United Nations
Educational, Scientific and
Cultural Organization

International Bureau
of Education

In-Progress Reflection No. 41

On *Current and Critical Issues in Curriculum, Learning and Assessment*

Towards indigenous curricula

Title	**Towards indigenous curricula**
Series	Current and Critical Issues in Curriculum, Teaching, Learning and Assessment
In-Progress Reflection	January 2021, No. 41 IBE/2021/WP/CD/41
IBE-UNESCO Director	Yao Ydo
Coordination and Production Team	Lili Ji, Perrine Arsendeau, Kosala Karunakaran
Author	Phillipe Jonnaert, Pascal Ndinga, Moussadak Ettayebi, Abdoulaye Barry, Lori Rabinovitch, Raïssa Malu[1]
Keywords	Education system, curriculum, holistic curriculum, indigenous curriculum, curriculum restructuration, curriculum reform, curriculum framework, program of study, national languages

[1] Philippe **Jonnaert**, Ph.D., is a retired full professor from the University of Québec in Montréal (UQAM) and from the University of Sherbrooke, both in Canada and from the Catholic University of Louvain (CUL) in Belgium; he is a founding member and director (until 2017) of the UNESCO Chair in Curriculum Development. Today he is president of the *Curriculum Support Office for Education Systems* (BACSE International); jonnaertp@gmail.com http://bacseinternational.com

Pascal **Ndinga**, Ph. D., is a full professor and director of the Department of Education and Pedagogy at the University of Québec in Montréal (UQAM); ndinga.pascal@uqam.ca

Moussadak **Ettayebi**, Ph. D., has taught at several universities, and is a senior consultant and director of international projects in general education, technical education, and university training; moussadak.ettayebi@uqtr.ca

Abdoulaye **Barry**, Ph. D., is a senior expert in international education programs and is retired from UNESCO where he worked at the *International Institute for Capacity Building in Africa* (IICBA) in Addis Ababa, Ethiopia and the *UNESCO Regional Office for Education in Africa*, Dakar, Senegal (BREDA); bendebarry@gmail.com

Lori **Rabinovitch**, Ph. D., is a retired international education consultant. For several years, she helped develop curriculum for the Province of Québec, Canada and subsequently worked on curriculum reform projects in Africa, the Middle East, and South America on behalf of UNESCO's *International Bureau of Education*. lorirabinovitch@gmail.com

Raïssa **Malu**, is an international education consultant, and director of the non-profit, *Investing in People.* She is responsible for the Technical Support Unit of a major World Bank project for the Ministry of Primary, Secondary, and Technical Education, Democratic Republic of Congo. rmalu@peqpesu.com

Table of Contents

Towards indigenous curricula[2]

Abstract

Based on its coauthors' experiences and contributions related to educational reform projects, particularly in Sub-Saharan Africa, the current text presents a series of reflections focused on the methodology of curriculum development. The coauthors' first principle of engagement is their profound conviction that a curriculum must be a product of the locality. With this end in mind, they suggest the levers, situated within the restructuration process, through which an indigenous curriculum can be realized: adopting a critical distance from international models; anchoring the process of curriculum development within national contexts; involving community partners throughout the curriculum development process as a form of learning-in-action; applying local curriculum frameworks; and, using a bank of representative situations. At every stage of curriculum development, including and especially implementation at the school level, the coauthors insist on prioritizing a return to national languages. The conclusion of this text elucidates the tensions and paradoxes with which curriculum reform projects are routinely confronted.

Keywords

Education system, curriculum, holistic curriculum, indigenous curriculum, curriculum restructuration, curriculum reform, curriculum framework, program of study, national languages

[2] Adaptation of a text accepted for publication in: Abero, B. and Thievenaz, J. (Eds). *Traité de méthodologie de la recherche en Sciences humaines. Enquêter dans les métiers de l'humain*, (to be published in 2022): Jonnaert, Ph., Ndinga, P., Ettayebi, M. and Barry, A. (to be published in 2022). *Co-construire des outils de professionnalisation endogènes en Afrique : le cas des référentiels curriculaires.*

Abbreviations

ADEA:	Association for the Development of Education in Africa
BACSE International:	Curriculum Support Office for Education Systems
BREDA:	UNESCO Regional Office for Education in Africa, Dakar
BRS:	Bank of representative situations
CESA:	Continental Education Strategy for Africa
CONFEMEN:	Conference of Ministers of Education of Countries Sharing French
CUL:	Catholic University of Louvain
DEP:	Department of Education and Pedagogy
DGRI:	Directorate-General for Research and Innovation
DR. Congo:	Democratic Republic of Congo
ECWAS:	Economic Community of West African States
ECCAS:	Economic Community of Central African States
ELAN:	School and National Language
FDA:	French Development Agency
IBE:	International Bureau of Education (UNESCO)
IFEF:	Institute for La Francophonie for Education and Training
IICBA:	International Institute for Capacity Building in Africa (UNESCO)
IOF:	International Organization of La Francophonie
IS:	International Standards
LMD:	Licence, Masters, Doctorate
LCF:	Local Curriculum Framework
MPSTE:	Ministry of Primary, Secondary and Technical Education
NCTM:	National Council of Teacher of Mathematics
OECD:	Organization for Economic Co-operation and Development
PH:	Pedagogy of Humanities
PASEC:	Support for Monitoring Education Systems of Countries Sharing French (CONFEMEN)
PEQPESU:	Education Project for Monitoring the Quality and Pertinence of Secondary and University Teaching
PISA:	Program for International Student Assessment
PS:	Program of Study
SMQE:	Support for Monitoring the Quality of Education
SEDPBE:	Strategic Education Development Program for Basic Education
TSU:	Technical Support Unit
UAF:	University Agency of La Francophonie
UIS:	UNESCO Institute for Statistics
UQAM:	University of Québec in Montréal

Towards indigenous curricula

> "The right to quality education is the right to meaningful and relevant learning. However, learning needs vary across communities in a diverse world. Relevant learning must therefore reflect what each culture, each human group, defines as what is required to live in dignity. We must accept that there are many different ways of defining the quality of life, and thus very diverse ways of defining what needs to be learned."
>
> UNESCO (2015a: 34)

Introduction and context

The global context within which contemporary curriculum development work is taking place, is increasingly comprised of education systems situated in complex, uncertain, and fragile environments. This climate of political, economic, social, environmental, and health-related ambiguities obliges education systems, at best, to undergo minimum adjustments at the school level but, more frequently, to initiate widespread curriculum reform throughout the entire system. Although the curriculum does not visibly and immediately impact its wider social setting, it plays the role of catalyst on multiple fronts, "Educationists agree that the curriculum is a vital foundation for learning-related educational reform." (IBE, 2013b**:** 3). In fact, some educators equate the role of the curriculum within an education system with the role of a constitution within a nation (Jonnaert, Ettayebi and Defise, 2008). The current worldwide COVID-19 pandemic has destabilized schools and underscored their frailties. It has also highlighted the importance of having a flexible curriculum, unique to local circumstances and populations, that can be easily and rapidly adapted to new realities and norms. With a diversity of pedagogical activities presented at a distance, face-to-face, or during on-line classes, individual and intergenerational involvement have included entire families in the education of their youth. As a result of school closures in many regions of the world, educators have adjusted their education systems and curricula to meet the constraints posed by the pandemic. (Webinar of 30.10.2020 of the International Bureau of Education, IBE-UNESCO)[3].

The curriculum is at the core of the reflections proposed in this text. The coauthors present their approach to the development and implementation of curriculum reforms, together with various concepts formulated and validated through lived experiences in many Sub-Saharan African countries, as well as in North America. The coauthors point to the integral role played by community educators in the work of curriculum development, a role that is enhanced when partners disengage from international models. The orientations proposed here support indigenous curriculum reforms founded on change levers that lead to flexible and holistic curricula.

From within this perspective, the use of national and regional languages constitutes a fundamental component, particularly in early childhood education: to learn to read and write in one's first language. For example, in the Democratic Republic of Congo where the official first language is French, the majority of the population employs the French language primarily in administrative and teaching situations. The everyday lives of citizens, with their shared values and community cultures, are almost always expressed through local or regional languages. In the day-to-day lives of Congolese people, the use of French is either superficial or totally absent and yet, at every level

[3] IBE, Webinar of 30.10.2020: *Covid-19 lessons and curriculum – related actions: Challenges for developing countries*: https://www.youtube.com/watch?v=UZteXYBBEFM&feature=youtu.be

of education today, the French language – a foreign language to a large segment of the population – remains the language of instruction. It is inconceivable to expect teachers to create contextualized learning situations through which students construct meaning, if the language of instruction is not the local, regional, or national language of the learners. In the Democratic Republic of Congo[4], banks of representative situations, textbooks, some programs of study, and video clips of program content, are now being translated, and more recent pedagogical resources are being designed and realized in national languages from the outset (Lingala, Swahili, Kikongo and Tshiluba)[5].

Today in Africa, there are several development projects focusing on national languages. The program, 'School and National Language' (ELAN*)* was launched in Africa in 2012 with support from the International Organization of La Francophonie (IOF), the Institute for La Francophonie for Education and Training (IFEF, created in 2015) and, the University Agency of La Francophonie (UAF). This program supports many Sub-Saharan African countries that are in the process of developing multilingual education programs in harmony with their respective linguistic backgrounds (for example, national languages and French), with the goal of improving the overall quality of their education systems[6]. Another example, this one from Côte d'Ivoire, is a project designed to facilitate digital literacy in a student's mother tongue (laptop computers, tablets…) and is supported by the Association for the Development of Education in Africa (ADEA), and the Didier Drogba Foundation, initiated by the internationally known soccer player[7].

School teaching and learning that employs regional or national languages helps students construct a sense of identity at community, regional and national levels through shared customs and traditions, while also leading to an overall improvement in the quality of their school learning. An indigenous curriculum insists on a return to local and national languages at school without minimizing the importance of learning international languages to broaden career opportunities (*bi-plurilingual* projects: national languages and at least one international language). By prioritizing local and national languages within the perspective of a bi-plurilingual education system, school learning reflects the goals of the community, while allowing students to imagine the broader world to which they also belong. After much reflection, the coauthors of this text are convinced that a return to national languages within a bi-multilingual perspective represents the key to successful indigenous curricula.

The first section of this text examines several examples of curriculum projects to illustrate the scope and interest in curricula (curriculums[8]) situated in regional realities, and increasingly disengaged from international models. The second section identifies a series of levers intended to support the construction of indigenous curricula. The third section addresses the functions of curriculum frameworks within a local setting. From the perspective of developing indigenous curricula, a bank

---

[4] Source: https://peqpesu.com/

[5] Common languages in the Democratic Republic of Congo are essentially: French, Lingala in the west of the country and Swahili in the east of the country. There are more than 200 local languages in the Democratic Republic of Congo, for example Ngala, Luba-Shaba, Songe, Phende, Kinyarwanda, Shi, Tetela, Zande, etc. Source : https://www.axl.cefan.ulaval.ca/afrique/czaire.htm

[6] Source : https://www.auf.org/nouvelles/appels-a-candidatures/appel-a-projets-de-recherches-actions-elan-2/

[7] Source : https://www.globalpartnership.org/fr/blog/alphabetisation-et-langues-nationales-en-afrique-les-nouvelles-activites-de-ladea

[8] *Curriculums* : plural of *curriculum*, according to the *Dictionnaire de l'Académie Française* : Rule 6, *Les mots empruntés à d'autres langues*.
Consulted on-line May 27, 2020, https://www.dictionnaire-academie.fr/article/A9C5351

of representative situations plays an essential role and is thus an important component of curriculum frameworks. The final section of this text looks at the responsibilities performed by local teams during the various stages of curriculum restructuration. The conclusion offers a general perspective on the coauthors' reflections.

Disengage from international models

It is traditionally understood that the goal of curriculum work is the overall improvement of the personal, social, and cultural lives of students, and this through the inclusive development of their competencies; the curriculum is supported by the administrative and pedagogical action plans of the education system (Jonnaert and Ettayebi, 2007). In one sense, the curriculum is an interface between the broad orientations established in education policies, and the implementation of these policies inside classrooms. The curriculum both encompasses and orientates programs of study.

There are generally five functions attributed to a curriculum (Depover and Jonnaert, 2014; Jonnaert and Ettayebi, 2007):

- *Analyze and interpret* education policies in relation to regional or national orientations and, through curriculum frameworks, translate these policies for the entire education system, including its administration, schools, training centres, teachers, etc.
- *Operationalize* regional or national orientations through the creation of coherent administrative and pedagogical action plans within the education system, and implement control and monitoring mechanisms.
- *Assure coherence* between all aspects of the curriculum and education policies.
- *Permit people to develop and learn* in harmony with their social, historical, religious, cultural, economic, geographic, linguistic, health-related and demographic environments.
- *Adapt and monitor the education system* in relation to a particular society's projects, and help realize these projects through an openness onto the world.

One of the goals of contemporary curriculum development work in African countries is to help local partners progressively disengage from international curriculum models, and begin to embrace both indigenous and global visions. However, this represents a major challenge; still today, many African school systems are imprinted with the remains of former colonial education practices. For example, in the Democratic Republic of Congo, training for primary school teachers is offered at the level of pedagogy of humanities. After the first two years of general secondary education (today referred to as extended Basic Education), a four-year teacher training program is offered for future primary school teachers. This structure corresponds to the teacher training programs that were provided to primary school teachers in Belgium before the independence of the Congo more than a half-century ago (Jonnaert and Barry, 2019; Bouveau, Cerbelle, Koudou and Keylem, 2020). Today, in the Democratic Republic of Congo, there is a movement to adapt this training to the country's everyday circumstances and needs rather than continuing to reproduce an obsolete international model. Many Sub-Saharan African countries wish to develop indigenous curricular approaches, such as Senegal: "*National education is Senegalese and African, helping to develop national languages and resources that allow teachers to connect with their heritage and history, and to assist Senegalese students in developing a sense of identity and belonging*"[9], (Government of Senegal, 1991).

In contemporary curricular debates across Africa and in many other regions of the world, one can discern a preoccupation with how to build an indigenous curriculum that truly reflects the identity

[9] Law N°91-22 from February 16, 1991, Title I, article 6), English translation L. Rabinovitch

and distinctiveness of a particular nation. Under these circumstances, what are the most effective means for supporting the construction of *indigenous curricula*? The coauthors of this text have researched and written a wide range of material, both quantitative and qualitative, much of it based on first-hand work experiences within African education systems, work completed with the Economic Community of Central African States (ECCAS[10]) and with the Economic Community of West African States (ECWAS[11]). The methodological approaches applied throughout these work experiences were designed to limit the influence of international curriculum models or, at the very least, to ensure their contextualization. Increasingly today, this work: adapts the functions of a curriculum to the realities of a particular country; supports the construction of a curriculum by African partners; helps implement community approaches; and, mobilizes national experts to monitor and validate all elements of curriculum reform.

In Niger, for example, before designing and writing new *programs of study*[12], a local team, trained in several national languages, worked with 47 focus groups from different regions across the country. Meetings between administrative authorities, both modern and traditional authorities, and the villagers allowed teams to determine the expectations of the civil society served by community schools (Ettayebi *et al*., 2008). In the Republic of Madagascar, a similar approach was employed during the process of curriculum revision (Ettayebi *et al*. 2010). When the basic education curriculum was reformed in Burkina Faso, local teams formulated a *National guide of indigenous knowledge* based on regional specificities (DGIREF, 2016). Throughout the work described above, a recurrent observation has been the discrepancy between students' school learning and the requirements of the wider community: "*When our students return to the village after a period of time at school, they are no longer capable of carrying out the work required for life in the community*" (Jonnaert, 2011a: 5) Elsewhere in Africa, it has been said that "*schools steal the children, regardless of whether their schooling succeeds or fails*" (Barry, 1998). (Translations, L. Rabinovitch).

The levers that support the construction of indigenous curricula constitute an integral part of the entire process, in part because they help local partners disengage progressively from international curriculum models and address related challenges. The first of these levers is at the core of the curriculum restructuration process.

Potential levers for curriculum restructuration

Figure 1 (below) illustrates the *curriculum restructuration process* (Jonnaert, 2015a). The concept of restructuration (*transposition*, Verret, 1975) encompasses the entire curriculum, and permits one to understand how education policies are modified as they are applied across the curriculum development process; from curriculum frameworks to the elaboration of programs of study to accompanying pedagogical resources and textbooks, education policies are newly interpreted and modified at each stage and according to their applications.

[10] ECCAS: Economic Community of Central African States.
[11] ECWAS: Economic Community of West African States.
[12] Programme (or Program) of Study (PS) is recognized by UNESCO's International Bureau of Education as the equivalent of syllabus: "A document which outlines the aims, selection and sequence of contents to be covered, mode of delivery, materials to be used, learning tasks and activities, expected learning objectives or outcomes, and assessment/evaluation schemes of a specific course, unit of study or teaching subject. It is often used incorrectly as an equivalent of the term 'curriculum'". (IBE Glossary 2013: 55).

This diagram establishes the curriculum as the interface between education policies and classroom practices. In this sense, the curriculum creates a coherent structure through which all educational practices and ideas flow, from pedagogical activities to the everyday learning experiences of students. The intended purpose of curriculum restructuration is to analyze and interpret education policies, rather than to directly affect or modify them. A country's education laws define how teaching and training are organized; education laws both precede and orientate the work of curriculum development, without being altered by this work.

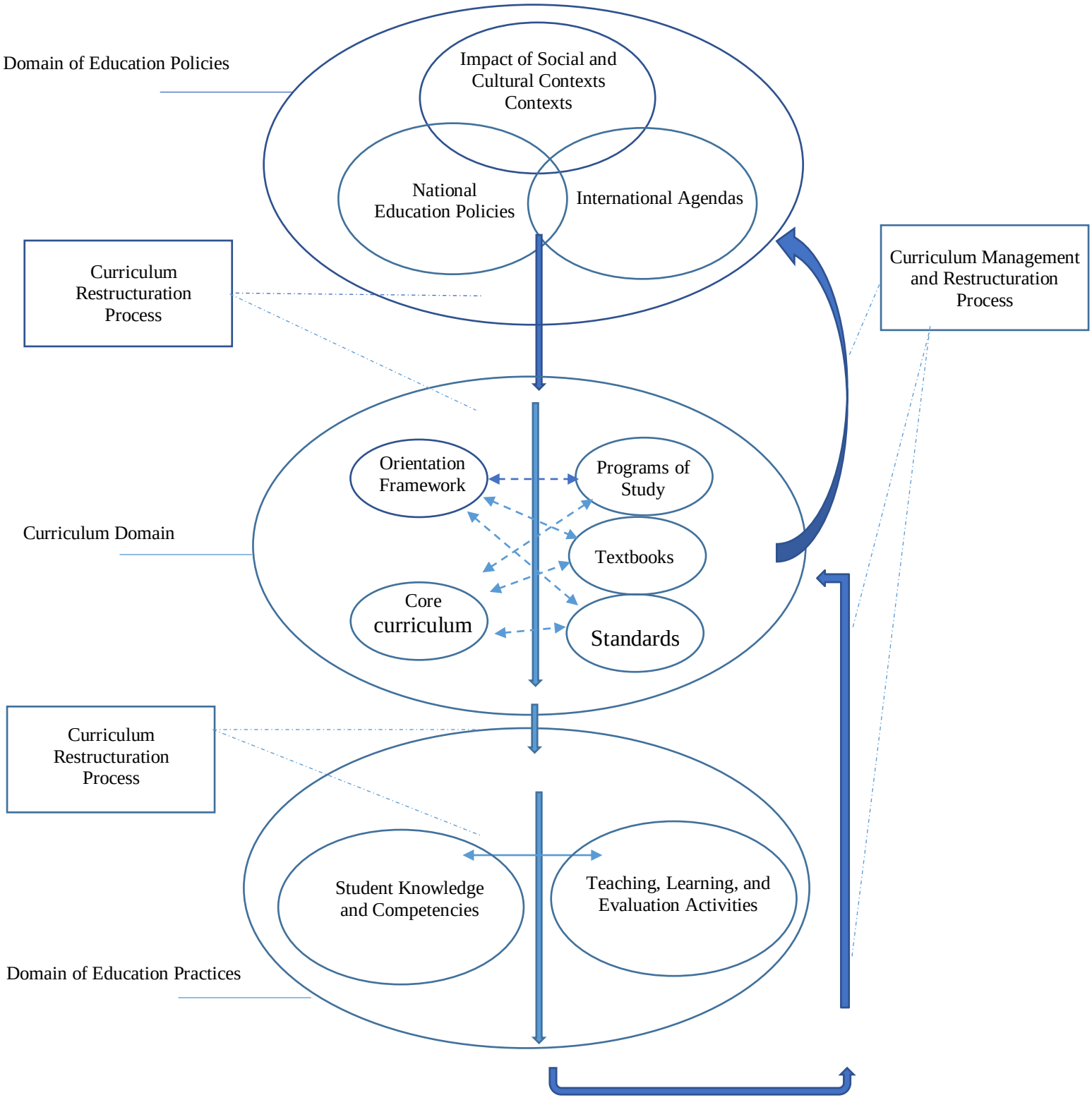

Figure 1: Holistic curriculum and the process of curriculum restructuration, adapted from Depover and Jonnaert (2014: 188).

Curriculum restructuration describes the process through which education policies are constantly interpreted and transformed until they reach pedagogical practices and student learning experiences in the classroom. Curriculum restructuration recognizes the successive stages through which education policies are altered. Guided by education policies, the concept of holistic curriculum harmonizes all curricular elements within this restructuration process with the goal of maximizing the educational experiences of every student. (Depover and Jonnaert, 2014: 189).

From the perspective of indigenous curricula, education policies reflect the interests of State power and politicians more than they represent specific curricular issues. Because a curriculum exists at a distance from education policies, it is able to analyze, synthesize, and interpret policies into a curriculum framework or orientation document. Education policies, created by political authorities within existing governments or parliaments, are subject to the authority of the State. By contrast, local technical teams working on curriculum restructuration, are able to contextualize programs of study and textbooks. Each step in the process of curriculum restructuration (curriculum frameworks, programs of study, textbooks, etc.) becomes a lever through which local teams transform these elements into an indigenous curriculum.

To create substantive curricular content, team members must have access to the necessary and pertinent *local curricular frameworks* and resources.

Local curriculum frameworks

It is no longer the case that curriculum reform work, including the design and writing of programs of study, is characterized by international models containing guidelines for competency development. Increasingly, national teams seek guidance from locally generated curriculum material that addresses a database of needs and resources distinctive to the region, rather than referring only to international standards (IS) (Jonnaert *et al*., 2020). These local curricular parameters serve as the foundation for elaborating programs of study, many of which share the same names as international programs[13]. Too often international standards are applied without taking local, regional, or national realities into account. As a result, both a program's pedagogical approach and related content are not representative of local realities. Pedagogical models, programs of study, and reference material from developed countries are appealing to students who aspire to higher education as well as students who wish to leave Sub-Saharan African countries. Initiatives that originate outside of Sub-Saharan African countries, such as the competency-based approach or structural reforms in higher education aimed at the Bachelor's, Master's or Doctorate (LMD), are often adopted without significant examination, adaptation, or adjustment. This widens the gap between programs of study and the country's education and training needs. The application of local curricular parameters is an important alternative to the standardization of international curricular models, while still allowing countries to integrate international standards into indigenous curricula. At each stage of curriculum restructuration, applying homegrown resources and frameworks is an effective means for elaborating indigenous curricula unique to the community population; the goal is to help African students develop into involved citizens who are concerned with their own growth and the growth of their respective societies.

[13] Examples from Statistics Institute: *National Council of Teacher of Mathematics* (NCTM, 2000); indicators from OECD (2019); standards defined by UNESCO's Institute for Statistics (2013, 2014, 2015); *Glossary of Curriculum Terminology*, UNESCO's International Bureau of Education (2013a).

The Conference of Ministers of Education of Countries Sharing French (CONFEMEN) (2020) is creating a common reference guide containing knowledge and competencies for basic education. The guide is intended for use by member countries participating in a program called, Support for Monitoring Education Systems of Countries Sharing French, CONFEMEN (PASEC) (Report from the Office of Research Studies, KAYEMBE, 2017). This resource will serve as a shared reference guide, containing recommendations for an orientation document; its content will be adjusted and adapted until it is coherent with local curriculum frameworks. A curriculum is an original production, specific to a single education system within one region of the country. It is not exportable from one country to another (Jonnaert, Ettayebi, 2007; Jonnaert *et al.,* 2008; Depover *et al*., 2014; Jonnaert et al., 2020). Curricular decisions must be rooted in the historical, social, economic, and cultural realities of a region.

Methodological perspectives that consider the viewpoints and productions emanating from community partners will facilitate the transition from imported curriculum models to more indigenous approaches. Local partners use original curriculum frameworks to guide their adaptation of productions, while always keeping international standards and agendas[14] within their sightline. Each stage of curriculum restructuration, supported by the local curriculum frameworks and coherent with international standards, builds progressively towards a more indigenous curriculum.

The local curriculum frameworks are professional reference tools or referral systems for education (Danvers, 1992). The purpose of these reference tools is to systematically structure the complexity and specificity of education benchmarks. Etymologically, reference is composed of “re”, a prefix that indicates a backward movement, and “ferre”, which is the Latin radical meaning ‘to carry’. To use a reference guide is to “re-use” a structured system of benchmarks. A reference tool provides users with situations representative of their profession, and allows them to establish and organize options for professional development. (Guillemette *et al*., 2019, p. 13).

Local curriculum frameworks are reference tools specifically created for use in the development of programs of study within a particular context and time period. The content of each local curriculum framework derives from local, regional, and national data, and thus provides guidelines for the construction of indigenous programs of study. The frameworks respond to both community established criteria and the exigencies highlighted by international standards (for example, NCTM, 2000) and resources (UNESCO Institute for Statistics, 2013, 2014, 2015; OECD, 2019).[15]

Reference to several local curriculum frameworks is necessary for the elaboration of any single program of study: orientation guidelines, entry level profiles of students beginning the program, a bank of representative situations (BRS), lists of competencies to be developed, list of essential knowledges, a teaching plan, a school calendar, an exit profile for each level of the program, etc. (Depover *et al*., 2014; Jonnaert *et al*., 2020). While designing indigenous programs of study, national team members must assemble reference tools that incorporate local criteria, and take note of transnational resources and international standards. Within member countries of the Economic

[14] For example, *Education World Forum* organized at Incheon in South Korea in 2015 (UNESCO, 2015a/b; IBE, 2013b).

[15] IS, according to the NCTM, describes the mathematical knowledge and competencies recommended for a particular study cycle. Program writers then make selections, according to international standards and local criteria, of the knowledge and competencies they wish to retain: (i) content is pertinent for the respective locality, region or country based on orientations established in educational policies; (ii) content is inclusive enough to permit program writers to generate additional content, examples, etc. in the same field ; (iii) content permits students to treat situations that are representative of their region or country; (iv) time allotted to the discipline or subject area is realistic and consistent with guidelines established by the region or country.

Community of Central African States (ECCAS) and the Economic Community of West African States (ECWAS), teams also consider conventions established by regional communities and standards set by the Continental Education Strategy for Africa 2016-2025 (CESA 16-25). All of these curricular frameworks are conceived of and written by local teams prior to the commencement of the curriculum restructuration process. The frameworks constitute primary reference tools for the creation of programs of study, program guides, textbooks, evaluation policies, evaluation and monitoring resources, policies for teacher training and continuing education, and policies for career advancement.

Transnational resources and international standards are no longer ascribed a normative status but are understood, rather, as part of a consultative process. Therefore, when teams employ local curriculum frameworks in advance of the restructuration process, this almost guarantees the elaboration of indigenous curricula and programs of study. In a given region, for example, the simple definition of a school calendar must account for natural seasons and production activities related to the environment (calendar of specific agricultural activities or extractions for which student participation is required). Such a school calendar obviously impacts how educational planning, student learning, and evaluation are organized. In the Republic of Madagascar, during cyclone season, the school calendar considers potential impediments to travel resulting from flooding or other types of water inundation caused by torrential rainfalls. An indigenous curriculum understands these important features of the local community, and because the needs of the community are recognized, families are more readily able to mobilize around and support students as they learn to become responsible community members and grow into socially involved actors, acknowledged by their elders as future leaders.

A *bank of representative situations* (BRS) is another lever that favours the adaptation of school activities to local realities.

Bank of representative situations: key reference for developing indigenous curricula

A bank of representative situations defines the situations that students must be able to effectively and appropriately treat by the end of their training. (Jonnaert 2015a/b ; Jonnaert *et al*., 2005, 2011a, 2020 ; Ettayebi, 2007 ; Ettayebi *et al.*, 2008 ; Depover *et al*., 2014). These situations are called representative because they reflect the everyday realities of students' lives within their local communities.

Banks of situations are an essential resource for writing programs of study and are developed by community teams. In many instances, countries carry out interviews and surveys with community members (*focus groups*) and the information and data collected are used to create a bank of situations (see first section of text for examples from Niger and Republic of Madagascar, Ettayebi *et al*., 2009). Following these preliminary investigations, local teams begin to identify which representative situations are best suited to the accommodation and contextualization of program content; next, a system of classification is imposed. Each category groups situations that exhibit similar characteristics, and these groupings are called *families of situations*. The effective treatment of each situation within a family of situations, requires students to apply the same types of actions, approaches, essential knowledge, and competencies (Jonnaert *et al*., 2020). The treatment of families of representative situations becomes the focus of student learning. By locating essential knowledge and competencies within authentic learning situations that are familiar and make sense to students, the actions and tasks undertaken are realistic and meaningful (Ndinga, 2013). This

type of learning is significant and motivating. In the Republic of Congo, the new programs of study in the Science Subject Area, and in the Science and Humanities Subject Area[16] are supported by banks of representative situations (Jonnaert *et al*., 2018). Every program template begins with a representative situation through which students construct essential knowledge and develop competencies related to the particular program of study. These situations are taken directly from the everyday lives of students, which is why they are significant for learning. A similar approach was utilized by local teams responsible for rewriting the programs of study in Brazzaville[17].

The use and application of a bank of representative situations during each stage of curriculum restructuration, facilitates the creation of indigenous curricula, especially when the entire process is constructed and validated by local and national teams.

Engage local teams in development and validation

Local partners, often accompanied by the coauthors' respective teams, are responsible for decisions and actions taken throughout the curriculum reform process. Pedagogical training for members of community teams, including both school administrators and teachers, positions them at the centre of the action. Examples provided here illustrate this point.

In the Republic of Congo, during the curriculum restructuration process (Brazzaville project), local teams applied specific criteria to analyze their country's education policy documents. Based on these results, criteria were redefined in relation to homegrown realities; specific indicators were created for each criterion. Once the criteria and indicators were established, local teams generated an analytical grid intended to reveal connections between the country's various educational policy documents; the subsequent critical analysis helped construct a complex and pluralistic vision focused on the future. Participants synthesized this work into a single document, highlighting the major orientation principles articulated in the education policies; these are the principles that guide the work of curriculum restructuration. Local curriculum frameworks are indispensable reference tools not only for the revision of programs of study, but also for planning and coordinating pedagogical activities at the school level (Jonnaert, 2015c, 2019; IOF, 2016). In several countries where similar work has taken place, local partners have worked directly on the analysis of education policies from their respective countries. This was the case in Côte d'Ivoire (Kourouma *et al*., 2015) and in Niger (Ettayebi, 2007; Ettayebi *et al*., 2008). Through these *training-in-action* learning situations, teams generate a local curriculum framework: the resulting orientation document, adopted by the Council of Ministers, becomes the foundational document defining curriculum guidelines. It is the reference tool that orients actions and key decisions at the core of the curriculum reform project, and is a valuable reference tool for implementing a curriculum reform. It is accompanied by the *Strategic Education Development Program for Basic Education* (PDSEB) (IOF, 2016).

Generated and written by local partners, the curriculum framework becomes a primary curriculum reference tool. Because it is constructed on site, its point of focus is the creation of indigenous curricula and programs of study. In the examples cited, the strategy of training-in-action continued

[16] Project PEQPESU, Ministry for Primary, Secondary, and Technical Education, Republic of Congo: Education Project for Monitoring the Quality and Pertinence of Secondary and University Teaching (financed by World Bank, 2016-2021).

[17] SEDPBE Project: Strategic Education Development Program for Basic Education, Republic of Congo, Brazzaville, (financed by World Bank).

throughout the curriculum restructuration process, with local teams initially receiving support from the coauthors' teams, but eventually becoming autonomous actors with progressively less input from international experts. The centrality of national teams throughout the process of curriculum restructuration and the elaboration of new programs of study and accompanying pedagogical material, is a strong determinant in the successful creation of indigenous curricula.

All of the work described here is certified through a series of cascading validations. In addition to the local technical teams in charge of the overall curriculum reform project, administrators and inspectors responsible for the country's education system, as well as teaching personnel, are expected to comment on the work and formulate revisions (Jonnaert *et al*., 2020). Initially, new programs of study and accompanying guides, plus other pedagogical resources, are tested internally by the writing teams. Local technical teams, comprised of subject area specialists for the new programs of study, validate productions according to pre-established criteria. Internal validations occur every time an important segment of the program is rewritten. Once the entire program of study is rewritten and validated internally, committees prepare group interviews (*focus groups*) during which the program is subjected to another level of pre-validation. Not only are pedagogical teams and personnel from teacher training institutions included in this entire validation process, but also school principals and various partners from the social milieu. The internally validated programs of study are analyzed in detail, and objections, criticisms, and requests for adjustments are formulated throughout regional interviews across the country.

The *rate of acceptance* of the new programs of study (Jonnaert *et al*., 2018) is verified using a well-defined questionnaire (adapted from Jonnaert *et al*., 1990) with a *5-level Likert scale*, ranging from a high level of acceptance to rejection. During this stage, it becomes obvious whether or not the new programs are ready for classroom implementation. Revised programs of study that are rejected by consultative committees are modified and are then subjected to another round of rigorous pre-validation. Only programs of study that receive a reasonably high degree of acceptance (an acceptance rate of 80% is judged sufficient, Jonnaert *et al*. 2018) will be implemented in classrooms. This underscores the mandatory ethical feature of the pre-validation process, which is that the acceptance of pedagogical innovations and new programs of study be verified before they are tested more extensively. These programs of study could be contraindicated for a particular grade level and ultimately create learning difficulties for a given segment of the student population. Once the pre-validation process leads to a sufficiently high level of acceptance, the new programs of study are considered ready for classroom implementation. An additional reason for strict validation procedures is to mitigate the risks of other education teams, or partners from the social milieu, blocking the implementation of the new programs. Only programs of study that have been pre-validated in designated school districts, school settings, and classrooms, and have received an acceptance rate of at least an 80%, are implemented. Teaching personnel must be trained to test the new programs of study to increase the likelihood of successful implementation. Local writing teams are present throughout the testing or piloting phase. They complete observation grids and analyze positive and negative features of the teaching-learning-and evaluation process.

The structure of cascading validations permits multiple players within the education landscape to become increasingly familiar with the new programs of study, and facilitates their eventual adoption by teaching personnel who have played an active role since their inception. From this perspective, the various education partners who validate the new programs of study and who are personally invested in the overall quality of education, are participating in the construction of indigenous curricula.

Conclusions

The coauthors of this text have accompanied curriculum reform projects in several countries, many of them in Sub-Saharan Africa; based on these experiences, they contextualize the concept of curriculum within the realities of a country. Here they propose several levers intended to support the development of indigenous curricula; all related actions and productions are specific and unique to a particular region and rooted in the socio-historic, cultural, economic, and philosophic values and identities of a local population. They strongly advocate a return to national languages as the languages of instruction to elevate issues of identity and belonging, intrinsic to the use of one's first language. This does not exclude the importance of teaching international languages for the purpose of career development. The coauthors favour a bi-plurilingual approach, through which a national language is used to learn at least one international language. Throughout the methodological reflections articulated here, a recurrent tension exists between situating curricula in local contexts while also ensuring that students are receptive and open to the outside world. The coauthors introduce the idea of creating local curriculum frameworks to generate program content; these are intended to combine locally generated criteria with essential knowledge and benchmarks recommended by international standards. The coauthors endorse the development of indigenous curricula that responds to local community education and training needs. Without undervaluing international education models, models through which the coauthors themselves have benefitted, they nevertheless propose a critical stance towards transnational approaches to education. This article attempts to navigate the reciprocal relationship between these two poles.

Following years of first-hand experience with curriculum reform projects in local settings, the coauthors have repeatedly witnessed the degree to which curriculum restructuration is faced with compromise. In principle, reference to education policies constitutes the key to curriculum work. The role of the curriculum is to translate education policies into pedagogical practices and, ultimately, learning experiences at the classroom level. However, this path is often hampered by the transposition process. At every stage of curriculum restructuration, education policies are interpreted and transformed. The coauthors have witnessed multiple junctures where competing policy interpretations and conflicting social and cultural priorities result in accommodations and concessions. The words of C. Lévis-Strauss, cited by Enthoven and Burguière (2009), bring a degree of clarity to the precarious nature of an indigenous curriculum: "(…) My job as an ethnologist, the direct or indirect study of societies very different from our own and different from each other, has made me understand that no real society or possible society can ever be completely transparent at a rational level. A society is not constructed from a system. A society is, first and foremost, constituted from its past, its values, and its ways of doing things: a set of irrational factors against which theoretical ideas, claiming to be rational, are unrelenting" (Lévi-Strauss, Enthoven and Burguière, 2009)[18]. Every curriculum anchored in the unique realities of a particular societal context, is automatically confronted by the irrationality described by C. Lévi-Strauss. This explains why curricular work is regularly met with compromise: "All curricula are situated within this paradox: defined by rational systems, they evolve out of the irrationalities of a given society. A certain portion of the work we call curriculum analysis, remains hidden and inaccessible to researchers." Jonnaert (2011b:142). (Translation L. Rabinovitch).

[18] Interview with Claude Lévi-Strauss carried out in 1990 for the *Nouvel Observateur* and found in number 75 of the *Nouvel Observateur 2009*. This special issue was devoted exclusively to Lévi-Strauss, cited in Jonnaert 2011b. (Translation L. Rabinovitch)

References

Barry, A. (1998). *L'apport des parents à la définition des nouvelles fonctions de l'enseignement primaire en République de Guinée.* Doctoral Thesis supervised by G. Goyette and A. Grandbois, supported through the University of Québec in Montréal, February 12, 1998.

Bouveau, P., Cerbelle, S., Koudou, O. and Keylem, M (2020). *Une radioscopie de la formation initiale des enseignants, (primaire et secondaire). Étude comparative sur huit pays*. Paris : AUF and AFD.

Bureau international de l'éducation de l'UNESCO. (2013a). *Glossary of Curriculum Terminology.* Geneva : IBE, UNESCO. [On line].

Bureau international de l'éducation de l'UNESCO. (2013b). *L'apprentissage dans l'Agenda pour l'éducation et le développement post 2015.* Geneva : IBE, UNESCO.

CONFEMEN (2020). *Étude exploratoire des curricula des pays en vue de la mise en place d'un référentiel de compétences*. Basic Education. Dakar: CONFEMEN, workshop, March 2 and 3, 2020. [On line].

Danvers, F. (1992). *700 mots-clés pour l'éducation.* Paris : Presses universitaires de Lille.

De Ketele, J.-M. (2009). L'évaluation de l'école par les standards internationaux. *Revue internationale de Sèvre*, *52*, 69-76. [On line].

Depover, C., Jonnaert, P. (2014). *Quelle cohérence pour l'éducation en Afrique. Des politiques au curriculum. Hommage à Louis D'Hainaut*. Brussels : De Boeck Supérieur.

Enthoven, J.-P., Burguière, A. (2009). Un artisan, pas un maître penseur. Ce que je suis par Lévi-Strauss, interview with Nouvel Observateur in 1980, *Nouvel Observateur*, Special issue, November-December 2009, (31), 30-36, cited in Jonnaert, 2011b.

Ettayebi, M., Rajohnson, L. (2010). Les situations de vie et leur intérêt en formation pédagogique, in D. Masciotra, F. Medzo, P. Jonnaert, (eds.). Vers une approche située en éducation : réflexions, pratiques, recherches et standards. *Les Cahiers scientifiques de l'Association Francophone pour le Savoir (ACFAS)*, *111*, 99-117.

Ettayebi, M., Tahirou, K., Goza, N-A., Masciotra, D. (2008). Élaboration de programmes d'études basés sur le traitement compétent de situations de vie. In M. Ettayebi, P. Jonnaert, R. Opertti (eds.), *Logique de compétences et développement curricula ire : débats, perspectives et alternative pour les systèmes éducatifs* (p. 149-166). Paris : L'Harmattan.

Ettayebi, M. (2007). Regards croisés sur la réforme du curriculum au Niger et au Rwanda. In L. Lafortune, M. Ettayebi, P. Jonnaert (eds.), *Observer les réformes en éducatio*n, (p. 169-198). Québec : Presses de l'université du Québec.

Gouvernement du Sénégal (1991). Law N°91-22, February 16, 1991, on the orientation of national Education, modified [On line].

Guillemette, S., Vachon, I., Guertin, D. (2019). *Référentiel de l'agir compétent en conseillance pédagogique en soutien à la réussite des élèves*. Montréal : Les éditions JFD Inc.

Institut de statistique de l'UNESCO (UIS) (2015). CITE 2011. *Guide opérationnel. Directives pour la classification des programmes éducatifs nationaux et des certifications correspondantes.* Montréal: UIS, UNESCO. [On line].

Institut de statistique de l'UNESCO (2014). *Domaines d'études et de formation de la CITÉ 2013 – (CITE – F).* Montréal : UIS, UNESCO. [On line].

Institut de statistique de l'UNESCO (2013). *Classification internationale type de l'Éducation – CITÉ 2011*. Montréal : UIS, UNESCO. [On line].

JI, L. (2015). Comprendre le curriculum holistique : la clé pour l'effectivité des travaux curriculaires. In P. Jonnaert, G. Kpazaï, M. Kei (dir.) Au-delà du LMD : quelle qualité pour l'enseignement supérieur en Afrique ? *Assempe. La revue universitaire des sciences de l'éducation*, *5*, 17-26.

Jonnaert, Ph. (2020). *Processus de révision des curricula existants du primaire et du premier cycle du secondaire en République du Congo (Brazzaville). Étude comparative sur l'éducation de base élargie. Impact différé des programmes éducatifs en Mathématiques, en Français et en SVT, au cycle primaire et au cycle secondaire*. Brazzaville : Projet d'appui à l'amélioration du système éducatif, (PRAASED), World Bank. (Research Report; contract n° 035/2019/MEPSA/PRAASED-UCP).

Jonnaert, Ph., (2015a). Vers une reproblématisation des assises d'une théorie du curriculum. *Linguarum Arena, Revista do programa doutora em didactica de linguas da universitdade do Porto*, *6*, 9-28.

Jonnaert, Ph. (2015b). *Guide pour l'élaboration d'un programme éducatif dans la perspective de développement de compétences par les apprenants*. Genève : UNESCO. International Bureau of Education (IBE) / Montréal : Université du Québec à Montréal (UQAM) (Research Report). [On line].

Jonnaert, Ph. (2015c). *Indicateurs pour une évaluation globale d'un curriculum. Document 2 : note théorique et indicateurs pour un processus d'évaluation*. Bureau international de l'éducation (IBE, UNESCO, contract N°4500264007) / Montréal : Université du Québec à Montréal (UQAM) (Research Report, UNESCO, contract N°4500264007). [On line].

Jonnaert, Ph. (2011a). Des programmes d'études endogènes articulés aux standards internationaux en République du Niger. *ACDI-CIDA, Education Newsletter*, *3.* 4 -5.

Jonnaert, Ph. (2011b). Curriculum, entre modèle rationalité et irrationalité des société, Revue internationale d'éducation de Sèvres, 56, 2011, 135-145. [On line].

Jonnaert, Ph., Depover, C., Malu, R. (2020). *Curriculum et situations*. Brussels : De Boeck Université.

Jonnaert, Ph., Barry, A. (2019). *Étude sur la réforme de la formation initiale des enseignants des six premières années de l'éducation de base en République Démocratique du Congo*

(Kinshasa). Addis Ababa : Institut international de renforcement des capacités en Afrique de l'UNESCO (IICBA) and Kinshasa : Projet d'amélioration de la qualité de l'éducation (PAQE), World Bank (Research Report, contract n° IICBA/4500395233).

Jonnaert, Ph., Fall, O., Sampson, S., Malu, R., Antoun, Z., Rabinovitch, L., Sambote, J. (2018). A pre-validating process for new programmes of study within the science subject area for the final cycle of basic education in the Democratic Republic of Congo, *In-Progress Reflection*, *24*, on *Current and Critical Issue in Curriculum, Learning and Assessment*. Geneva: International Bureau of Education, UNESCO (IBE). [On line].

Jonnaert, Ph., Ettayebi, M., Defise, R. (2008). *Curriculum et compétences*. Brussels : De Boeck Université.

Jonnaert, Ph., Ettayebi, M. (2007), Le curriculum en développement, un processus dynamique et complexe. In L. Lafortune, M. Ettayebi, P. Jonnaert (eds.). *Observer les réformes en éducation* (p. 15-32). Québec : Presses de l'université du Québec.

Jonnaert, Ph., Lauwaers, A. (1990). Quelles questions poser pour rédiger un programme? *Bulletin de psychologie et d'orientation scolaire*, *2*, 103-124.

KAYEMBE (2017). Étude exploratoire des curricula dans les pays PASEC membres de la CONFEMEN en vue de l'élaboration d'un référentiel de connaissances et compétences dans les domaines fondamentaux de l'éducation de base. Rapport final de recherche. Dakar : PASEC/CONFEMEN.

Kourouma, I., Kouakoussui, J-B. (2015). Réformes et changements. In P. Jonnaert, G. Kpazaï, M. Kei (eds.). Au-delà du LMD : quelle qualité pour l'enseignement supérieur en Afrique. *Assempe. La revue universitaire des sciences de l'éducation*, *5*, 114-124.

Luke, A. (2008). Curriculum in context. In F.M. Connely, M.F. H. & J. Fillion (eds.). *The Sage Handbook of Curriculum and Instruction* (p. 145-150). London: Sage publication.

National Council of Teacher of Mathematics (2000). *Principles and Standards for School Mathematics.* Reston (VA) The National Council of Teachers of Mathematics Inc. [On line].

Ndinga, P. (2013). L'authenticité des tâches d'évaluation en milieu scolaire: état des lieux. In G. Raîche, P. Ndinga, H. Poirier (eds.) *Des mécanismes pour assurer la validité de l'interprétation de la mesure en éducation* (p. 111-129). Québec : Presses de l'Université du Québec.

OCDE (2019). *Regards sur l'éducation 2019: Les indicateurs de l'OCDE*. Paris : Éditions OCDE. [On line].

OIF (2016). Burkina Faso : Le cadre d'orientation curriculaire (COC) de l'éducation de base, *Média terre, Le système d'information mondial francophone pour le développement durable*, n° January 29, 2016 [On line].

Opertti, R., Ducombe, L. (2011). Vision curriculaire. Perspective d'ensemble et débats contemporains. *Revue internationale d'éducation de Sèvres*, *56*, 101-110.

UNESCO (2015a). *Forum Mondial sur l'éducation 2015, Incheon, South Korea, 19-22 May 2015*. Paris : UNESCO. [On line].

UNESCO (2015b). *Déclaration d'Incheon. Éducation 2030*. Paris : UNESCO. [On line].

Union Africaine (2016). *Stratégie continentale de l'éducation 2016-2025, CESA 16-25*. Addis-Ababa, (Ethiopia) UA.

Verret, M. (1975). *Le temps des études*. Lille: Reproduction of Theses, vol. I and II.