

Louvain-la-Neuve Communiqué (2009) The BP 2020: The European HE Area in the new decade. Communiqué of the Conference of European Ministers Responsible for HE. Available at: http://www.ehea.info/media.ehea.info/file/2009_Leuven_Louvain-la-Neuve/06/1/Leuven_Louvain-la-Neuve_Communique_April_2009_595061.pdf (accessed 19 January 2019).

Majaliwa JGM, Seuliba E, Kizza CL, Freedom K, Walangulu M, Rasoirahona J, D’Haese L, Pilot D, Ratsirason J, Wituze S and Adipala E (2016) Strategy for alignment of the LMD system in selected Francophone universities in Africa. RUFORUM Working Document Series 14(3): 5–12.

Marsh D and Sharman JC (2009) Policy diffusion and policy transfer. Policy Studies 30(3): 269–288.

Masrar KE (2015) Current university reforms in Morocco: The present situation of labour market and culture. International Journal of Humanities and Social Science 5(9): 182–188.

Metatla O (2016) HE reform in Algeria: Reading between the lines. Open Democracy free thinking for the World. Available at: www.opendemocracy.net/north-africa-west-asia/oussama-metatla/higher-education-in-algeria-reading-between-lines-of-lmd-reform (accessed 8 January 2019).

Mignanwande PSD and Hounmenou J-C (2016) The Three-Five-Eight (Bachelor, Master, Doctorate) System: An essential and demanding reform for the University of Abomey-Calavi, Benin (West Africa). Open Journal of Social Sciences 4: 158–170.

Ministry of Education (2018) Ethiopian Education Development Network. Addis Ababa: Education Strategy Center.

Mngo ZY (2011) Instructors’ Perceptions of the Bologna Model of HE Reform in Cameroon. Andrews University, Berrien Spring: UMI Dissertation Publishing.

Mohamedbhai G (2007) Discussion on AU-Harmon-AAU-QA: Conference – The African Universities’ Adaptation to the BP. Available at: www.aau.org/pipermail/au-harmon-aau-qa/2007-July/000071.html (accessed 16 December 2018).
Neave G (2003) The Bologna declaration: Some of the historic dilemmas posed by the reconstruction of the community in Europe’s system of higher education. *Educational Policy* 17(1): 141–164.

Newmark AJ (2002) An integrated approach to policy transfer and diffusion. *Review of Policy Research* 19: 152–178.

Obasi IN and Olutayo AO (2009) Globalization, the BP and African Universities: Limits and contradictions of market-oriented HE reforms. *Journal of Higher Education in Africa* 7(1–2): 159–187.

Phillips D and Ochs K (2004) Researching policy borrowing: Some methodological challenges in comparative education. *British Educational Research Journal* 30(6): 773–784.

Prague Communiqué (2001) Towards the European HE Area. Communiqué of the Meeting of the European Ministers in Charge of HE. Available at: http://www.ehea.info/media.ehea.info/file/2001_Prague/44/2/2001_Prague_Communique_English_553442.pdf (accessed 19 January 2019).

Provini O (2017) Transnational circulations of university reforms LMD models: The policy-making of the LMD in Burundi. Third International Conference on Public Policy (ICPP3) June 16, Singapore. Available at: https://hal.archives-ouvertes.fr/hal-01540747/document (accessed 20 November 2018).

Rappleye J (2012) Reimagining attraction and ‘borrowing’ in education: Introducing a political production model. In: Steiner-Khamsi G and Waldow F (eds) *Policy Borrowing and Lending in Education*. London and New York: Routledge, 121–147.

Reguig HH-B (2014) *A Comparative Study of Teaching ESP in the LMD System in Algerian and French Universities: The Case of the Faculties of Sciences in Tlemcen and Paris-Sud*. Available at: http://dspace.univ-tlemcen.dz/bitstream/112/7685/1/hidayet-hemche-berekci-reguig.pdf (accessed 8 January 2019).

Reinalda B and Kulesza E. (2006) *Bologna Process: Harmonizing Europe’s Higher Education* (2nd edn). Farmington Hills: Springer.

Rogers EM (2003) *Diffusion of Innovations*. New York: Free Press.

Rose R (1991) What is lesson-drawing? *Journal of Public Policy* 11(1): 3–30.

Rose M (2015) Education in North Africa since independence: Country profile – Morocco. Commissioned for the Hammamet conference. Available at: www.britishcouncil.org/sites/default/files/education-in-north-africa-since-independence-algeria.pdf (accessed 9 January 2019).

Saarinen T (2007) *Quality on the Move: Discursive Construction of Higher Education Policy from the Perspective of Quality*. Jyväskylä: University of Jyväskylä.

Sahlin K and Wedlin L (2008) Circulating ideas: Imitation, translating and editing. In: Greenwood R, Oliver C, Suddaby R and Sahlin A (eds) *The SAGE Handbook of Organisational Institutionalism*. Thousand Oaks: Sage, 218–242.

Sall AS (2012) *Les mutations de l’enseignement supérieur en Afrique: Le cas de l’université Cheikh Anta Diop de Dakar (UCAD)*. Paris: Harmattan.

Sall HM and Ndjaye BD (2007) HE in Africa: Between perspectives opened by the BP and the commodification of education. *European Education* 39(4): 43–57.

Shawa LB (2008) The BP and the European gain: Africa’s developmental demise? *European Education* 40(1): 97–106.

Silova I (2004) Adopting the language of the new allies. In: Steiner-Khamsi G (ed.) *The Global Politics of Educational Borrowing and Lending*. New York: Teachers College Press, 75–86.

Sorbonne Declaration (1998) Sorbonne joint declaration: Joint declaration on harmonisation of the architecture of the European HE system, signed by the four ministers in charge for France, Italy and the United Kingdom, Paris, 25 May. Available at: https://media.ehea.info/file/1998_Sorbonne/61/2/1998_Sorbonne_Declaration_English_552612.pdf (accessed 19 January 2019).

Steiner-Khamsi G (2006) The economics of policy borrowing and lending: A study of late adopters. *Oxford Review of Education* 37(2): 151–171.

Steiner-Khamsi G (2012) Understanding policy borrowing and lending. In: Steiner-Khamsi G and Waldow F (eds) *World Year Book of Education: Policy Borrowing and Lending in Education*. London: Routledge, 3–17.

Steiner-Khamsi G (2013) What is wrong with the ‘What-Went-Right’ approach in educational policy? *European Educational Research Journal* 12(1): 20–33.

Steiner-Khamsi G (2014) Cross-national policy borrowing: Understanding reception and translation. *Asia Pacific Journal of Education* 34(2): 153–167.
Steiner-Khamsi G (2016) New directions in policy borrowing research. Asia Pacific Education Review 17: 381–390.
Stone D (2010) Private philanthropy or policy transfer? The transnational norms of the Open Society Institute. Policy & Politics 38(2): 269–287.
Tansey O (2007) Process tracing and elite interviewing: A case of non-probability sampling. Political Science and Politics 40(4): 1–23.
Teferra D (2005) The BP: The experience and challenges for Africa. In: Tor H and Atle N (eds) The BP and the Shaping of the Future Knowledge Societies. Bergen: University of Bergen, 287–293.
Teferra D (2015) The World Bank’s perspective on African higher education. International Higher Education (54). Available at: https://ejournals.bc.edu/index.php/ihe/article/view/8418/7552 (accessed 20 July 2020).
Vögtle EM (2010) Beyond Bologna: The BP as a global template for HE reform efforts. TranState Working Papers, No. 129, Sonderforschungsbereich 597 im Wandel, University of Bremen.
Vögtle EM and Martens K (2014) The BP as a template for transnational policy coordination. Policy Studies 35(3): 246–263.
Vuban JA (2018) The influence of the BP on the harmonization of Cameroonian HE. PhD Thesis. University of York, UK.
Waldow F (2009) Undeclared imports: Silent borrowing in educational policy-making and research in Sweden. Comparative Education 45(4): 477–494.
Watts DJ (2003) Six Degrees: The Science of a Connected Age. New York: Norton.
Wellington JJ (2000) Educational Research: Contemporary Issues and Practical Approaches. London: Continuum.
Woldegiorgis ET (2018) Policy travel in regionalisation of HE: The case of the BP in Africa. In: Curaj A, Deca L and Pricopie R (eds) European HE Area: The Impact of Past and Future Policies. Dordrecht: Springer, 43–59.
Woldegiorgis ET, Jonck P and Goujou A (2015) Regional HE reform initiatives in Africa: A comparative analysis with the BP. International Journal of HE 4(1): 224–253.
Woldetensae Y (2013) African Union Commission’s Continental Initiatives in HE. Bayreuth, Germany: Africa Union Commission.
World Education News and Reviews (2006) Education in the Maghreb – Algeria, Morroco & Tunisia. Available at: https://wenr.wes.org/2006/04/wenr-apr-2006-education-in-the-maghreb-algeria-morocco-tunisia (accessed 9 January 2019).
Zahavi H and Friedman Y (2019) The Bologna process: An international higher education regime. European Journal of Higher Education 9(1): 23–39.
Zgaga P (2006) Looking Out: The Bologna Process in a Global Setting – On the ‘External Dimension’ of the BP. Oslo: Norwegian Ministry of Education and Research.
Zgaga P (2019) The Bologna Process in a global setting: Twenty years later. Innovation: The European Journal of Social Science Research 32(4): 450–464.
Zmas A (2015) Global impacts of the BP: International perspectives, local particularities. Compare: A Journal of Comparative and International Education 45(5): 727–747.

Author biographies

Elizabeth Agbor Eta (PhD) is a senior researcher at the Center for Research on Lifelong Learning and Education, University of Turku, Finland and the Project Director at GraphoGame. She has written extensively on the spillover effect of the Bologna Process on the Cameroonian higher education system. Some of her recent publications on the Bologna Process include: ‘Enhancing graduate employability in Cameroonian universities through professionalization in the context of the “Licence-Master-Doctorat” Reform’ (in Higher Education Policy, 2018); ‘Educational policy borrowing in the Cameroonian higher education system: A debatable paradigm from stakeholder perspectives’ (with Vuban AJ in Forum for International Research in Education 2018); ‘Process of transfer and reception of Bologna Process ideas in the Cameroon higher education system’ (with Kallo J and Rinne R in European Education Research Journal 2018); and ‘Global
references, local translation: Adaptation of the Bologna Process degree structure and credit system at universities in Cameroon’ (with Vubo EY in *Globalisation, Societies and Education* 2016).

Zachary Y Mngo is a highly experienced international professional in educational leadership with a PhD in higher education administration, an EdS in K-12 educational administration, and an MA and a BA in English Language and Literature. He has more than 25 years of administrative and teaching experience both in K-12 and higher education having worked in diverse teaching and leadership positions in education across three continents. Among others, he has worked as a vice principal, principal, superintendent, internship coordinator, lecturer, assessment director and college dean. He is currently Assistant Professor at Prince Mohammad bin Fahd University, Saudi Arabia, and Chair of the Core Curriculum Program.