Analyzing the literature on education governance over the last 71 years

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Abstract

Purpose – This article results from a survey on national and international research articles published from 1947 to 2018 that aimed to produce a theoretical framework and description of education governance.

Design/methodology/approach – The study was based on bibliographic research techniques. Its bibliometric analysis (Pritchett, 2001) focused on three structural indicators: 1) keywords, 2) most relevant journals and 3) most productive researchers. A survey was made targeting national and international research articles on education governance published from 1947 to 2018 as available on Scopus.

Findings – The survey pointed out the fundamentals of the education governance dimensions as posited in Hufty's (2011) Governance Analytical Framework, namely: problems, social norms, actors, nodal points and processes.

Originality/value – The study provides the theoretical framework for establishing operational definitions of aforementioned dimensions that can be used in an education governance assessment instrument.

Keywords Education governance, Basic education system, Governance analytical framework (GAF), Bibliometrics

Paper type Literature review

1. Introduction

In 2015 the United Nations (UN) established the new Sustainable Development Goals (SDGs). SDG No. 4 (or SDG4) stands out because of its ambitious purpose: to ensure equitable, quality inclusive education and lifelong learning opportunities for all (UN, 2017b). The goals have not been reached yet for nearly any of the indicators within the SDG4 (UN, 2017a), which entails that data remain to be produced or no international standard has been defined for measuring the various constructs of quality education. Part of the challenges ahead includes implementing governance structures in the education system (Møller & Skedsmo, 2015; Vidovich & Currie, 2011; Woelert & Millar, 2013).

In Brazil the main legal frameworks guaranteeing access to education are 1) the Constitution (Constituição da, 1988), 2) the Guidelines and Frameworks for National Education (Lei de Diretrizes e Bases da Educação Nacional, 1996 – Act No. 9,394, as of 1996) and 3) the National Education Plan (Nacional de Educação, 2014 – Act No. 13,005, as of 2014). Brazil has advanced toward universal access to education, but the high rates of failure, drop-out and absenteeism and the students' low performance in cognitive assessments have been clear indicators of quality problems in the Brazilian education system (Soares, 2005).

According to the UNEducational, Scientific and Cultural Organization [UNESCO] (2015) and to Sayed and Ahmed (2015), the quality of education is directly related to a country's

development. Incidentally, the World Bank (1992) has stressed the importance of improving social conditions, especially through health and basic education, to achieve long-lasting sustainable, equitable growth.

In fact, guaranteeing access to quality education has gained relevance in the international education agenda (UNESCO, 2015; Sayed & Ahmed, 2015). However, few Brazilian studies have focused on education governance, including Fernandes and Rodrigues (2017), Robertson (2013), Robertson and Verger (2012), Dale (2010) and Amos (2010). In contrast, several studies have been carried out in other countries, including: Norway (Møller & Skedsmo, 2015; Magalhães, Veiga, Ribeiro, Sousa, & Santiago, 2013), Sweden (Bunar, 2011), Armenia (Dobbins & Khachatryan, 2015), Germany (Schiersmann, 2014; Magalhães et al., 2013), Switzerland (Schiersmann, 2014; Magalhães et al., 2013), England, Netherlands, Italy, Portugal (Magalhães et al., 2013), the United States (Vidovich & Currie, 2011), Hong Kong (Ng, 2013) and Australia (Woelert & Millar, 2013; Vidovich & Currie, 2011). Such studies have shown the relevance of education governance for quality education. As a matter of fact, successful cases of education governance, especially in Australia, Norway and Sweden, have been widely addressed and cited in scientific research.

This article aims to identify the main studies on education governance in Brazilian and international scientific literature, as the first step towards designing a measurement instrument for assessing governance in Brazilian basic education. It builds on the assumption that such an instrument requires a clear definition of the fundamental dimensions of the education governance process (see Pasquali, 2009).

To this end, this study used the Governance Analytical Framework (GAF), which targets governance processes, but lacks application in the field of education (Hufty, 2011). This model comprises five dimensions of analysis, namely: problems, social norms, actors, nodal points and processes (Hufty, 2011) (see section 2.2).

The study used bibliographic research techniques to identify a consistent theoretical framework and characterize education governance. Bibliometric analysis (Pritchett, 2001) was conducted to identify the main topics and scientific output.

This article is organized into five sections, starting with this introduction. Section 2 presents the governance construct and dimensions of GAF. Section 3 describes the methods, which were built on Zupic and Čater (2015) and Pritchard (1969). Section 4 reports on the analysis of keywords, journals and the most relevant authors and articles; it also provides the fundamentals of the GAF-based dimensions of the education governance process (subsection 4.5). Section 5 contains the final remarks.

2. Review of the literature
2.1 The governance construct
Levi-Faur (2012) state, that the term "governance" has been approached in at least four different ways in the literature (namely, as a structure, a process, a mechanism or a strategy), with the predominance of its understanding as a structure. Levi-Faur (2012) defines governance as a system of rules or institutionalized modes of social coordination, with this social coordination taking place at different governance levels and through different topologies of governance (Coward, 2010). The expression "education governance" was coined by Amos (2010) to refer to the set of measures aimed to ensure education quality in schools.

Education governance is an incipient field of study (Coward, 2010). Few attempts have been made to define this expression, but several authors point to its similarities with health governance, especially regarding the interdependent relationships between areas such as institutional governance, organizational development and risk management. Most of the literature on the topic is related to education systems or higher education institutions. Most studies originate from the United States and address elementary and middle schools or the management of state and local education systems. Besides, most studies indicate that

satisfactory education standards and quality assurance processes stem from good education governance (see Coward, 2010, for further details).

A similar idea is defended by Sarrico, Veiga and Amaral (2013), who sought to describe governance in Portuguese higher education institutions and how governance arrangements impact the mechanisms of quality and quality assurance in higher education. Their major results show that the national and institutional characteristics of governance and management can influence the implementation of quality policies and procedures and, eventually, the improvement of quality.

The expression "multi-level governance" was first used in 1992 to describe the multi-level decision-making approach of the European Union's cohesion policy, which aimed to converge supranational, national, regional and local actors (Sbragia, 1992; Hooghe, 1996; Liesbet & Gary, 2003; Bache, 2012). Multi-level governance addresses the increasingly complex relationships between actors from the public, private and voluntary sectors, organized at different territorial levels (George, 2004). Furthermore, it raises questions about the efficiency and accountability of contemporary decision-making at public level.

Considering the GAF, this article builds on the concept of "governance" as posited by Hufty (2011). It concerns social interactions, formal and informal collective decision-making processes and the elaboration of norms of social control in matters of public interest. It also considers the term "governance" as applicable in both public and private sectors (Rhodes, 2007).

2.2 Governance analytical framework (GAF)
Hufty (2011) proposes five GAF dimensions, namely: *problems*, *social norms*, *actors*, *nodal points* and *processes*. The latter (i.e. processes) are applied by researchers from different fields to analyze governance processes, mainly in public health, product chains, post-conflict water supply, biodiversity conservation, discourse analysis and deforestation.

Problems is a dimension related to the issues involved in a given situation. As this is a social construction, problems are characterized by social actors according to their social status and habitus (Bourdieu, 1993). More specifically, each actor seeks to ensure that their standpoint prevail building on 1) the nature of the problem and 2) the rules of the game for the negotiation process (Hufty, 2011). In the present study, the collective problems proposed by Hufty (2011) refer to a community's education demands to be prioritized and solved through the governance process.

Social norms is a dimension based on values or beliefs. It includes the "rules of the game" and the norms that underlie them (meta-governance) to guide and sanction the actions of individuals or groups within a society's spaces of power (Hufty, 2011). Norms involve both prescription (i.e. what should or should not be done) and sanction, which can be either 1) positive, reinforcing behavior, or 2) negative, restricting behavior (Hufty, 2011).

Actors, the focus of GAF, is a dimension related to individuals or groups of individuals whose behaviors are guided by their nature, power, interests, ideas, and history (Hufty, 2011). It is related to the quality of representation of interested parties impacted by the governance-derived decision-making. Cunha, Almeida, Faria and Ribeiro (2011) address a multidimensional strategy for assessing policy councils and suggest an approach involving the analysis of legitimacy, participatory dynamics and exogenous factors. An important aspect of this dimension is the technical and political training of board members for the full exercise of their functions (Tatagiba, 2002). It requires investigating the plurality of representational segments, criteria for choosing representatives, composition of boards and equal status and qualification of members.

Nodal points are the places of interaction (physical or virtual) between actors in the governance process (Hufty, 2011). A board, such as the state and municipal boards of education, is one of the main spaces for different actors to participate and express their

opinions (Tatagiba, 2005), thus influencing the decision-making process. It involves, for instance, analyzing individual service channels for citizens, with individual participation mechanisms being those devices that allow citizens to express their preferences about services and goods, which are offered directly by the municipality or regulated by the municipal government (Cortes, 2011). Citizens can use such channels to file complaints, assess quality or express their level of satisfaction with goods and services, as well as to provide suggestions or make propositions. This category includes user satisfaction surveys over the phone or via internet, and especially through ombudsmanship.

Finally, *organizational processes (or workflows)* are the actors' set of activities and interactions in the nodal points over time (Hufty, 2011). This set starts with the identification and delimitation of a problem and ends when a decision is made to solve the problem. It may involve analyzing the decision-making process based on the rules that govern the institutions' functioning, i.e. based on the modus operandi underlying the final decision-making (Vaz, 2011). The decision-making process is a relevant variable because it defines the rules for reaching a final consensus among participants. The rules for preparing the meeting agendas, for example, are important predictors of this dimension as they define which discussions will be conducted.

3. Methods
Articles published from 1947 to 2018 were retrieved from Scopus in October 2018. Following Zupic and Čater (2015), Scopus was selected because it 1) has a broad coverage (includes 37,979 studies), 2) enables data import by software packages commonly used in bibliometrics and 3) contains data for all cited authors, providing greater accuracy to authorship and co-citation analyses.

Data collection considered the following descriptors: *educational governance* OR *education governance* OR *quality of education* OR *governance in education* OR *educational governance* extracted from controlled vocabulary *Thesaurus Brasileiro da Educação* [Brazilian Education Thesaurus] (Brased). The years of publication and the type of production "research articles" were defined through the options *limit pubyear* and *limit doctype*, respectively, as available on Scopus.

Initially, 6,292 articles were found and handled in a sequence of steps (Table 1) for bibliometric analysis, following Zupic and Čater (2015) and Pritchard (1969). In this analysis, three criteria were used to assess scientific production, namely, structural indicators that measure 1) the most recurrent topics (keywords), 2) groups of journals that address the topic more frequently and 3) the researchers who produce the most on the topic. To map the theoretical, methodological, and thematic proximity of journals, two methods were used – coupling analysis and co-citation analysis (Marshakova, 1981) – through software VOSviewer.

The articles were then analyzed considering the following: 1) title, 2) abstract, 3) keywords and 4) conclusions, including research findings, agenda and limitations. In this stage, 58 articles were selected, a number which met the sample size prerequisite of a bibliometric study (1.31% of the total). Only two of these articles were produced by Brazilian authors. The criterion for inclusion and exclusion of articles was the relevance to the research topic, especially to the identification GAF analytical categories.

4. Results
4.1 Bibliometric analysis – keywords
Initially, 48 of the 11,495 keywords identified in the bibliometric analysis were selected, considering their absolute frequency in ascending order, followed by their number of occurrences. Coupling analysis through software VOSviewer provided the mapping shown in Figure 1, where the keywords are in English, the language of Scopus articles.

In Figure 1, the colors of the keyword circles indicate the cluster to which they belong. The orange cluster, with few occurrences, refers to governance in higher education (higher

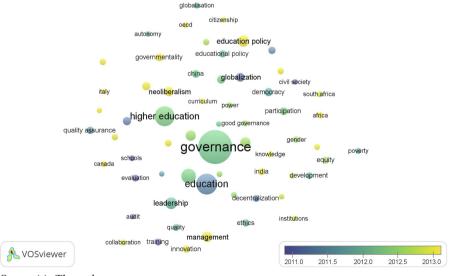| Stage	Objective	Criteria	Results
1	Identify research articles on the topic	Descriptors used on Scopus: *educational governance* OR *education governance* OR *quality of education* OR *governance in education* OR *educational governance* extracted from controlled vocabulary *Thesaurus Brasileiro da Educação* [Brazilian Education Thesaurus] (Brased)	6,292 articles
2	Identify the most recurring topics	Absolute frequency in ascending order, followed by the number of occurrences	48 out the 11,495 keywords retrieved were selected (see section 4.1)
3	Identify the group of journals that most frequently address the topic	Relevance upon analyzing cluster by coupling, co-citation and classification according to Brandford's Law	20 journals (see section 4.2)
4	Identify outstanding researchers	Identification of the most productive researchers, followed by identification of the number of citations per author among those who produced seven or more articles	21 authors (out of 12,735) (see section 4.3)
5	Identify relevant articles	Number of citations and co-authorships	29 articles out of the 6,292 most relevant (i.e. most cited) studies
6	Select reference articles to identify the fundamentals of the education governance dimensions	Relevance to the research topic, especially in the identification of GAF analytical categories	58 articles published from 1947 to 2018 as retrieved from Scopus in October 2018

Source(s): The authors

Table 1.
Fundamentals of education governance dimensions

Figure 1.
Graphic map of the most frequent words

Source(s): The authors

governance, higher education, universities, university governance, etc.). The green cluster groups papers on human and social development (civil society, corruption, development, equity, human, capital, instructions, knowledge, learning, poverty, etc.). The yellow cluster was delimited by keywords related to public policy (citizenship, culture, curriculum, democracy, education policy, OECD, participate, school governance, etc.). Finally, the green cluster refers to social norms, i.e. the establishment of "rules of the game" to define the behavior of actors within the governance process (autonomy, collaboration, decentralization, ethics, leadership, management, policy, power, etc.).

The results showed the unequal frequencies of keywords related to governance in higher education and basic education. The higher education group features a frequency of 80 or more papers, while the basic education group contains only eight papers. Considering that most of the articles are written by non-Brazilian authors – as mentioned above, only two articles are authored by Brazilians – this difference can be justified by the culture in different countries, especially in Europe, of funding research aimed at improving quality in higher education, and by the number of journals aimed at university governance.

Besides, the most frequent keywords refer to words that represent the cognitive structure of knowledge. These findings point to the thematic highlights and the trending topics over the years. The following topics are noted from 2013 onward: education policy, citizenship, neoliberalism, innovation, curriculum, collaboration, Organization for Economic Cooperation and Development (OECD), management and global governance.

4.2 Bibliometric analysis – journal relevance
The minimum number of 26 articles was chosen as a criterion for analyzing the main 20 journals that published the most on the topic, either nationally or internationally. Thus, the 20 most relevant journals, out of 2,504 publications, were grouped after a cluster analysis that used publication source as the unit of analysis and citation as the type of analysis.

To obtain a deeper analysis of publication structure, the bibliographic link between the main papers was observed through bibliographic coupling and co-citation analyses. The bibliographic coupling, which measures the relationship between two papers based on their numbers of common references, shows the influence of the *Journal of Education Policy* and *Higher Education* in scientific production on education governance.

The *Journal of Education Policy* prioritizes the relationship between governance and public education policies, while *Higher Education* is focused on governance in tertiary education, a topic which is less relevant to the present study on governance in *basic education*. Figure 2 shows a strong coupling between *Journal of Education Policy* and *European Educational Research Journal* and between *Higher Education* and *Tertiary Education and Management*.

The strength of co-citation, which reveals the degree of association between pairs of papers (Small, 1973) was based on an analysis of the 20 journals (out of a total of 120,257 cited articles) with the highest degree of association. The results, shown in Figure 2, are color clustered and point to three large clusters.

The red cluster refers to journals on public policies, namely: *Comparative Education*, *Comparative Education Review*, *European Educational Research Journal*, *European Journal of Education*, *Higher Education*, *Journal of Education Policy*, *Public Administration* and *Public Administration Review*. The green cluster groups journals that predominantly belong to the field of management: *Academy of Management Journal*, *Academy of Management Review*, *Administrative Science Quarterly*, *Journal of Business Ethics*, *Journal of Financial Economics* and *Strategic Management Journal*. The blue cluster contains "multidisciplinary" journals: *American Economic Review*, *BMJ*, *Lancet*, *Research Policy*, *Science* and *World Development*.

The *Journal of Education Policy* stood out with 1,164 articles, followed by *Higher Education* with 831 articles. The editorial line of the journals, all of which chosen to address
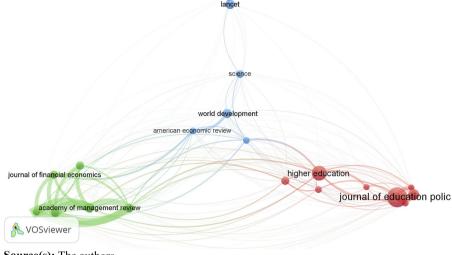
Figure 2.
Graphic map of journal
co-citation

Source(s): The authors

the present topic of study, seem to indicate that most of the published articles target education policy.

A further cluster analysis was carried out to identify the most productive journals, leading to 40 journals containing the highest number of articles on *education governance* from 1947 and 2018. The most productive journals found based on Brandford's Law (which organizes journals in decreasing order of productivity) are consistent with the bibliographic coupling findings, especially: *Mediterranean Journal of Social Sciences*, *Higher Education* and *Journal of Education Policy*. *Journal of Education Policy* seems to be the most relevant to the present study, as it prioritizes studies that address the relationship between governance and public education policies.

4.3 Bibliometric analysis – outstanding authors
To identify the most outstanding authors out of the 12,735 authors of the selected articles, the following procedures were used: first, identifying the most productive authors; then, identifying the number of citations per author of seven or more articles. This led to a set of 21 authors, i.e. 0.16% of the total ($N = 12,735$).

Bob Lingard was found to be the most productive author, followed by Bjørn Stensaker. The former is also among the most cited, which is indicative of his recognition as a relevant scholar in the scientific community. The authors with the highest volume of citations are Stephen John Ball, Bob Lingard and Jenny Ozga. The most outstanding authors in terms of co-authorship are Jenny Ozga, Sotiria Grek, Bob Lingard and Stephen John Ball. Thus, the most outstanding authors in terms of scientific production, acknowledgment by the scientific community and co-authorship are Jenny Ozga, Sotiria Grek and Bob Lingard.

Bob Lingard is a research fellow at the University of Queensland' School of Education, Australia; Jenny Ozga is Professor Emerita of Sociology of Education at the University of Oxford, England; and Sotiria Grek is Senior Professor of European and Global Education Governance at the University of Edinburgh, Scotland. These scholars are acknowledged in the scientific community for authoring and coauthoring articles on education governance, including Grek *et al.* (2009a), Grek, Lawn and Ozga (2009b), Ozga, Grek and Lawn (2009),

Grek and Ozga (2009, 2010), Ozga (2012), Ozga, Baxter, Clarke, Grek, and Lawn (2013) and
Grek, Lawn, Ozga, and Segerholm (2013).

4.4 Bibliometric analysis – most relevant articles
The most relevant articles were determined by their number of citations. Twenty-nine (out of
6,292 papers) were identified as the most relevant (i.e. cited) papers and classified according to
their number of citations and co-authorships. The most cited article was Ozga (2009), with 221
citations, followed by Nórvoa and Yariv-Mashal (2003), cited 205 times. Figure 3 presents the
authors' connection through three color clusters with similar research profiles, i.e. those
authors that cite similar bibliographic materials.

The red cluster, entitled "governance practices and mechanisms", contains the most
relevant authors that address strategies, network governance, and types of governance.
Their studies focus on changes in the political process and on new methods of governing
society. They also address a shift from centralized, bureaucratic government to network,
multi-level governance. The green cluster, entitled "monitoring and assessment", contains the
most relevant authors of comparative analyses, algorithms and quantitative approaches that
seek to highlight the growth of education governance and the use of data for this purpose.

The blue cluster, "education policy", groups together the most relevant authors of studies
on education policy in Europe, as well as on national education policy and education
governance in the European Union. Their articles discuss public education policies at the
global, national and local levels.

After that, the bibliometric indicator of yearly citations indicates which articles have been
relevant in each year over the last 20 years. Over time, research on the emergence of "digital
governance" in public education has become more relevant and especially connected to public
education policy journals. With this new governance practice, organizations seek to delegate
education-related decision-making to socio-algorithmic forms of power that predict and
govern the actions of a collectivity (see Williamson, 2015). The most cited articles in recent
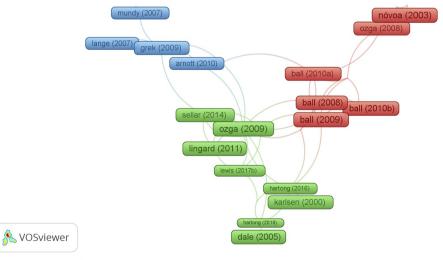years are Hartong (2016, 2017) and Lewis and Hardy (2017).

Source(s): The authors

Figure 3.
Graphic map of most
cited articles

4.5 Fundamentals of education governance dimensions
Fifty-eight (out the 6,292 articles obtained in the previous stages) were selected considering their relevance to the topic, especially to identify GAF analytical categories. Based on Hufty's framework (2011), an in-depth analysis of these 58 articles published from 1947 to 2018 (as retrieved from Scopus in October 2018) was carried out to identify the fundamentals of education governance dimensions.

Table 2 provides the fundamentals for each dimension, as well as their respective references.

The articles dealing with the actor dimension within education predominantly report on research on school and local community's empowerment, autonomy and engagement in social control and democratic management. Some of them also discuss the participation of the

Fundamentals of dimensions	References
Problems: they are the recognition of a topic as a public challenge to be tackled through the governance process, considering the current education status (diagnosis) and the desired status (goals and objectives). Problem identification stems from education stakeholders' (both individuals and groups) demands, needs and expectations considering both the local context and the national coordination. This dimension comprises problem identification, prioritization, planning and disclosure	Avis (2009), Hufty (2009), Christensen, Homer and Nielson (2011), Gerrard *et al.* (2013), Trabelsi (2018)
Actors: they are the stakeholders (individuals or groups), either formal or informal (recognized by the authorities or not), impacted by the process or those that influence decision-making in the education governance process. Stakeholders have roles, powers and accountabilities in the governance process. Stakeholder analysis comprises the assessment of influence, need, engagement, interference, composition, training and technical support provided	Popkewitz and Lindblad (2000), Lindblad, Johannesson and Simola (2002), Edelenbos and Klijn (2005), Hodge and Greve (2007), Ball (2008), Hufty (2009), Ranson (2011), Bevir (2010), Williamson (2012), Edwards and Klees (2015), Oldham (2017)
Social norms: they refer to collective expectations about what is considered appropriate behavior in a society to provide for power, regulation, competences, accountability, legitimacy or sanctions to actors in the governance process	Ostrom (2000), Karlsen (2000), Cole and John (2001), Arnott and Menter (2007), Hufty (2009), Arnott and Ozga (2010), Goodwin and Grix (2011)
Nodal points: they are physical or virtual spaces where various problems, actors, workflows converge in time and space to make decisions, seal deals and create social norms applied throughout the education governance process. Such nodal points are characterized by trust between actors, social participation, effective decisions and transparent performance	Hofman, Hofman and Guldemond (2002), Nórvoa and Yariv-Mashal (2003), Hudson (2007), Hufty (2009), Ranson (2012), Hooge and Honingh (2014), Lewis, Sellar and Lingard (2016), Theisens, Hooge and Waslander (2016)
Organizational processes (or workflows): they are a set of interdependent activities ordered in time and space for decision making in response to an education problem. Tasks and efforts must be intentionally aligned through continuous improvement of processes for identifying and prioritizing problems, monitoring and assessing results, managing interested parties, continuously training board members and promoting governance-driven institutional articulation	Lange and Alexiadou (2007), Hufty (2009), Grek *et al.* (2009a, b), Lange and Alexiadou (2010), Harris and Burn (2011), Peters (2012), Simkins (2014), Ozga (2016), Anderson and Donchik (2016), Williamson (2016), Lewis (2017), Lewis and Hardy (2017)
Source(s): The authors	

Table 2.
Fundamentals of education governance dimensions

third sector in education governance. The articles focused on the organizational processes (or workflows) dimension predominantly address transactional governance through institutional articulation with international organizations such as OECD. Some of them also tackle the functions of governance, monitoring and assessment, especially when it comes to using data and technologies in the analysis of education policies.

5. Final remarks

This article set out to identify the main studies on education governance in Brazilian and international scientific literature. The results showed the relevance of the *Mediterranean Journal of Social Sciences*, *Higher Education* and *Journal of Education Policy*, journals which have featured studies on accountability, democracy, engagement, decentralization and power. Social participation and democratic management have also stood out as prominent topics in three large groups of discussions: governance in higher education, human and social development and public policy. The most prominent authors have been Jenny Ozga, Sotiria Grek and Bob Lingard, while the most cited articles have been Ozga (2009), Nórvoa and Yariv-Mashal (2003) and Hartong (2016).

It is apparent in this specialized literature that analyzing education governance processes could indicate factors that promote quality education in Brazil. According to Hufty's (2011) GAF, the fundamentals displayed in Table 2 specify the "governance" construct and limit the semantic spaces of what should be addressed for assessing such a construct. Drawing on the fundamentals found in the present study, which are still in the theoretical pole according to Pasquali's (2009) methodology, further research can eventually establish the operational definitions of the dimensions of a future instrument aimed to assess education governance in Brazil.

Based on the fundamentals and the articles collected and analyzed (covering a period of 71 years from 1947 to 2018) in this study, it seems that the formal social norms could explain, at least partially, the dynamics of the governance process. Further research should analyze such social norms, along with informal norms.

In addition, the governance dimensions that ensure the right to quality education are proposed in this article building on the literature. They are expected to lead to instruments that measure "good practices" of governance in Brazilian education systems, at the national, regional and local levels.

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