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## **A Synthesis of Funds of Identity Research: Purposes, Tools, Pedagogical Approaches, and Outcomes**

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*This review illuminates the growing body of funds of identity (FoI) scholarship and explores its contribution to breaking down deficit thinking and enhancing the inclusivity and equity of education. FoI theory aims to complement the funds of knowledge conceptual framework that draws attention to knowledge and competences of minoritized students. FoI theory is distinctive because of its focus on funds that are personally meaningful for students. The concept of FoI and its relationship with funds of knowledge scholarship are described, followed by an analysis of insights from FoI empirical research: (1) methodological tools that researchers have developed to identify students' FoI and (2) pedagogical approaches utilized to connect to students' FoI. Finally, the review offers an examination of evidence that research has yielded for effects that result from making links to students' FoI, and makes recommendations for future work.*

**KEYWORDS:** funds of identity, funds of knowledge, superdiversity, social justice pedagogy, culturally sustaining pedagogy

Ongoing investigations of students' experiences in school and academic outcomes turn a spotlight on the minoritized status of some student groups, illuminating an important continuing challenge for teachers, schools, and policymakers concerned about social justice.<sup>1</sup> At the time of writing, due to Covid-19, schools have recently reopened after a period of lockdown in both authors' home countries, New Zealand and The Netherlands. In current discourse there is a popular view that for some students, learning did not progress during lockdown, because they lacked access to (online) resources and parental support. Although it is obvious that concerns about increased educational inequality as a consequence of the lockdown are justified, this discourse is a contemporary and timely reminder of deficit thinking about certain groups of students, and narrow conceptualizations

of what counts as knowledge and what it means to learn. The ways that these paradigms intersect and mediate teacher thinking and action are deeply problematic, because they constrain teacher agency and maintain deep divisions in students' experience of schooling and their academic outcomes (Sleeter, 2012). Such paradigms ignore knowledge and skills gained informally, and obscure opportunities to support academic learning by making meaningful links to diverse students' lives.

This review explores Funds of Identity (FoI) scholarship and how it aims to break down deficit thinking and to enhance the inclusivity and equity of education by acknowledging and building on knowledge and skills that students acquire out of school and define as important aspects of their identity. We think that the concrete teaching strategies and explicit theoretical argument underpinning these strategies offered by FoI scholars are helpful in the current setting of superdiverse school populations<sup>2</sup> and changing technological environments, which have made the challenge and moral imperative of socially just schooling complex and multifaceted (North, 2006). FoI research, addressing this challenge, has been rapidly growing over the past 10 years, and although FoI scholarship is still young, there now seems to be sufficient maturity for a literature review to be worthwhile (Alexander, 2020).

### **Deficit Theorizing in Education**

The deficit theorizing paradigm has been pervasive in many forms for over a century (Valencia, 1997, 2010). According to this worldview, differences in academic achievement by different groups of students are due to deficiencies within students, their families, and/or their culture (Valencia, 1997). Internationally, those groups include immigrants (e.g., Clycq et al., 2014; Saubich & Esteban-Guitart, 2011), indigenous students (e.g., Bishop & Berryman, 2006; Fforde et al., 2013; Turner et al., 2015), other culturally minoritized groups (e.g., Cavanagh et al., 2014; Ghorashi, 2014; Savani, 2010; Spiller, 2012), and students from families with low socioeconomic status (e.g., Cabrera et al., 1981; Dudley-Marling & Lucas, 2009; Hattam & Prosser, 2008). One of the problems of deficit theorizing is that teacher behaviors based on deficit assumptions may create a self-fulfilling prophecy, resulting in lower academic achievement of students from affected groups (Swartz, 2009).

Because deficit theorizing relies on negative assumptions about students, their families, and their cultures, it is important to support teachers to engage with these students' and families' strengths or assets (F. A. López, 2017; Moll et al., 1992; Swartz, 2009). Aronson and Laughter's (2016) synthesis of scholarship showed that this is a key component of culturally relevant education.

### **The Funds of Knowledge and Funds of Identity Approaches as Ways to Counter Deficit Theorizing**

All students' "virtual backpacks" (Thomson, 2002) contain experiences, values, dreams, talents, fears, passions, resources, and more, and the virtual backpacks of students from middle-class White families are more likely to be anticipated and honored by their mostly White middle-class teachers, because they are somewhat known to them. But social justice concerns mean that we must

continue to ask how the diverse identities and resources of minoritized students can be validated, nurtured, and drawn on as a resource to develop meaningful curriculum and support equitable school outcomes for all (Swartz, 2009). Effective schooling in superdiverse settings calls for pedagogy that is not only culturally responsive (Sleeter, 2008, 2011) but also culturally sustaining (Paris, 2012), which means pedagogy that “seeks to perpetuate and foster—to sustain—linguistic, literate, and cultural pluralism as part of the democratic project of schooling” (Paris, 2012, p. 93).

The funds of knowledge (FoK) approach (Moll et al., 1992) is acknowledged as an essential aspect of culturally responsive education (Banks et al., 2001; Moll & González, 2004). Crucially, it fundamentally rejects reliance on negative assumptions and stereotypes that characterize deficit theorizing. A central principle in FoK theory and practice is the assumption that students are competent and have knowledge and skills, developed through their life experiences outside school (Hogg, 2011; Llopart & Esteban-Guitart, 2017, 2018). Ethnographic studies, collaboratively conducted by teachers and researchers, have shown the accumulated bodies of knowledge, skills, and information available in students’ households and communities (Moll et al., 1992). Also, research has documented how teachers can draw on those family and community FoK and use them for pedagogical purposes (e.g., Jovés et al., 2015; Moll, 2005). Thus, FoK seeks to “involve teachers in conducting and applying research, to link theory and practice” (Hogg, 2011, p. 667). One pivotal outcome that teachers experience when learning about students’ FoK is development of respect for students and families (e.g., Comber & Kamler, 2007; Sugarman, 2010). Comber and Kamler (2007) referred to this as teachers *turning around to students*, highlighting the transformational changes that can occur.

In 2011, Saubich and Esteban-Guitart introduced a new concept—FoI—that further developed and complemented FoK theory, and Esteban-Guitart (2012, 2016; Esteban-Guitart & Moll, 2014a, 2014b) later elaborated FoI theory more fully. While both theories emphasize the connection of formal education practices with students’ daily lives, the FoI concept draws attention to FoK that students themselves experience as meaningful. FoI are FoK that individuals themselves define as important to their identity and self-understanding (Esteban-Guitart, 2014, 2016; Saubich & Esteban-Guitart, 2011). Like FoK theory, FoI theory takes a sociocultural or cultural-historical perspective on human development that illuminates the dynamic interplay of personal and environmental factors that in turn are understood as social and historical; the origin of development is to be found in culture (Esteban-Guitart & Moll, 2014a; Subero, 2020). Both FoK and FoI can be seen as semiotic resources that mediate human behavior and that therefore are also resources for education (Subero, 2020). As for FoK, applying the FoI concept involves learning about individual students, rather than assumptions or stereotypes related to their group membership, also including family membership. Because FoI are those FoK that have paramount significance for the students involved, a focus on FoI can potentially enhance teachers’ ability to make education more personally meaningful. Within the Results section, a subsection devoted to the FoI concept includes more elaborated findings related to FoI, its relationship to FoK, and the rationale for the development of FoI theory.

We two authors were motivated to undertake this review because we educate student teachers and experienced teachers in FoK/FoI concepts and approaches as ways to counter deficit thinking and enhance the cultural sustainability of teaching and learning in multicultural schools. We welcome the development of FoI scholarship, since it provides both a theoretical basis and concrete teaching strategies that can potentially enhance asset-based pedagogy. During these times, which feature the coexistence of increasing societal superdiversity and persistent deficit theorizing directed at minoritized students and families, it has become increasingly urgent to “bring culturally responsive education back into mainstream discourses” (Aronson & Laughter, 2016, p. 164).

### **Method**

This systematic literature review (Boland et al., 2017) examines the scope of FoI scholarship, including its conceptual development and empirical evidence base. Being a systematic review defines the work in terms of both process and final product (Alexander, 2020). The process comprises “review of a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise relevant research, and to collect and analyze data from the studies that are included in the review” (Moher et al., 2009, p. 264). The many steps in the process were “carefully planned, explicitly justified, and thoroughly documented” (Alexander, 2020, p. 11), so that the study is replicable (Boland et al., 2017). In terms of the product, the review illuminates and critically analyzes the contribution of FoI scholarship to knowledge about effective and equitable education within superdiverse societies. Specifically, our research questions were the following:

**Research Question 1:** How do scholars conceptualize “funds of identity” and how is it related to “funds of knowledge”?

**Research Question 2:** What do scholars regard as the purpose of FoI theory and practice?

**Research Question 3:** What methods have been used to reveal students’ FoI?

**Research Question 4:** How has FoI theory been applied to pedagogy?

**Research Question 5:** What evidence of effects is offered by FoI scholars?

The search for relevant studies was conducted by both authors on January 31, 2019. We searched for relevant published literature that included the term “funds of identity” in the title and/or abstract, in order to identify studies that had a primary focus on FoI. These search parameters were used in four major education databases that were available to us at Victoria University of New Zealand: Web of Science, ERIC, A+ Education, and Proquest. We also searched Google Scholar, looking for papers that included the phrase “funds of identity” and later hand-searching papers from Google Scholar to identify those in which the term was in either the title or abstract. As shown in Figure 1, our search resulted in 137 hits within the four databases and on Google scholar, and five other papers were recommended to us. When duplicates were removed, there were 118 manuscripts to consider, and all these texts were screened to evaluate their relevance and quality.

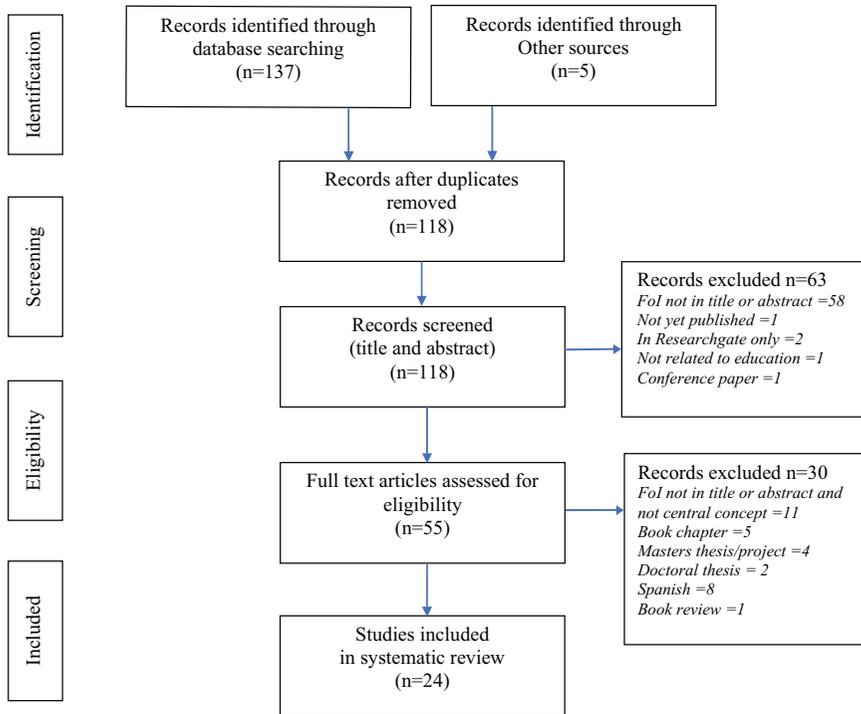


FIGURE 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) diagram of selection process. FoI = Funds of Identity.

Retrieved articles needed to meet eligibility criteria to be included in the review. Because the literature review relates to an emerging body of scholarship, we included theoretical papers and articles that reported education research of any design in which FoI was the central concept. Quality assurance was accomplished by limiting selected papers to those published in journals that used a rigorous peer review process (i.e., double-blind reviewing).

Unpublished manuscripts such as theses and conference presentations were excluded. We excluded grey literature, chapters, and books, with the exception of an academic encyclopedia, because the quality of these texts may not be consistently high, since there is no guarantee of application of rigorous peer review. Although we are aware that a significant amount of FoI scholarship is published in Spanish, because of the linguistic competencies of the authors, we were confined to papers that were published in English. We also considered only papers for which we had access to the full text, so that data collection would not be impeded.

Inclusion and exclusion criteria are shown in Table 1, together with some examples of studies that were considered, and the reason for their exclusion or inclusion. On the basis of the selection process, 24 studies were selected for review.

**TABLE 1**  
*Inclusion and exclusion criteria*

Inclusion criteria	Exclusion criteria	Examples of studies considered, with reason for exclusion/inclusion
One of FoI central concept	FoI not central concept Central concept is funds of knowledge	Hedges (2018); excluded, because this study is not framed as FoI scholarship although it could have been
“Funds of identity” in title OR abstract OR keywords	Central concept is identity theory Central concept is identity texts	McGilp (2014); excluded, because FoI not in title or abstract; checked to see if central concept but only referred to in conceptual framework
Education	Unrelated to education	Esteban-Guitart, Monreal-Bosch, et al. (2017); excluded, because unrelated to education
Theoretical papers; literature reviews; empirical research, of any research design	Absence of theoretical framework or research aim	Lamping & McClelland (2018); excluded, because the article is presented as an account of practice, not as research
Published in peer-reviewed journal or academic encyclopedia	Book chapter; unpublished study; published but not subject to rigorous peer review; conference presentation; published only on ResearchGate	Moulton (2018b); FoI in abstract and keywords; study focus on FoI of homeless students; excluded, because is unpublished PhD thesis Ghannoun (2017); FoI in keywords; excluded, because the paper is a master’s thesis Poole (2018); excluded, because this is a conference presentation
Published in English language	Languages other than English	Esteban-Guitart et al. (2015); excluded, because published only in Spanish
Full text accessible	Full text inaccessible	No texts were excluded on this basis.

*Note.* FoI = Funds of Identity.

Data were extracted from the 24 selected texts, according to a preplanned template. The template was modified in the early stages of data collection, when we realized that one item (purpose) was causing us to conflate data about both the purpose of the study and the researchers' stated purposes for applying FoI theory. Each author was the primary data collector for 12 texts and gave feedback on data extracted from the other 12. For each text, data extraction was agreed on by both authors.

Data were analyzed deductively, according to the research questions, and also inductively, as themes emerged. We used various data display tools (including tables and timelines) to help us identify developments, patterns, and trends. As for data extraction, each author took primary responsibility for several areas of analysis, and findings were discussed and critiqued in regular meetings.

## Results

We begin by providing a descriptive overview of the changing nature and spread of FoI scholarship. We then synthesize descriptive work related to the FoI concept itself and identified purposes of the FoI approach. The last three parts of the Results section have a specific focus on empirical research: methods used to learn about students' FoI and the nature of FoI revealed, pedagogical approaches used to apply FoI theory, and the nature of evidence offered. An overview of the Results section is provided in Table 2.

We noticed that in the literature FoI is referred to as an approach, a theory, and a teaching strategy or method. Therefore, in this review, we regard and treat FoI scholarship (just like FoK) as multilayered. It encompasses theory around a concept and suggests concrete teaching strategies. These strategies make use of different methods (or methodological tools) to identify and draw on students' FoI. For clarity, throughout the article we use "FoI theory" when the theoretical basis is discussed, "the FoI concept" when the concept in particular is the focus, and "FoI approach" when we refer to methods to identify students' FoI and practical enactments (teaching strategies) in schools.

### *Growth of FoI Scholarship*

Analysis of texts revealed the growth and changing nature of FoI scholarship. Table 3 shows that from 2011 to 2014, most work was conceptual development. Since 2015, several texts reexamined earlier research that was originally identified as FoK work, through an FoI lens, to illustrate FoI theory. Almost all empirical studies have been conducted since 2015.

Table 4 shows the increasing spread of scholars, numerically and geographically. FoI scholarship began in Spain and has been taken up in other European countries, as well as in the Americas, Asia, and the Pacific.

### *The FoI Concept*

The term "funds of identity (FoI)" was first used by Saubich and Esteban-Guitart (2011), after which the concept was further explained and developed by Esteban-Guitart (2012, 2014, 2016) and Esteban-Guitart and Moll (2014a, 2014b). It was presented as a complement to and sometimes a critique of the FoK conceptual framework (Moll et al., 1992). FoK scholarship, rooted in sociocultural

**TABLE 2**

Overview of the Results section, including research questions addressed, section headings, and subheadings

Section headings	Research question	Subheadings (if relevant)
Growth of FoI Scholarship		
The FoI Concept	1	
Purposes	2	
The FoI Approach: Methods Used to Identify Students' FoI	3	Identifying FoI Through Creating Artefacts and Narratives: The Initial Approach Identifying FoI Through Creating Artefacts and Narratives: Expanding the Repertoire Identifying FoI Through Observations and Found Objects FoI Revealed
The FoI Approach: Pedagogical Applications	4	Designing Teaching and Learning Related to Specific Students' FoI Co-Constructed Artefacts Integrating Students' Popular Culture FoI Student Production of Identity Artefacts
Evidence of Effects	5	

Note. FoI = Funds of Identity.

theory, drew educators' attention to the "historically accumulated and culturally developed knowledge and skills essential for household and individual functioning and well-being" (Moll et al., 1992, p. 134), with a specific focus on lower income and immigrant communities (Rios-Aguilar et al., 2011). The FoI concept further refines the FoK concept by focusing on funds that are important for people's self-understanding (Saubich & Esteban-Guitart, 2011). "*Funds of knowledge* . . . become *funds of identity* when the participants appropriate them and use them to define themselves" (Esteban-Guitart, 2014, p. 753), which implies that FoI are always a subset of FoK: FoI are always FoK, although FoK may not always be FoI.

This focus requires a conceptualization of identity, which was found in socio-cultural theories of identity, especially Vygotskian theory (Esteban-Guitart, 2014; Esteban-Guitart & Moll, 2014a; González-Patiño & Esteban-Guitart, 2014; Hviid & Villadsen, 2014; Nogueira, 2014; Poole, 2017a; Poole & Huang, 2018). From a sociocultural perspective, identity is seen as both a social product and personally experienced; identity is constructed in social interaction and participation in one's local settings, which in turn are informed by broader cultures and narratives; and identity is a source of motivation for action (e.g., Holland et al., 1998; Verhoeven

**TABLE 3***The nature of FoI scholarship 2011–2018*

Categories	2011	2012	2013	2014	2015	2016	2017	2018	Total
Conceptual development	1	1		5		1	1	1	10
Reframing previous FoK studies to illustrate FoI theory					1	1	1	1	4
Original empirical research	1				1	1	2	4	9

*Note.* FoI = Funds of Identity; FoK = Funds of Knowledge.

et al., 2019). The nature of identity is multiple, historical, and social-cultural (Esteban-Guitart & Moll, 2014a). In constructing one’s identity, cultural resources are used: language, artefacts such as a flag, ideologies, and so on. Thus, FoI do not exist solely within minds of individuals but are distributed: among persons, artefacts, activities, and settings. Building on this conceptualization, Esteban-Guitart (2012) proposed a definition of FoI that has often been cited in later articles:

A set of resources or *box of tools*. These tools have been historically accumulated and culturally developed; they are socially distributed and transmitted; and they are essential for constructing one’s identity and for defining and presenting oneself. (p. 177)

In theorizing the process in which identities develop, the notion of “lived experience” or “perezhivanie” plays an important role, as it explains how personal experience and cultural environment are mutually constitutive and inseparable. As Esteban-Guitart and Moll (2014a) explained:

On the one hand, a child’s previous experience determines what he or she brings to the situation. On the other, the social and cultural situation offers possibilities and constrictions. How these “external” situations are refracted by the child is the lived experience, an indissoluble whole that integrates the individual and the world. (p. 33)

Poole and Huang (2018) emphasized an interpretation of perezhivanie as “experiencing-through-struggle” (Blunden, 2014), which foregrounds how individuals actively work through critical moments to reestablish psychological equilibrium. This interpretation draws attention to negative emotions and experiences that students may have appropriated as part of their identities, and that may be relevant to draw on in the classroom.

The FoI concept and approach are presented as trying to overcome three limitations of the FoK concept and approach (Esteban-Guitart & Moll, 2014b; Esteban-Guitart et al., 2019). A first limitation concerns the primacy and exclusivity that are given to families as the focus of attention when documenting a student’s FoK. This feature is problematic because students may not incorporate FoK

**TABLE 4***Spread of FoI scholarship by chronology, author, and country*

Features of scholarship	Year						
	2011	2012	2014	2015	2016	2017	2018
Authors	2	1	6	5	7	7	14
Countries	Spain (2)	Spain (1)	Brazil (1) Denmark (2) Spain (2) United States (1)	Spain (5)	Australia (5)  Canada (2)	China (1)  Spain (4) United States (2)	Australia (3) China (2) Spain (6) United States (3)
Papers	1	1	5	2	2	5	7

derived from their family histories in their identities, and additionally, they may also participate in contexts other than the family that are important to them. The second limitation pointed out is related, and of a methodological character. Much FoK scholarship has relied on ethnographic research carried out by teachers in visits made to their students' homes, which González (1995) called "the funds of knowledge methodology" (p. 238), but this approach may accentuate parents' FoK and will not reveal students' FoK developed in other contexts (Moll, 2005)<sup>3</sup>. Third, conducting home visits is a very time-consuming process, and some teachers are concerned that they will not be able to implement this for all their students (Esteban-Guitart, Lalueza, Zhang-Yu, & Llopart, 2019; Hogg, 2013). In contrast, in FoI literature pleas are made for a qualitative multimethodological approach to complement the use of in-depth interviews. This suggests that FoI scholars aim to add methods that may be used with individual students and potentially groups or whole classes (see Method section to identify students' FoI).

FoI theory is related to several other theoretical frameworks and the notion of FoI resonates with other notions; some of these relationships have been explicitly addressed by FoI authors. For example, when first introducing the concept, Esteban-Guitart and Moll (2014b) and Esteban-Guitart (2014) built not only on sociocultural theory but also on Foucault's notion of "*technologies of self*," suggesting that FoI are actually such "technologies": "techniques (discourses, meanings, artefacts) that human beings use to understand and produce themselves, explicitly or implicitly" (Esteban-Guitart & Moll, 2014b, p. 75). Also, in emphasizing the importance of immigrant students' strengths and resources rather than their supposed deficits, several authors refer to *social justice* frameworks. For example, Subero et al. (2015) drew on Gutstein's definition of social justice pedagogy, which works towards "developing socio-political consciousness" (Gutstein, 2003, as cited in Subero et al., 2015, p. 36). Subero et al. (2017) pointed out the relationship between the FoK and FoI approaches and theoretical perspectives that see learning as *knowledge creation*, instead of transmission of fixed knowledge (Paavola et al., 2004). A case in point is the idea of prospective education (Kozulin, 1998), which emphasizes collaboration and development of new competencies, knowledge and understandings (Poole, 2017b). Another theoretical

notion that FoI is closely related to is *educational contextualization* (Llopart & Esteban-Guitart, 2017), which means linking curricular content (e.g., literacy, science, mathematics, social sciences) with students' lives, including prior learning experiences from their homes and communities (Tharp et al., 2000).

In his 2012 article Esteban-Guitart introduced five major types of FoI, a categorization that was often used in later work: (1) *Geographical* FoI include "any area or territory, such as a river, a country, a village or a mountain which become a source of self-identification"; (2) *practical* FoI refer to "any activity such as work, sports, music"; (3) *cultural* FoI are "artefacts such as religious symbols, national flags, national anthems or any social category such as introversion/extroversion, age, ethnic group or gender"; (4) *social* FoI include "significant others such as relatives, friends or colleagues"; (5) *institutional* FoI refer to "any social institution, such as family, marriage, or the Catholic Church" that are important to one's identity (p. 177).

Over the past few years, the basic ideas underpinning the concept of FoI have remained unchallenged, but several proposals have been made to add types of FoI. González-Patiño and Esteban-Guitart (2014) and Poole (2017a) proposed inclusion of digital (technological) FoI. González-Patiño and Esteban-Guitart (2014) argued that these are important because we live in "mobile-centric societies" (p. 64) and digital devices are increasingly being used by young people to produce and share identity, although this occurs mainly out of school (Poole, 2017a).

Subero et al. (2015) and Poole (2017a) referred to Zipin's (2009) notion of dark FoK, (knowledge and skills related to experiences with challenging situations such as alcoholism and racial discrimination), suggesting that dark FoI should also be taken into account. Two different terms seem to have developed to address this idea. Charteris et al. (2018) noted that "dark experiences and knowledge are also relevant to personal identity construction" (p. 11) and coined the term *dark funds of identity*, which they used to describe FoI that arose for one student from her struggles to fit in at school. Poole and Huang (2018) proposed adding the category 'existential funds of identity' to the typology of FoI developed by Esteban-Guitart (2012, 2014). Existential FoI refer to positive and negative experiences that students appropriate in order to define themselves. According to Poole and Huang (2018), negative emotions and experiences are often not acknowledged and consequently not accommodated and drawn upon in classrooms, whereas these practices might help students to grow as human beings (pp. 126, 129). Existential FoI may include "problematic circumstances, such as being suspended from school, exam pressure, or falling out with a friend, as well as more personal issues to do with identity and belonging" (Poole & Huang, 2018, p. 129). Additionally, Poole (2017b) proposed the category of "ideological" FoI, defined as "political, cultural or religious beliefs" (p. 8), such as "patriotism . . . (and) Christianity" (p. 8).

### *Purposes*

A general purpose of the FoI approach mentioned in several articles is to break down deficit thinking, in particular about immigrant students, whose funds are less visible to or relatable for teachers (Esteban-Guitart, 2014; Poole, 2017a; Saubich & Esteban-Guitart, 2011). Associated with this is the purpose of

education becoming more equitable and inclusive (Llopart & Esteban-Guitart, 2017). More specifically, several purposes of identifying and drawing on students' FoI in teaching can be identified in the FoI literature. A basic argument, including three steps, reoccurs in most articles.

The first step emphasizes, similar to the FoK literature, the importance of teachers recognizing students' existing resources (knowledge, skills, language, etc.), to which FoI researchers add a focus on resources that are important for students' self-understanding. This may require extra effort on the part of teachers as some students' resources and experiences are not as visible or accessible for teachers and can therefore easily be overlooked (Esteban-Guitart & Moll, 2014a; Marsh & Zhulamanova, 2017). Understanding students' life experiences is seen as a goal in itself (Poole, 2017b), but it also contributes to a larger goal of validation and affirmation of students' identities, particularly those of marginalized students (Poole, 2017a; Ordóñez et al., 2018) and "legitimising students' cultural voices" (Llopart & Esteban-Guitart, 2017).

Although affirmation of students' identities is in itself considered valuable, usually a second step is part of the argument: Teachers can (and should) use their insights in students' FoI pedagogically, that is, they should draw on them in order to build bridges or create continuities between the curriculum and students' prior knowledge, life experiences, and interests (Charteris et al., 2016; Esteban-Guitart & Moll, 2014a; Llopart & Esteban-Guitart, 2017; Nagle & Stooke, 2016; Poole, 2017b; Recchia & McDevitt, 2018; Subero et al., 2018). This is also referred to as making lessons meaningful or contextualizing learning (Ordóñez et al., 2018; Subero et al., 2017; Subero et al., 2018). Drawing on students' FoI is considered an improved, innovative approach to teaching (Hviid & Villadsen, 2014; Nogueira, 2014).

The third step of the argument concerns potential outcomes of innovative and improved teaching that draws on students' FoI and students' learning experiences. It is argued that such experiences can extend students' resources and help them to connect with new academic and formal learning; drawing on students' FoI thus supports academic learning (Subero et al., 2017). Several authors also mentioned enhanced student motivation or school engagement as an aim or possible outcome (Llopart & Esteban-Guitart, 2017; Ordóñez et al., 2018; Subero et al., 2018). Some authors focused on nonacademic outcomes, more closely related to identity development. They discussed how drawing on students' FoI can expand and amplify students' identities (Subero et al., 2017) or foster development of new identities (Poole, 2017b). Esteban-Guitart and Moll (2014a) referred to the concept of zone of proximal identity development (Polman, 2010). Others emphasized how it may empower students (Ordóñez et al., 2018; Poole, 2017a; Subero et al., 2018) and enhance their agency (Charteris et al., 2016). Poole and Huang (2018) argued that a focus on existential FoI could be transformative for students.

#### *The FoI Approach: Methods to Identify Students' FoI*

Researchers have been using an array of methods to identify and draw out students' FoI, and over the years this range of methods has expanded, with addition of methods from other research traditions. In our analysis in this section we

distinguish between two kinds of methods. The first asks students to purposefully create an object or a narrative (a story or written account), as described in the first two subsections. The second category includes less “obtrusive” methods that involve finding or collecting objects and observing students (as described in the third subsection).

*Identifying FoI Through Creating Artefacts and Narratives: The Initial Approach*

Saubich and Esteban-Guitart (2011) described several methods that were used to identify the FoK and FoI of a Moroccan family living in Catalonia, with a special focus on one daughter, a 12-year-old girl. In line with the FoK tradition that makes use of ethnographic research, the data were collected during home visits. However, the visits were not used only for interviews and observations; several qualitative and quantitative research techniques were applied in order to identify the family members’ identity, their funds of family knowledge, and their forms of life. We discuss those techniques in detail that have reappeared in the FoI literature and have become “standard” FoI methods.

The girl was asked to draw a self-portrait and to provide a self-definition. The *self-portrait* is an arts-based projective technique in which the participant is asked to draw “who you are at this moment in your life . . .” and is invited to add “the people, activities, artefacts, institutions and things that are important to you at this moment in life.” The technique is aimed to encourage participants to think holistically about their identities and lives. The *self-definition task* entailed answering the questions “Could you define yourself? Could you answer the question: Who are you?” and writing down 10 answers to the question “Who am I?” and then placing the answers in order of importance. The mother of the family was asked to draw a *significant circle*. This technique invites the participant to summarize, by means of a single-page representation, the most important objects, activities, people, institutions, and hobbies in their daily lives, keeping in mind that the closer to the center of the big circle that the learner put the small circles and the squares, the more important they are to them. And several family members were asked to take *pictures*, in order to study their *routines*, way of life, and the contexts of their daily activity (with a focus on educational routines), with a camera provided by the researchers.

Compared to FoK research, in which the approach is usually that parents are interviewed and family/community life is observed (González, 1995), the focus in enacting a FoI approach is more on students themselves and the methods used are often arts-based. In a theoretical article, Esteban-Guitart (2012) defended the use of multiple methods and took an explicit stance against the “methodological reductionism” of research in the social sciences that traditionally relies on in-depth interviews to learn about the meanings people attach to their experiences and environment. He made a plea for an approach that “involves using different qualitative research techniques and strategies, at different times and in different circumstances, in order to capture the dynamic details of the identity of individuals” (p. 178). The multimethod autobiographical approach developed by Bagnoli (2004) inspired methods used with the Moroccan family by Saubich and Esteban-Guitart (2011). The self-portrait and the significant circle are still commonly part of the repertoire in FoI research (see e.g., Moulton, 2018a). Esteban-Guitart

(2014) argued that art-based methods create “identity artefacts” and can be used with participants of all ages. Moulton (2018a) added that different modes of expression may tap into different layers of meaning.

*Identifying FoI Through Creating Artefacts and Narratives: Expanding the Repertoire*

Over the years, the repertoire of methods used to identify students’ FoI expanded in several ways. *New media* have been added to the tools used for creating identity artefacts, and identity artefacts have taken on new forms: personal diaries (Esteban-Guitart, 2012), videos (Esteban-Guitart & Moll, 2014b), poems (Subero et al., 2015), photos (Marsh & Zhulamanova, 2017), maps (Moulton, 2018a), and collages about how a (self-chosen part of a) text relates to the student’s own life experiences (Subero et al., 2018).

Another development is that home visits have lost their role as primary context for data collection, and the *school or classroom* became the site where identity artefacts are created. An associated development is that, whereas at first drawing, taking pictures, and so on were mainly applied as research activities, in later studies it is often the teacher or teacher-researcher who asks students to write, draw, or make photographs or videos as (part of) a school assignment. This is emphasized by Subero et al.’s (2017) reference to identity artefacts as “school artefacts created by students and impregnated by students’ identities” (p. 253). This move in the site of data collection from students’ homes to the classroom clearly makes identifying FoI more doable for teachers. It also implies a blurring of the boundaries between research and teaching, and between identifying FoI and using them pedagogically.

Over the years, identity artefacts were increasingly used as *educational* tools. Subero et al. (2018) went so far as to say that identity artefacts “also require. . . the application of curricular content or competencies” (p. 163). There must be identity investment *and* educational use. Llopert and Esteban-Guitart (2017) also emphasized the double function of identity artefacts. First, “they enable funds of knowledge and identity within students’ life experiences to be identified and documented” (p. 270). Second, they “help to link curricular content with students’ practices, experiences and daily life contexts” (p. 270). In Charteris et al. (2018), the production of an identity artefact was directly linked to the curriculum content, and students were asked to make links between course materials and their life experiences themselves.

Connections were made with *other research traditions*, by borrowing methods, tools, and concepts that fit in with the FoI approach. Subero et al. (2017), for example, identified the notion of “identity texts” in the Canadian “Multiliteracy Project” (Cummins & Early, 2011) as particularly relevant. An identity text is “an artefact produced by children who have invested some of their identity in them” (Subero et al., 2017, p. 255). These products can be written, spoken, visual, musical, or combinations in multimodal form. Examples from the Multiliteracy Project are (1) the results from research into the history of students’ family, community, or neighborhood; (2) a bilingual text on the migration history of their family; and (3) audio and video recordings of a child’s daily life activities, used for making a reading book. These products often also travel back to the students’ homes, thus creating a bridge between school and home.

Pleas for making use of the possibilities of *digital media* were made from an early stage in the history of FoI. In a theoretical article, González-Patiño and Esteban-Guitart (2014) suggested use of a class blog and referred to other work in which students created a virtual space and uploaded materials, such as videos, music, and artwork (Moll et al., 2013). Charteris et al. (2016) promoted e-assessment for learning. However, Poole (2017a, 2017b) actually applied digital tools in empirical FoI research. Initially, he theoretically explored the idea of having students design an avatar as an FoI text (Poole, 2017a). Two arguments underpinned the use of this tool. First, digital devices are increasingly being used by young people to produce and share identity, but this occurs mainly out of school. Second, use of avatars can be seen as an example of “prospective education” (Kozulin, 1998) as avatars may facilitate students’ exploration and creation of new possible identities, and thus involve knowledge creation. With this second argument, Poole made clear that the use of avatars adds not only a method or tool to the FoI repertoire but also a whole new dimension; whereas methods in FoI research are usually designed to draw on existing FoI, avatars aim to create new identities. Poole advocated for students to be encouraged to create subject-specific avatars at school, which can represent their identity in that discipline (see the section on pedagogical uses of FoI).

The range of methods for identifying FoI has also been extended by means of the increasing use of *collective or collaborative methods*. Whereas in earlier years artefacts produced were mainly individual products, the authors of two studies suggested methods where the artefact produced is a group product, such as a class discussion. Subero et al. (2015) reviewed two projects in which classroom discussions were used. In the Social Justice Education Project (Camarrota, 2007), students’ life histories and experiences were discussed in teacher-student discussion groups, with poems used as a cue, with the aim of “unearthing silenced voices” (p. 41). In the Redesigning Pedagogies in the North Project (Zipin, 2013), students were asked to bring cultural artefacts from their lives outside school that carried rich identity resonances, and to talk about their meanings. In a similar way, Ordóñez et al. (2018) used an identity drawing as input for a group discussion. Another instance of collaborative creation of identity artefacts involves such artefacts going back and forth between the school and the family so that not only the student but also family or other community members contribute to it. An advantage of this method is that the artefact can serve to build bridges between what students do in and outside school (Esteban-Guitart & Moll, 2014b).

Despite criticism of the sole use of interviews, and notwithstanding development of new ways to identify FoI, interviews have remained part of the repertoire of FoI researchers. It is acknowledged that stories and accounts about family structure, working history, language and hobbies, religion, education, and ethnic identity may still carry valuable information on FoI (e.g., Jovés et al., 2015; Saubich & Esteban-Guitart, 2011). Moreover, artefacts usually require some explanation to be informative about their meaning for the student. Therefore, drawings, photographs, avatars, and other artefacts created by students have increasingly been used as cues in interviews in which students are asked to explain what they have produced (Marsh & Zhulamanova, 2017: photo elicitation interviews; Poole, 2017b: avatars).

### *Identifying FoI Through Observations and Found Objects*

Some authors argued for or made use of methods that involve the researcher or teacher collecting objects or observing students, or students bringing objects to school to help the teacher learn about their FoI. However, this seems to be a less prevalent method. In one example, researchers completed a table in which they described *family artefacts*, how these were used, and where they were located (Saubich & Esteban-Guitart, 2011). In the Redesigning Pedagogies in the North Project (Zipin, 2013), discussed by Subero et al. (2015), students revealed their FoK/FoI through *cultural artefacts* that they brought to school. Subero et al. (2017) explained how in the British Home-School Knowledge Exchange Project, students and families purposefully collected objects that were special to them and displayed them in a decorated shoebox (Hughes & Pollard, 2006). Inspired by the pedagogical methodology ‘The Integrating Background’ (Canevaro et al., 1988), Hviid and Villadsen (2014) proposed searching for “traces” (through observation and interviews with children) that could be considered aspects of children’s evolving personality (with a history and a potential future): “Things children keep in their pockets or bags, books children want to have read again, spaces children go to on the playground, themes children play, toys children prefer, events children refer to or draw, etc.” (p. 66). They also suggested making up stories together, playing, and constructing together as methods to identify FoI. Hviid and Villadsen (2014) supported their argument by cautioning against methods such as self-portrait and significant circle, which they considered provide only “snapshots” (p. 61).

In contrast, in some studies, students’ FoI were not deliberately investigated by teachers but become apparent through students’ completed work (Charteris et al., 2018; Nagle & Stooke, 2016; Recchia & McDevitt, 2018).

### *FoI Revealed*

Table 5 shows types of students’/families’ FoI reported in the nine empirical studies, with digital FoI shown separately. In three studies, only one specific category of FoI was illuminated; two of these were studies in which students created co-constructed artefacts, and the other example was offered as an argument for the educational value of revealing a specific type of FoI (existential). In six studies, several types of FoI were revealed. Pedagogical applications did not always draw on the full range of FoI (e.g., Marsh & Zhulamanova, 2017). In a third of studies, FoI categories were explicitly referred to in the reporting of findings.

### *The FoI Approach: Pedagogical Applications*

In this section, we describe ways that FoI theory was applied pedagogically in the literature. Nine out of 24 studies reported original research that included pedagogical application of FoI theory. This aspect of FoI work seems to be of increasing interest to scholars, because prior to 2017 there was no more than one study each year, whereas in 2017 there were two examples, and in 2018 there were four.

Through our analysis, we identified four types of pedagogical approaches, although we note some overlap between them. The four types identified were (1) designing teaching related to specific (target) students’ FoI, (2) co-constructed

**TABLE 5**

*Types of funds of identity revealed in empirical studies*

Papers	Geographical: any area or territory	Practical: activities (e.g., work, sport, music)	Cultural: artefacts, social categories	Social: significant others	Institutional: social institutions	Digital	Existential or dark	FoI reported in categories
Charteris et al. (2018)					✓			
Jovés et al. (2015)		✓	✓	✓				
Marsh & Zhulamanova (2017)	✓	✓	✓	✓	✓			✓
Moulton (2018a)		✓				✓		
Nagle and Stooke (2016)		✓	✓	✓		✓	✓	✓
Poole & Huang (2018)		✓						
Poole (2017b)	✓	✓	✓	✓	✓			✓
Recchia & McDevitt (2018)		✓					✓	✓
Saubich & Esteban-Guitart (2011)	✓	✓	✓	✓	✓			

artefacts, (3) integrating students' popular culture FoI, and (4) student production of identity artefacts.

*Designing Teaching and Learning Related to Specific Students' FoI*

Four studies described a pedagogical approach that included firstly learning about the FoI of a minoritized student(s), then using that knowledge to design learning that related to the selected/targeted students' FoI. However, despite this underlying similarity, each study contributed a unique pedagogical variation.

Saubich and Esteban-Guitart (2011) and Jovés et al. (2015) described learning about FoI and FoK held within immigrant families in Catalonia, the FoI/FoK that were revealed, and teaching units specifically designed to relate to FoI/ FoK discovered. In each case, a series of lessons was designed that related to a Moroccan family's FoI/FoK. Although both studies described contextualization of curriculum to allow a focus on the targeted student/family's FoI, Saubich and Esteban-Guitart (2011) reported on students learning about Morocco and life in Morocco through listening to the teacher and completing worksheets, whereas in the study by Jovés et al. (2015), family members of the immigrant student were positioned as experts within the learning experience.

Two pedagogical applications related to FoI held by multiple students. Both raised issues related to how to deal with FoK/FoI that teachers may consider undesirable, and how revelation of such FoI might be transformed into an educational opportunity. Ordóñez et al. (2018) described a pedagogical design focused on shared FoI held by a group of teenage boys, related to "their 'popular culture', such as music and comics" (p. 5). The boys, who had diverse backgrounds, were enrolled in a Spanish language class in a special educational facility for students at risk of social exclusion and/or with behavioral problems, in Spain. A learning activity was chosen to accommodate the boys' preferences for artistic and manipulative activities. Accordingly, the students were required to

create a character and a story (in Spanish). Specifically, the boys were asked to use three sessions to make a comic. For this they had to propose a story and a character, give him or her a name, and endow them with certain skills and weaknesses. (Ordóñez et al., p. 7)

Ordóñez et al. (2018) discussed a potential challenge that might arise when a student's comic included drug use or violence: What kind of educational use can be made of such expression? They supported Zipin's (2009) argument that schools should not deny these realities; he advocated that schools make such dark FoK/ FoI an object of learning in order to foster reflective, to encourage critical analysis, and to support personal and societal transformation.

Marsh and Zhulamanova (2017) reported how in a U.S.-based early childhood education (ECE) setting, policy, and teacher concerns were initial barriers to allowing princesses and beauty themes into the curriculum, although these themes obviously related to two girls' shared FoI. Artefacts based on popular culture were typically banned from dramatic play at the ECE center, because of evidence that Disney princesses have perpetuated racism, classism, and sexism and have negative impacts on children. However, student play and discussion appeared to extend

beyond Western princess notions. For instance, students talked about different ways that princesses might look. Thus, the dramatic play actually opened up students' possibilities to be a princess, on their own terms, rather than reproducing stereotypes.

The teacher, Mr. H., took a leading role in opening space for non-dominant notions of princesses and beauty. Teacher-initiated discussion and timely introduction of relevant resources both centralized students' FoI and supported their developing ideas. The teacher, for instance, introduced a book on a *princess boy*, which made the children decide that 'if they see a boy dresses as a princess they will not laugh at him or call him names but will play with him and like him for who he is.' (Marsh & Zhulamanova, 2017, p. 1011)

This study appears to provide a model for how teachers may approach students' FoI that they initially feel uncomfortable with in a critical, potentially transformative way.

### *Co-Constructed Artefacts*

We found two examples of guided reflection activities that directed tertiary students (preservice teachers) to draw on their FoI, one in Australia (Charteris et al., 2018) and the other in the United States (Recchia & McDevitt, 2018). Charteris et al. (2018) characterized this pedagogy as *co-constructing artefacts*, because students were required to respond to set questions. In this approach, FoI are conceptualized as dynamic, because the pedagogy enables students to draw on existing FoI to make sense of their academic learning and develop new FoI.

First-year online students in a preservice teaching program were "required to relate the unit material to their own experiences growing up, as pupils in school classrooms, or, for the more mature age students, in the workplace and parenting" (Charteris et al., 2018, pp. 11–12). The authors reported findings from several students that highlight how diverse "dark funds of identity can assist preservice teachers to project potential teacher identities" (Charteris et al., 2018, p. 11). For example, Kate linked course material about emotional intelligence to her schooling experience when she was labeled and relentlessly taunted as the girl with epilepsy.

In contrast, rather than making links between their FoI and course text material, in Recchia and McDevitt's (2018) pedagogical application, preservice ECE teachers in the United States were required to complete a reflective journal, conduct a home visit for a "key" child, and reflect on a videotape of their practice. Immigrant preservice teachers tapped into diverse lived experiences in and out of schools, such as childhood experiences and ways of caring for babies in each of their own cultures. They reflected on tensions between the cultural practices in their U.S. ECE settings and their own upbringing, and came to find ways that they could accept and take on new ideas and practices. For example, Chai Yenn (from China) grew up with the value of not wasting food, but the ECE center practice was to "allow the babies to participate in their own feeding, offering. . . opportunities to practice their developing skills . . . frequent spills and food dropping were

considered part of the children's learning" (, p. 20). Chai Yenn eventually found a compromise: "doling out only small amounts of food to Sandy at a time, to avoid too much waste" (Recchia & McDevitt, 2018, p. 20).

What is distinctive about the outcome in this study is that immigrant students concluded that their FoI were problematic for U.S. professional practice, because they did not coincide with U.S. ECE center values. Therefore, in this pedagogy, expression of students' FoI was valued as an explicit statement of their beliefs and values at the beginning of teacher training, which then allowed identification of tensions between their FoI and values held in ECE setting. These immigrant pre-service teachers found their own solutions; they identified compromises that worked for them. The pedagogy therefore supported them in taking up new practices that were consistent with the culture of U.S. ECE settings, while also maintaining their FoI.

### *Integrating Students' Popular Culture FoI*

We found two papers that reported on studies involving pedagogical applications of students' popular culture FoI. In one (described earlier) the pedagogical application was designed after identifying FoI (related to comics) shared by a group of boys (Ordóñez et al., 2018). In contrast, in a Canadian study, Nagle and Stooke (2016) described how pairs of students were able to draw on their FoI when they were allowed to choose a focus for investigation (within a broad topic) and to choose how to present their findings. Students' "design decisions (were) increasingly informed by their awareness of modal affordances" (Nagle & Stooke, 2016, p. 161) and digital FoI, because, the authors argued, "participation in digital landscapes" (p. 158) was an important way that students expressed their identities. One student pair developed a website to present their research. Another pair's topic choice was influenced by one boy's FoI related to his current favorite video game and the band *Rage Against the Machine*. The authors asserted the value of personal exploration because student-made connections between their project work and their FoI resulted in "purposeful meaning-making" (p. 161); however, they were concerned about gender stereotypes that were prevalent in students' topic and presentation choices. Boys' projects showed engagement with themes of war and conflict, and girls' teams produced a doll skit and a fashion magazine, raising questions for the authors about "how to disrupt social narratives by "mak(ing) counter narratives available by critically framing student interests and challenging dominant discourses" (p. 164). In this study, the challenge was unresolved, in contrast to the successful navigation of students' FoI that caused concerns for teachers, in the study by Marsh and Zhulamanova (2017), in which a teacher created opportunities for discussion and critical reflection.

### *Student Production of Identity Artefacts*

In contrast to pedagogical applications recommended by Subero et al. (2015) to enhance social justice through students focusing *outward* on their life conditions and/or communities, Poole's (2017b) example of student-made identity artefacts involved students in taking an *inward* focus. In a 2-week English project, Chinese students at an international high school explored and developed

their own cultural and individual identities, through open-ended digital literacy activities. Students were asked to create (1) a word cloud (an image composed of adjectives and nouns that best described them, arranged graphically using digital apps); (2) an avatar (a graphical representation of a user or a user's alter ego or character), constructed by students using digital apps (e.g., Adobe Photoshop); and (3) a written or spoken reflection, which was an explanation for both software used to create the avatar and avatar design (Poole, 2017b; Poole & Huang, 2018). Poole and Huang (2018) noted that students' avatars represented both their current and future selves. They concluded that the pedagogy was "effective in channeling proleptic identities—inchoate future selves that are starting to emerge" (p. 129). However, some FoI revealed "more problematic forms of funds of identity related to political and philosophical beliefs" (Poole, 2017b, p. 1), which created role dilemmas for the teacher (Poole, 2017b). Poole (2017b) mused,

On the one hand, it is tempting to encourage students to address their inner world issues in order to assist them in negotiating a complex yet potentially cathartic process of identity formation. On the other hand, [...] it has to be asked to what extent is a teacher qualified to deal with the psychological and affective aspects of their learners' development? (p. 16)

#### *Evidence of Effects*

In discussing evidence, we only look at the nine empirical studies in our sample. Little "evidence" in a strict sense is provided in these articles, that is, evidence of effects of drawing on students' FoI on academic learning, students' engagement with school, or identity development. Conspicuously few studies focus on outcomes at the student level. However, adopting a broader definition of "evidence," we might say that several articles provide evidence that it is possible for teachers to identify students' FoI and incorporate them pedagogically.

In Saubich and Esteban-Guitart's study (2011), six teaching units with activities related to Morocco were created and enacted; teaching and learning objectives, topics and activities of these units are described, and a photo of students' final presentation of the project to the school is provided. In a similar way, Jovés et al. (2015) developed seven teaching units about farm animals for second grade students, including criteria to assess what the students have learned from the units. Moulton (2018a) described how a teacher created space for the FoI of a student who was homeless. None of these studies, however, reported results or outcomes of teaching activities in terms of student learning.

In some studies, student work was presented as evidence of how drawing on students' FoI affected them. Nagle and Stooke (2016) described multimodal student presentations to argue that space can be created in schools in which students mobilize out-of-school identities for school-initiated activities. Poole (2017b) showed avatars designed by students to argue that these can be used as strategies for detecting students' FoI and enacting progressive education. Charteris et al. (2018) presented examples from preservice teachers' work that show how they were able to link academic literature on emotional intelligence to their own experiences.

Three studies presented observation or interview data to substantiate their claims about how teaching activities drawing on students' FoI affected students' learning. Based on observations of 3- to 5 year-old children's behavior in the classroom, Marsh and Zhulamanova (2017) included descriptions of the two focus girls' participation at their ECE center, from data collected before and during the pedagogical intervention. This evidence illuminated new developments in the play of the two girls (and other children as well), when their teacher actively tried to build on their FoI (knowledge of Disney princesses) to improve their participation. Recchia and McDevitt (2018) described evidence from three immigrant students' journals and assignments that showed how they initially experienced tensions between their FoI/FoK and the theories and practices presented in their infant and toddler practicum course, and eventually found ways to reconcile them. Ordóñez et al. (2018) described and provided examples of student work (comics created by the students). They also reported student responses elicited in the study:

The students declared that the activity was motivating because it was based on things that were of interest to them, in this case, comics. (p. 9)

In contrast, Poole (2017b) reported an effect on himself as a teacher/researcher, explaining, "The project also brought about significant transformation in the way I viewed my students" (p. 2). Previously he saw them as Chinese students, but that changed into seeing them as individuals who are Chinese. According to the author, his shift in perspective illustrated that learning about students' FoI is a suitable strategy for addressing teachers' deficit thinking.

## **Discussion**

FoI theory is an emerging and growing area of research that has been presented as complementary to FoK theory (Esteban-Guitart & Moll, 2014a). It aims to address potential limitations acknowledged by FoK scholars (González et al., 2011; Moll, 2005). In the spirit of support for this emerging body of scholarship, and for its ethical goals, questions are offered that may be useful for consideration by scholars designing future studies.

### *Issues Related to Identifying Students' FoI*

An extensive range of tools that engage students in accessible, open-ended activities and questions and do not conflate *family FoK* with a *student's FoK or FoI* is described in FoI scholarship. Multiple FoI studies utilized the FoK methodology of ethnographic interviews in household settings, in combination with other methods that put a spotlight more on a student and look beyond the family context (e.g., Marsh & Zhulamanova, 2017; Saubich & Esteban-Guitart, 2011). The repertoire of methods for learning about FoI includes possibilities that can be applied by teachers in school settings, which arguably raises the potential for more students to experience personally meaningful learning. However, several questions remain in this respect.

First of all, little research has focused on aspects of application that affect the efficacy of this work. We recommend further research to identify factors that may

affect the success of such efforts, such as teacher skills and disposition, and manageability.

A second issue concerns factors that might be relevant to the suitability or effectiveness of methods employed within specific cultural contexts. Diverse arts-based methods to learn about students' FoI were found in the literature, including photographs, digitally produced and hand-drawn artwork, and artwork that may include written words. These methods are sometimes described in great detail, providing exact instructions used with participants (e.g., Jovés et al., 2015; Saubich & Esteban-Guitart, 2011). Development of multiple methods is helpful because it allows researchers and teachers to consider and apply those that are most suitable for their context. Because students' cultural identities and their ideas about important aspects of their identity may be interwoven, methods to investigate FoI must allow those to come through. For example, for indigenous peoples, relationship with place is fundamental to one's identity (Penetito, 2009). Future studies within and beyond Spain, the United States, China, and Australia could usefully develop knowledge about how an FoI approach could translate to other cultural contexts, and reveal methods that are relevant in specific cultural settings. In that sense it is promising that the application of FoI theory in empirical research still seems to be spreading in terms of regional coverage (e.g., Jones & Mutumba, 2019).

A third concern is whether arts-based methods such as significant circle and self-portrait provide only "snapshots" (Hviid & Villadsen, 2014, p. 61) and to what extent they can reveal deeply significant aspects of identity that link back into students' past and potentially to their future. Poole (2017b) and Poole and Huang's (2018) work with avatars provided an illustration of how this may be achieved. Future work may involve experimentation with new methods or variations on current ones to address this concern. It is important to note that some authors emphasized the importance of interviews alongside arts-based approaches, because they provide opportunities for students to elaborate or explain aspects of their identity presented in an artwork (Marsh & Zhulamanova, 2017; Poole, 2017b).

Finally, most studies reported on participants describing positive aspects of their lives, such as people whom they value. However, proposals are made to also focus on FoI that are linked to negative experiences (Poole, 2020; Poole & Huang, 2018). These types of FoI create challenges for teachers, who may feel that they lack the resources or training to support students in life struggles that are revealed, echoing a difficulty experienced by Australian teachers when they learnt about students' dark FoK (Zipin, 2009). Linked to this challenge are questions of safety and ethical responsibility.

#### *Issues Related to Drawing on Students' FoI*

As in FoK scholarship, some ways to pedagogically apply students' FoI to their learning involved firstly learning about students' FoI, and then *drawing on* them (Hogg, 2015) in specifically designed learning experiences (e.g., Marsh & Zhulamanova, 2017; Nagle & Stooke, 2016). Other pedagogical applications were teacher-designed learning experiences that *drew out* (Hogg, 2015) students' FoI by encouraging or requiring students to apply them within the learning (e.g.,

Charteris et al., 2018; Recchia & McDevitt, 2018). The range of pedagogical applications appears to enable use of FoI at every level of education, from early childhood to tertiary settings. We noted various elements of difference between pedagogical applications. One related to the positioning of student FoI in the learning experience: whether it was positioned as valuable or problematic. A second related to who was positioned as expert in the learning experience related to students' FoI: the student/family members themselves or the teacher. Because many studies have a focus on describing pedagogical intervention, student impacts remain unknown, suggesting a valuable area for development.

Two theoretical studies outlined concerns about pedagogical applications. Esteban-Guitart (2012) questioned whether "all FoI are to be welcomed" (Esteban-Guitart, 2014, p. 756). Examples that he gave included egocentrism, hedonism, and aggression. Esteban-Guitart noted that this is difficult terrain, because of the subjectivity of such judgments. We argue that this issue encompasses new levels of challenge in superdiverse societies, related to questions about the aims of education within such societies: How should schools validate diverse forms of identity, belief structures, and ways of being? How can schools resolve potential tensions between diverse FoI held by students and tools needed to function successfully within a specific cultural setting, and to potentially work toward societal transformation? Therefore, we suggest further study to examine forms and characteristics of pedagogical applications that are validating, are inclusive, and contribute to students' academic, social and/or emotional development. We saw examples of pedagogical applications that included student exploration of expansive possibilities, resulting in student empowerment, and application of FoI that proved to be transformative for students. Poole (2017b) explained that conducting an FoI approach as a teacher transformed his own perspective of students too. Future research might reveal further transformative possibilities of an FoI approach for teachers and students. For instance, how might this support students to achieve personal and societal transformation? How could an FoI approach foster students' identity exploration and development, allow change and take up of new perspectives, and nurture students' sense of agency and empowerment (Verhoeven et al., 2019)?

### *Theoretical Issues*

Drawing upon a Vygotskian perspective, in the FoI literature identity is understood as socially distributed and located. It is embodied in cultural artifacts, objects, and people. Based on this, FoI are not completely internal but are embedded in the social fabric of life. Some researchers have noted (Hviid & Villadsen, 2014; Poole, 2020) that Esteban-Guitart's (2014) distinction between five categories of FoI (geographical, practical, cultural, social, and institutional) may reify FoI and imply "a symbolic essence of things which the individual, through his/hers (sic) development, will come to discover" (Hviid & Villadsen, 2014, p. 64). We understand this categorization as a proposal of sensitizing concepts, offering a language that may help discuss possible FoI. However, future research should use methods to identify FoI that are open enough to be able to find additional categories or to call into question the categorization altogether.

Additional categories of FoI have already been proposed. The notions of “dark funds of identity” (Charteris et al., 2018), building on Zipin’s dark FoK (2009) and “existential funds of identity” (Poole, 2017b, 2020; Poole & Huang, 2018) draw attention to difficult experiences and associated negative emotions that students may have and use in order to define themselves. In an attempt to overcome the polarization of positive and negative emotions and experiences, and to emphasize individuals’ agency in producing their own identity, Poole (2020) and Subero (2020) drew on González Rey’s (2016, 2018) theory of subjectivity. This endeavor raises more fundamental questions concerning whether researchers should focus on individuals’ experiences (as something ‘out there’) or rather on how individuals make sense of their experiences, which is never static but constantly changing. A related challenge for researchers is how to deal with experiences that are difficult to capture in language. Poole (2020) argued that many methods used by FoI researchers for data collection are positivist in nature; he made a plea for developing new methodologies that better fit the theorization of identity in terms of subjective experience.

In line with the above, although in part of the literature the phrase “uncovering students’ FoI” is used, we tried to avoid the term *to uncover*, because we do not want to suggest that identity is immanent, residing in objects and things, and already there to be “found” or “discovered.” Being invited to produce a narrative (e.g., in an interview) or an artefact (e.g., a drawing of a meaningful circle) can actually produce identity expressions and meanings, rather than uncover them. This underlines Hviid and Villadsen’s (2014) point that the process of identifying an individual’s FoI provides the researcher with a snapshot of the individual’s inner world, but it does not clarify the significations that the individual ascribes to a cultural artefact as it is used across contexts and over time.

### *Issues of Evidence*

Most of the studies in this review are about how to go about identifying and/or drawing on students’ FoI. Few studies have investigated actual educational outcomes in terms of academic, social, or emotional development. Currently, offering evidence of effects seems to be the weakest area of FoI scholarship. Future research needs to demonstrate impacts for teachers and students. Also, to progress FoI scholarship, and support the application of theory into practice, we need studies that closely examine challenges and supports that influence applications of FoI theory.

### *Limitations of This Review*

Because of the linguistic competences of the authors, this review was limited to work published in English. We do not mean to devalue or hide the work of FoI scholars who do not publish in English, especially since we are aware of a significant amount of scholarship that is published in Spanish (e.g., Díaz-Barriga-Arceo & Vázquez-Negrete, 2020; Esteban-Guitart et al., 2015; Esteban-Guitart, Pallisera, et al., 2017; E. López et al., 2018; Subero, 2015). However, some scholars publish in both languages (e.g., Esteban-Guitart, Subero). By means of this review we hope to make at least the English language work more accessible, and to attract a wider audience to FoI theory and scholarship.

Another limitation arises from this review's focus on FoI scholarship, which led us to include only work that was explicitly presented under the heading of FoI, and resulted in the exclusion of studies that the authors do not identify or position as FoI scholarship. Notably, some authors have acknowledged the limitations of the original FoK concept and approach and have therefore broadened types of "funds" that they consider (e.g., also students' knowledge gained by playing computer games), and do not solely rely on the methodology of ethnographic home visits and interviews. For example, they had students bring significant artefacts for discussion (Zipin, 2013) and share shoeboxes that they had decorated and filled with meaningful items (Hughes & Pollard, 2006). However, these authors used the term *FoK* (and not *FoI*) to characterize their approaches, which means that these works were not identified as relevant in our search and not included in the review. Indirectly, however, they are part of the review, as several papers reviewed (e.g., Subero et al., 2015; Subero et al., 2017) were reviews of research originally presented as FoK scholarship, which retrospectively repositioned these as FoI scholarship.

### Conclusion

FoI scholars have developed a fully elaborated, substantial, and theoretically grounded approach that has the potential to make a substantial contribution to countering deficit thinking and achieving schooling that is culturally inclusive within our superdiverse societies. It remains productive in generating empirical research (e.g., Oikonomidou & Karam, 2020; Villacañas de Castro, 2020; Zhang-Yu et al., 2020; Zhu, 2020). We also note that outside the "niche" of the FoI and FoK conceptual framework, several studies addressed questions related to making education more relevant for students through making learning more personally meaningful (Chaffey, 2018; Hedges, 2018; Silseth, 2018). We hope that this review raises awareness of FoI theory, which scholars such as these and others with a focus on reducing the "educational debt" (Ladson-Billings, 2006) to minoritized students may find relevant to their work. This may lead in turn, to the development of new knowledge that supports education for social justice in our increasingly diverse societies.

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### Notes

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<sup>1</sup> Students who are *minoritized* "have been ascribed characteristics of a minority and are treated as if their position and perspective is of less worth" (Sleeter, 2011, p. 1), which is independent of their numerical status in a society. This term encompasses a range of student groups for whom there are serious social justice concerns.

<sup>2</sup> Vertovec's (2007) term *superdiversity* described a level of diversity in societies that is much higher and more multifaceted than ever before, due partially to unprecedented levels of migration.

<sup>3</sup> However, in a number of FoK studies, alternative ways to learn about students' FoK were used (e.g., Allen et al., 2015; Calabrese Barton & Tan, 2009; Dworin, 2006; Hogg, 2013; Smythe & Toohey, 2009).

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*References marked with an asterisk indicate studies included as data sources.*

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