Chapter 8
Constructivist and Constructionist Epistemologies in a Globalised World: Clarifying the Constructs

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Abstract This chapter sets out to provide conceptual clarity around these two epistemological stances by comparing constructivism with constructionism in relation to three particular categories – (1) their origins and epistemological premises, (2) their ontologies, and (3) their purposes. It then proceeds to articulate some implications concerning the use of each epistemology to contribute to research in the field of education and to the notion of globalisation more generally. It notes in particular the positive contribution of constructionism in bringing about educational reforms and in taking a critical view towards the taken-for-granted notion of globalisation discourses. It shows how constructionism can make a positive contribution to research agendas that seek to bring about educational reform to improve the quality of teaching and learning and contribute to the betterment of societies precisely because it questions the very notions of globalisation, competitive market forces and the universalising of markets and production. Constructionist pedagogies may then be discerned and implemented as the result of the correct alignment of the theoretical perspective, research methodology and data collecting strategies with the constructionist epistemology. In making the important distinction between constructivism and constructionism, this chapter makes a significant contribution to the refinement of theories of knowledge, and to their usage in qualitative research in education to bring about improved learning and teaching to contribute positively to the betterment of societies in a globalised world.

Keywords Constructivism · Constructionism · Epistemology · Education reforms · Globalisation

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Introduction

As a multi-dimensional process typically characterised by neoliberal ideology, the universalising of markets and production, and profit-driven managerialism (Urzua 2000), globalisation is having a profound effect on educational institutions, including higher education, which through its various research agendas, seeks to improve the quality of teaching and learning and contribute to the betterment of societies. Researchers in higher educational contexts seek to achieve this through their understanding of the theory of knowledge, that is epistemology, and the aligning of the various elements of the research process to reflect their epistemological stance in their quest bring about educational reform. In the qualitative paradigm, many educational researchers draw their epistemological stance from either constructivism or constructionism.

Yet here has been confusion in the field of education concerning the notions of constructivism and constructionism. These are two quite different epistemologies, and yet many writers use them (and their derivatives social constructivism and social constructionism) either interchangeably or in complementary ways (e.g., Hoban et al. 2010; Kafai and Resnick 1996; Lindsay 2017; McLean 2018; Xerou et al. 2016; Young and Collin 2004). Some contribute the birth of constructionism to Seymore Papert, a student of Piaget who placed emphasis on the shared constructing of knowledge, in which Piaget's original notion of constructivism becomes constructionism (e.g., Parmaxi and Zaphiris 2014). However, such a view is too simplistic and does not adequately take into account the historical and philosophical movements from which constructionism emanates. Constructivism emphasises how knowledge is constructed on qualitatively different, progressively more adequate levels, as the result of the individual's action and interaction in the world either alone or with others (see Zajda 2018). Constructionism, on the other hand, emphasises the characteristics of social participation, relationships, the setting of activity and historical change (Packer and Goicoechea 2000). Importantly, and in terms of globalisation, constructionism calls into question the taken-for-granted knowledge, concepts (such as globalisation and neoliberalism) and categorisations of peoples, places and things, inviting those who engage with it to be critical of the notion that observation of the world unproblematically yields it nature to the observer.

Constructivism

Origins and Epistemological Premises

Constructivism originates from the work of Swiss developmental psychologist Jean Piaget. Constructivism is complex and contains a number of strands of divergent thought as represented, for instance, through the writings of Vygotsky (1978) who focussed on the socio-cultural dimension of knowledge (see also Galperin 1969;

Karpov and Hayward 1998), and Rogoff (1994, 2003) who focused on the role of the community and institutional practice (see also Rogoff and Lave 1984). This chapter, however, will confine itself to a brief discussion of constructivism as proposed originally by Piaget and his proponents, in particular von Glasersfeld (1995).

The research question posed by Piaget was both epistemological and philosophical: What is the nature of knowledge and how does it grow and develop? (Ultanir 2012)While Piaget was influenced by the work of Immanuel Kant (Packer and Goicoechea 2000) (discussed in greater detail in the following section) he was also persuaded by the philosophical thinking of John Dewey who argued that knowledge is never a mere representation of reality, but rather involves a process through which human beings become a part of that reality (Dewey 1938). The focus of Piaget's project, then, was how human beings construct a stable and orderly picture from the flow of their experiences (von Glasersfeld 1995). For Piaget, knowledge arises from the functioning individual's activity, either physical or mental, and it is goal-directed activity that provides knowledge with its organisation. Therefore, "all knowledge is tied to action, and knowing an object or event is to use it by assimilating it to an action scheme" (Piaget 1967, pp. 14–15). The notion of an action scheme is central to Piaget's constructivist theory of knowledge, and with it, the associated terms of assimilation and accommodation.

Assimilation occurs when a person places an experience into a conceptual structure – an action scheme – that the she or he *already possesses* (Piaget 1988; von Glasersfeld 1995). In other words, assimilation always reduces new experiences apperceived by the individual to already existing sensorimotor or conceptual structures (von Glasersfeld 1995). The question then arises as to what happens to those experiences apperceived by an individual that do not fit into her or his already existing sensorimotor or conceptual structures, and how, therefore, is new knowledge attained. This is where the notion of accommodation has relevance.

When an individual is unable to fit an experience into an existing scheme or structure, a perturbation – a disturbance or disorder – is said to occur. This leads the individual to review the experience that has been apperceived, thereby revealing characteristics that were disregarded by assimilation. If the unexpected outcome of the activity was disappointing, the newly noticed characteristics may "effect a change in the recognition pattern and thus in the conditions that will trigger the activity in the future" (von Glasersfeld 1995, p. 65). Alternatively, if the unexpected outcome was one of interest or was pleasant, a new recognition pattern may be formed to include the new characteristic, thus constituting a new scheme. In either case, the result would be an *accommodation* of new knowledge.

Of importance in Piaget's scheme theory is the notion of *equilibration*, a term that refers to the range of perturbations the individual is able to eliminate, thereby restoring equilibrium between assimilation and the accommodation of new knowledge. Thus, the theory that emerges from Piaget's work suggests that cognitive change occurs when a scheme, instead of producing the expected outcome, leads to perturbation which, in turn, leads to an accommodation that either maintains or re-establishes equilibrium:

> Assimilation and accommodation are therefore two poles of an interaction between the organism and the environment, which is the condition for all biological and intellectual operations, and such an interaction presupposes from the point of departure an equilibrium between the two tendencies of opposite poles. (Piaget 2000, p. 353)

Therefore, learning and the knowledge it creates are said to be explicitly instrumental (von Glasersfeld 1995). However, Piaget's theory of cognition involves a twofold instrumentalism. At the sensorimotor level, action schemes are instrumental in assisting individuals to achieve goals in their interaction with the world they experience (Piaget 2000; von Glasersfeld 1995). On the level of reflective abstraction, operative schemes are instrumental in assisting individuals achieve a coherent conceptual network of structures that reflect particular ways of acting and thinking which those individuals have found to be viable.

The acquisition and use of language is especially important in constructivism. The capacity for thought is primarily developed through the acquisition of language, which in turn, can constrain or expand knowledge constructions (von Glasersfeld 1995). The language that the individual uses both shapes and is shaped by the individual's membership within families and communities (Oldfather et al. 1999). Language is entwined with thought and is therefore central to the way in which an individual makes sense of the world. Since an individual's inner thoughts are rooted in language, it can be argued that they are inherently social, like language (Brooks and Brooks 1993). However, and as von Glasersfeld (1995) cautions, while language is social in the sense that it is shared by all of the individual speakers via their linguistic interactions, and that individual meanings are modified and adapted throughout their use during the course of social interactions, they remain nonetheless, the individual's meanings, derived from the individual's own subjective experience:

> There is no doubt that these subjective meanings get modified, honed, and adapted throughout their use in the course of social interactions. But this adaptation does not and cannot change the fact that the material an individual's meanings are composed of can only be taken from that individual's own subjective experience. (Glasersfeld 1995, p. 137)

Ontology

Whereas epistemology concerns the theory of knowledge and the question of what counts as, or constitutes knowledge, ontology concerns the nature of being and reality, that is, what it means for something, or somebody, to exist or to be (Packer and Goicoechea 2000). Constructivism assumes a dualist ontology. Piaget (1972) was influenced by the philosophical thought of Immanuel Kant and his concept of *a priori* structures that are inherent in the functioning of reason. According to Kant (1952) "we find existing in the mind *a priori*, the pure form of sensuous intuitions

in general, in which all the manifold[1] content of the phenomenal world is arranged and viewed under certain relations" (p. 23). These structures consist of space and time, although writers who have studied Kant's work closely include causality and object among these structures (Allison 1983; Packer and Goicoechea 2000; von Glasersfeld, 1995). For Kant (1952), then, space and time are "two sources of knowledge, from which, *a priori*, various synthetical cognitions can be made" (p. 28). It is therefore:

> …not merely possible or probable, but indubitably certain, that space and time, as the necessary conditions of all our external and internal experiences, are merely subjective conditions of all out intuitions, in relation to which all objects are therefore mere phenomena, and not just things in themselves [and therefore] much may be said *a priori,* whilst of the thing itself… it is impossible to say anything at all. (Kant 1952, p. 31)

These *a priori* structures are, then, the "fundamental forms which human reason imposes on all experience" (von Glasersfeld 1995, p. 40). Kant later went on to write that "It is not until the understanding that joins them and connects them [*a priori* structures] by a rule of thought…that they become empirical knowledge, i.e., *experience*" (Kant, cited in von Glasersfeld 1995, p. 144, italics in original). Therefore, human experience is what the individual constructs – out of the elements of the manifold – when reason is imposed upon it. The fact that only certain things are constructed while others are not is determined by the structure of reason – the primary topic of Kant's transcendental philosophy (von Glasersfeld 1995).

Therefore, although the person, individually or with others, constructs knowledge through interacting with the environment, the Kantian categories of space, time, causality, and objects (Allison 1983) are considered *a priori* structures of a person's being and experience. In taking these insights from Kantian thought, Piaget (1972) explained that "all construction elaborated on by the subject presupposes [these] antecedent internal conditions" (p. 91).[2] In other words, the categories of space, time, causality and object, which Kant considered innate to the mind, in fact shape an individual's experience of reality so that cognition "constructs in the twin senses of giving form to the empirical data of sensation and giving rise to new conceptual structures" (Packer and Goicoechea 2000, p. 228). Constructivist ontology then is an ontology of two realms – a subject (the individual) and an independent world. This dualism is problematic in terms of a coherent theory of human knowledge, for even as Dewey (1966) noted:

> The identification of the mind with the self, and the setting up of the self as something independent and self-sufficient, created such a gulf between the knowing mind and the world that it became a question of how knowledge was possible at all…when knowledge is

[1] Kant's use of the term "the manifold" is a key concept, and consists of the raw material, or '"the stuff" on which constructive perception and reason can operate" (von Glasersfelds 1995, p. 40).

[2] It should be noted that the chapters in Piaget's work *The Construction of Reality in the Child* (1954/2000) have been structured to reflect this Kantian influence, so much so that von Glasersfeld (1995) maintains that they are effectually the constructivist substitute for the categories that Kant assumed to be *a priori*.

> regarded as originating and developing within an individual, the ties which bind the mental life of one to that of his fellows and ignored and denied. (Dewey 1966, pp. 293–297)

Purpose

The third area of comparison in this analysis concerns the purpose for which each epistemology is employed. Brooks and Brooks (1993) point out that constructivism is a theory about knowledge and learning. It emphasises how knowledge is constructed on qualitatively different and progressively more adequate levels as the result of a person's action and interaction in the world, either individually or with others (Piaget 1972; Oldfather et al. 1999; Packer and Goicoechea 2000). In building upon the work of Piaget, von Glasersfeld (1995) maintained that there are two key principles that establish the purpose of constructivism. Firstly, that knowledge is not passively received, but rather that it is built up by the cognizing subject, and secondly, that the function of cognition is adaptive and serves the organisation of the experiential world rather than the discovery of an ontological reality.[3] The purpose of constructivism is, then, for the individual to construct her or his own meanings out of the elements of individual experience (or, to use Kant's terminology, out of the manifold), and then to adapt these meanings so as to form a coherent worldview. This constructing may be undertaken individually, or with others in social contexts, using in both cases language as a shared medium through which to construct meaning. However as von Glasersfeld also warns, such sharing does not imply a shared social meaning. For although language may provide for the opportunity for the negotiation of meaning and knowledge, the decisive aspect of this negotiating procedure is that the accommodated knowledge "is still a subjective construction, no matter how mutually compatible the knowledge of the negotiators may have become in the process" (Glasersfeld 1995, p. 191).

Constructionism

Origins and Epistemological Premises

In contrast to constructivism, constructionism emanates from the field of sociology against the backdrop of postmodernism. Key writers in the constructionist movement were Berger and Luckmann (1966) whose systematic account of social life – *The Social Construction of Reality* – argues that human beings together create and

[3] Although von Glasersfelds (1995) argues that constructivists do not say anything about ontology, Packer and Goicoechea (2000) maintain that that in practice, constructivists do not avoid the issues that are concerned with ontology, largely because they inhereted them from the Kantian and Piagetian traditions.

then sustain all social phenomena through social practice. They identify three particular moments in the processes of socialisation through which this occurs. The first is externalisation, which occurs when people act upon the world in some manner, creating an artefact or practice. This might occur when an individual, or community, develops a concept, such as the way in which the earth was created, and then seek to externalise this idea by, for example, telling a story or writing a book about it. The artefact (the story or book) then enters the social realm. Other people re-tell the story or read the book, and the artefact begins to take on a life of its own. This second movement is known as objectivation, whereby the artefact – a product of human activity – is "available to both [its] producers and to other men [sic] as elements of a common world" (Berger and Luckmann 1966, p. 49). It has become the object of consciousness for the society in which it was developed – a feature of the natural world itself rather than a construction of the interactions of human beings (Burr 2003).

Berger and Luckmann (1966) argue that externalisation and objectivation are moments in a continuing dialectical process. There is a relationship between human beings (the producers of artefacts) and the social world. That is "man (not, of course, in isolation but in his collectivities) and his social world interact with each other. The product acts back upon the producer" (p. 78, parentheses in the original). The result of such interaction renders three essential characterisations of the social world, namely that "*Society is a human product. Society is an objective reality.* [And that] *Man is a social product*" (p. 79, italics in the original).

The third moment in the process is internalisation, by which "the objectivated social world is retrojected into consciousness in the course of socialisation" (Berger and Luckmann 1966, pp. 78–79). Other people, including future generations, are born into and inhabit a world in which an idea already exists, and begin to internalise it as a part of their own consciousness, and understanding of the nature of the world.

Berger and Luckmann's (1966) account demonstrates how the world can be socially constructed by the social practices of people. At the same time, it demonstrates how people experience the world as if the nature of their world is pre-given and fixed (Burr 2003), rather than a construction.

The cultural backdrop of postmodernism also renders the origin of constructionism quite different from constructivism. Postmodernism questions and rejects metanarratives which attempt to describe the social world and the structures of it from particular foundational stories, such as religion and psychology (see for instance Hollinger 1994). It questions the notion of structuralism, which suggests that there are underlying structures determining the way in which people see the world (Burr 2003). Instead postmodernism emphasizes the co-existence of a multiplicity and variety of situation-dependent ways of life. Rather than metanarratives, there are individual stories that are historically and culturally bound (Horell 2003).

Structural psychology – the field from which constructivism emanates – with its emphasis on underlying structures, represents a metanarrative which is ultimately questioned and rejected by postmodernism. The epistemological stance of constructionism would, as a consequence, question and reject the notion of constructivism, understanding it to be significantly different from itself.

Ontology

Constructionism challenges the dualist ontology of constructivism. As Gergen (1985) notes, the emergence of constructionism (and in particular social constructionism) has transcended the subject-object dualism and all its attendant problems so as to develop a new framework of analysis based on an alternative and non-empiricist theory of the functioning and potentials of science. Constructionism therefore is grounded in a social ontology that conceives of the individual as one who is engaged in the world (Lave and Wenger 1991; Packer and Goicoechea 2000). Phrases such as "communities of practice" (Lave and Wenger 1991) in which the individual participates and forms her or his identity in activity in the world are indicative of the non-dualist ontology expressed in constructionism.

Therefore, in constructionist ontology, the human person is not viewed as a natural entity but rather as a social and historical product. Consequently, the human person is *made*, and not simply born. Humanness is therefore, according to Berger and Luckmann (1966) a socio-cultural variable. In other words, while it is true to say that all human beings share certain biological characteristics human nature is not biologically fixed, but is rather a socio-cultural variable:

> There is only human nature in the sense of anthropological constants…the specific shape into which this humanness is moulded is determined by those socio-cultural formations and relative to their numerous variations. While it is possible to say that man [sic] has a nature, it is more significant to say that man [sic] constructs his own nature, or more simply, that man [sic] produces himself. (p. 67)

Constructionist ontology then is one in which the human person and the social world are internally related to one another, "mutually constituting" (Packer and Goicoechea 2000, p. 234). This is in contrast with the "constituting subjectivity" of Kant and Piaget, who viewed construction only as a cognitive activity in which subjectivity applies its forms to data from a distinct and separate objective world. Cognition "serves the subject's organisation of the experiential world, not the discovery of an objective ontological reality (von Glasersfeld 1995, p. 51). Ontologically then, constructivism is quite different from constructionism.

Purpose

Constructionist inquiry is concerned with "explicating the processes by which people come to describe, explain, or otherwise account for the world (including themselves) in which they live" (Gergen 1985, p. 266). It emphasises the characteristics of social participation, relationships, the setting of activity and historical change (Packer and Goicoechea 2000). There are two fundamental purposes of constructionist inquiry. The first is to take a critical stance towards taken-for-granted knowledge (Burr 2003; Gergen 1985, 2001; Parker 1997). Burr (2003) argues that constructionism invites those who engage with it to be critical of the notion that

observation of the world unproblematically yields it nature to the observer. Constructionists maintain a suspicion of assumptions in relation to how the world appears to be, arguing that the categories with which human beings apprehend the world do not necessarily refer to real divisions. Constructionism then asks one to "suspend belief that commonly accepted categories or understandings receive their warrant through observation" (Gergen 1985, p. 267).

The second is that, although it is possible to have an infinite number of conceivable constructions of the world, each brings with it, or invites, a different kind of action from human beings. In other words, knowledge and social action go together. The purpose of constructionist inquiry then should lead to social action. As Gergen (1985) notes, particular descriptions or explanations of the world themselves constitute particular forms of social action – they serve to sustain and support certain social patterns to the exclusion of others. For example, the social action appropriate for understanding "celibacy" depends upon how this concept has been constructed. Constructions of celibacy as a response in love to a vocation to follow God more closely calls for very different social action than constructions of it as a denial of one's natural human desires and inclinations. To treat other concepts, such as depression, or anxiety, as emotions from which people involuntarily suffer is to have significantly different implications than to treat them as chosen, selected (Gergen 1985). Constructions of the world are, therefore, bound up with power relations because they have implications for what might be permissible for different people, and consequently, for how they may treat others (Burr 2003).

It would seem, then, that research which adopts a constructionist epistemology is typically concerned with broad topics, such as gender, aggression, mind, causality, person, self, childhood, motivation, morality, identity (Burr 2003; Gergen 1985), story (Merrtens 1998), education (Davies 1998) and the like. Such topics are concerned with larger societal concepts that have been constructed through the processes of socialisation, and research oriented towards these topics considers the ways in which such categorical concepts might be challenged by various groups of people, including the researcher. It would also consider appropriate social action in response to the knowledge that emanates from the findings of such research.

While there are a range of research methodologies that are compatible with a constructionist epistemology, they would typically include conversation analysis and discourse analysis (see for example, Potter 1998; Wetherell et al. 2001; Willig 1998). In contrast, research that adopts a constructivist epistemology tends to be concerned with not only the ways in which the research participants have constructed meaning from their experiences (either individually or with others), but also the way in which the researcher constructs knowledge in addressing the research question *through analysing the data* that has been gathered via the research participants A range of possible methodological approaches are compatible with the constructivist epistemology, including grounded theory, ethnography, narrative ethnography, case study, phenomenology and hermeneutic phenomenology.

The analysis above then reveals that constructivism and constructionism are two distinct epistemologies. The following two sections of this chapter discern some of the implications and contributions made by each theory of knowledge to research in

education, as well as a consideration of the contribution that constructionism can make to globalisation more generally.

The Implications and Contribution of Each Epistemology to Research in Education in a Globalised World

Since constructivism and constructionism are two different epistemologies, their respective contributions to research in education will be distinctive. While it would be a mistake to state emphatically that certain topics will align themselves more closely with one or other epistemology – the very thing that constructionism seeks to avoid, that is, the categorisation of people and ideas into taken-for-granted socially constructed categories (Burr 2003; Gergen 1985; Hacking 1999) – case studies, research focusing on generating theory from collected data, or describing a phenomenon in its essence are likely to be aligned with constructivism. They assume an independent world with which the researcher engages. In relation to education, examples of such research could include an examination of contemporary teaching practices (Tiilikainen et al. 2019), analysing the learning and teaching processes in courses (Tuncel and Bahtiyar 2015), evidence bases for teaching and learning (Dinham 2017), examining student responses in science classes (Appleton 1997), analysing the relationship between teachers' epistemological understanding and music teaching practice (Cleaver and Ballantyne 2013), and exploring children's faith in relation to Vygotsky's zone of proximal development (Court 2010; Agar Junker 2013), Such research, aligned with constructivism, has a distinctive contribution to make to the field of education since it generates theory where little is known about the phenomenon in question, or ascribes meaning in relation to particular phenomena associated with issues pertinent to education.

The contribution of constructionism to education is two-fold. Firstly, it challenges taken-for-granted categories, assumptions and meanings that have been ascribed through the process of socialisation. Generally, these assumptions will concern larger societal issues, such as gender, childhood, socialisation, morality, identity, and the like. Secondly, it will call for a response, or social action. In relation to education, a key example of such constructionist research is presently focused on the notion of gender fluidity, showing how perceptions of gender are constructed by individuals, challenging societal taken-for-granted conceptions of gender, and calling for appropriate social responses. For instance, Holmes (2007) promotes the advantages of using a community of practice to analyse discourses that promote repressive ideologies that punish deviations from gender norms for both boys and girls. Hester (2004) advocates for a "postgender" alternative that perceives the body an active participant and contributor to gender identification, formation and practice. Other research focussing gender fluidity using a constructionist epistemology includes Carr (1999), Wilson (2001), Morojele (2011) and Coates (2012).

The necessity of research in education being underpinned by the appropriate epistemological foundation is, therefore, a central concern for researchers in this field. Confusion in the alignment of empirical work with the correct theory of knowledge results in a category mistake, in which facts of one kind – for instance the key tenets of constructivism – are presented as if they belong to another – for instance the tenets of constructionism (see Hyde 2013 for a detailed discussion of category mistakes). The consequence of this would render the misalignment of all of the other elements of the research which stem from the epistemology – the theoretical perspective, the methodology, the data collecting procedures, the tools of analysis, and so forth. It may also result in research in this field seeking to find answers to the wrong questions, since these questions would not align with the appropriate epistemological premises.

The Contribution of Constructionism to Globalisation

In terms of globalisation more generally, constructionism has an important contribution to make. Since globalisation is commonly perceived as a process rather than a condition or single event, the ways in which individuals create and then sustain this social phenomenon through social practice becomes important. Those who operate from a constructionist epistemology perceive globalisation in ways beyond the corporate ethos of the efficiency, performance-based, and profit-driven managerialism. Rather, they see globalisation as process of creating new world order, complete with new institutions and culture, such that solutions to world problems that have been created by asymmetrical power relations are founded in the reconstruction of the new global order (Efanodor et al. 2017).

Constructionism further contributes to globalisation in so far as it presents the possibility of taking a critical view in relation to the taken-for-grantedness of many of the globalisation discourses. Globalisation itself contains a particular discourse concerning the international reality that might be uncovered through constructionism with its focus on the social construction of reality (Risse 2007). Further, a constructionist understanding of globalisation places emphasis on the non-material forces at work in this phenomenon and focuses on the process of meaning construction and interpretation as constitutive for globalisation, as well as emphasising the possibility for change instead of the inevitability of global processes due to its scrutiny of taken-for-granted discourses (Risse 2007). In this way constructivism assists people to critically examine the claims espoused by proponents of deliberative democracy on a global scale.

Thus, while not offering a theory of globalisation, constructionism serves as a critical perspective that enables those who study the process of globalisation processes which to call into question the conventional wisdom in both scholarly and the wider public discourses that are associated with globalisation. Importantly, Risse (2007) points out that constructionists are likely to highlight that globalisation, itself a dominant discourse, will tend to reify existing power structures.

Conclusion

As theories of knowledge, both constructivism and constructionism offer valuable epistemological premises for research within education, with constructionism offering particular possibilities for a thorough of the process of globalisation. However, each epistemology is quite distinct. Within the field of education, researchers need to be able to distinguish clearly between these two terms and to appropriately align their research projects with most appropriate epistemology. The categories of comparison utilised in this chapter have sought to provide such clarity in relation to these two epistemologies, thereby assisting researchers in the higher education sector in their discernment of an appropriate choice of epistemology in their quest bring about educational reform in an increasingly globalised world.

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