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Informed Interaction: A Funds of Knowledge Approach to Students in Poverty

Davis Clement, Brian Fries, Mike Postma, Bei Zhang

Abstract

Students of low socioeconomic status (SES) suffer reduced academic achievement levels compared to other students. Evidence suggests discord between a student's home and school environments (i.e., the hidden curriculum) contributes to poor educational outcomes. In this paper, we advocate educator, teacher, and administrator use of the Funds of Knowledge theory to identify the hidden curriculum that a student of low SES receives in school. This paper illustrates how, once the hidden curriculum is identified, educators can be better equipped to connect the home and school environments of students of low SES and thereby improve their academic performance.

Keywords: *funds of knowledge, low socioeconomic status, hidden curriculum*

The Elementary and Secondary Education Act, last restructured in 2002 as the No Child Left Behind Act (NCLB) of 2001, was intended to close the achievement gap between students from families of low socioeconomic status (SES) and their peers (U.S. Department of Education, 2002). Although the NCLB policy outlined a variety of methods to reform American education, children of low SES continue to suffer reduced academic achievement levels when compared to the achievement of other students (American Psychological Association, 2014). SES is defined as an individual's or family's economic and social position in relation to other individuals or families (American Psychological Association, 2014). Substantial evidence links low SES (e.g., poverty) to lower educational

outcomes. Children from families of low SES score 10% lower than the national average on national achievement tests, and they tend to drop out of high school at higher rates than their contemporaries from higher SES backgrounds (American Psychological Association, 2014).

American educational settings include a persistent bias against students of low SES and their academic performance (Gonzalez, Moll, & Amanti, 2005). The SES difference that exists between student populations and teachers drives the need to develop educational environments that foster mutual trust and understanding, bridging the discord between a student's cultural background and the outcomes and expectations of the curriculum and the school. Evidence suggests that discord between a student's home and school environments contributes to poor educational outcomes (Brown, 2007). As a result, educators are seeking methods to improve the connection between school and home. The student learning that occurs amid this discord has been called the hidden curriculum by some researchers and advocates (Giroux, 2001). Instead of being explicitly stated, this curriculum is implied by the formal, stated curriculum of a school, yet has widely disparate outcomes for students, depending on their race, SES, ethnicity, or linguistic identity. Identifying what methods are needed to better connect home and school requires school leaders to somehow identify the nature of the discord between a student's home and school environments.

In this paper, we advocate educator, teacher, and administrator use of the Funds of Knowledge (FoK) theory to identify the hidden curriculum that a student of low SES perceives or consumes in school (Moll, Amanti, Neff, & Gonzalez, 1992). After the nature of this hidden curriculum is specified, educators will be better equipped to connect the home and school environments of students of low SES and ultimately to improve their academic performance. We first explain how identifying the hidden curriculum as a function of the interaction of the school's formal curriculum and the student's funds of knowledge is essential to understanding how to counter its effects. Next, we review the emergence of FoK in research literature, highlighting selected studies that have used the FoK theory in classrooms that provide concrete methods for improving student academic achievement. Finally, we offer implications for research and practice.

Disparate Outcomes

Standardized teaching and testing of a standardized curriculum should result in standardized performance across a normal distribution. In reality, however, the same curriculum affects some populations of students differently than it affects other populations of students (Jones, 2004; Lipman, 2004; Martínez-Roldan & Malave, 2011; Sapon-Shevin, 2004; Weiss, 2006), and high-stakes testing of that curriculum results in disparate outcomes across the socioeconomic spectrum (Brignall, 2006; Lipman, 2004; Vinson, Gibson, & Ross, 2004). As a result, students in poverty report more "mistrust," "anger," and "dissociation" (Langhout & Mitchell, 2008, p. 595) related to school than students from middle- or upper-class backgrounds. Students who do not identify with

school, as one might expect of those who are mistrustful of, angered by, or disassociated from school, are less likely to be academically engaged. Academic engagement is defined by Langhout and Mitchell (2008) as “on task and enthusiastic, optimistic, and curious about learning” (p. 595). This definition of academic engagement, however, cannot be operationalized in terms of measured proficiency in a subject area, but rather in terms of specific student behaviors and dispositions that lead to increased proficiency in a subject area. Therefore, increased academic improvement is a result of increased enthusiasm, optimism, and curiosity.

Even half a century after the release of the Coleman Report, family SES “still dominates the statistical explanation of student achievement” (Levin, 2007, p. 1384). Students from poorer families have only one-third the vocabulary of children from middle-class families by the time they start kindergarten. At fourth and eighth grades, students in poverty are 25 percentage points below middle-class students in reading and math. In 2001, students from poverty were six times more likely to drop out of high school before graduation than middle-class students (Levin, 2007). Connecting Levin’s (2007) outcomes to the definitions of academic engagement from Langhout and Mitchell (2008), we can infer that the levels of enthusiasm, optimism, and curiosity among these students were just as low. School leaders must consider the possibility that such disparate outcomes between groups of students indicate that their curriculum, ostensibly standardized for all students, is actually different for some students than it is for others.

School reform efforts like No Child Left Behind (NCLB) have failed to erase the disparity in outcomes between students of low SES and students from middle-class backgrounds. In an issue brief for the Center for Comprehensive School Reform and Improvement, Jerald (2006) claimed that the narrowing of curricular focus brought on by the new culture of standardized testing ushered in by NCLB disproportionately affects schools that serve students from low-income neighborhoods, as well as students from low-income families who attend majority middle-class schools. These negative effects appear to affect students from low-income backgrounds, whether they are dispersed throughout schools that serve students of widely varied SES or concentrated in one school or district that serves predominantly low-SES neighborhoods (Levin, 2007). As the legislation does not facially discriminate against these groups, an alternative explanation must exist for the pinpointed effects of high-stakes standardized testing on students from high-poverty backgrounds.

The answer is that these outcomes are not merely a result of a particular kind of formal curriculum. All standardized curricula do not automatically imply control or conformity. If this were the case, achievement results and disciplinary outcomes would be predictably tied to the type of curriculum a school delivers. Since there is diversity in outcomes among schools of the same type, it is more likely that the results are the effects of the interaction of the formal curriculum with particular students.

Hidden Curriculum as Interaction

Giroux (1981) defines the hidden curriculum as “the myriad of beliefs and values transmitted tacitly through the social relations and routines that characterized day-to-day school experience” (p. 284). Factors such as materials, teacher qualifications, teacher behaviors, classroom routines, regulations, student tracking, and time spent in instruction—none of which are the prerogative of a standardized curriculum—have a noticeable impact on student performance in and perception of school (Hemmings, 2000; Jerald, 2006; Levin, 2007). We suggest that these elements, or the informal curriculum, combine with the standardized, or formal, curriculum to form a single transmitted curriculum, to use Giroux’s (1981) wording. One might expect the impact of such school-wide decisions to similarly affect all students, but these policies affect different students in different ways (Langhout & Mitchell, 2008). Giroux’s transmitted curriculum, even encompassing the formal and informal utterances of school policies, then, cannot fully account for the hidden curriculum.

Levin (2007) sees the hidden curriculum as the “actual content of the student experience . . . characterized by activities and interactions that are profoundly different from the formal dimensions” (p. 1389). From Giroux’s (1981) perspective, there is a clear transmitted curriculum that is the result of both formal and informal phenomena, but in focusing on the individual student experience, Levin proposes a hidden curriculum that is beyond Giroux’s transmitted curriculum. Levin’s hidden curriculum relies on interaction between student and school. Factors such as home language, print access, previous school experiences, peer perceptions of schooling, family patterns, and local micro-cultural values all mediate the effects of school curriculum, instruction, and testing (Giroux, 1981; Hemmings, 2000; Lipman, 2004; Martinez-Roldan & Malave, 2011; Rueda & Dembo, 2006). It is this interaction that constitutes the hidden curriculum. Therefore, the key to improving outcomes for students of low SES is identifying—and changing—the nature of the interaction between the student and the school. By employing an approach that values students’ home experiences and worldview, educators can change the hidden curriculum from one that stimulates disassociation, resentment, and apathy, to one that engenders enthusiasm, optimism, and curiosity. This is the Funds of Knowledge approach.

Funds of Knowledge

During the 1990s, the FoK theory emerged in scholarship as an anthropologically grounded approach to replace the deficit perspective usually taken in examining the educational outcomes of children of low SES. Moll et al. (1992) studied the teaming of anthropologists with teachers to conduct ethnographic research into the families of students with low SES through home visitation. The study found that—by drawing on the knowledge resources of the home environment (e.g., interactions with family, friends and community)—teachers were able to develop engaging and rigorous learning environments (Moll et al., 1992). The Moll et al. research is important because it provides a methodology for improving the academic achievement of these

students based on enhanced knowledge of their home cultures and values. The first step to this kind of understanding is for teachers to familiarize themselves with what ethnographic research is, and to read ethnographies that interest them. Ethnographies are increasingly written for popular consumption and are available through local libraries, online retailers, or brick-and-mortar booksellers.

Eisenhart (2001) asserted that the FoK approach rests on culture, defined as “patterns in a way of life characteristic of a bounded social group and passed down from one generation to the next” (p. 4). Cultural patterns reflect a group’s successful adaptation to relatively stable environmental (i.e., economic, social, and political) conditions (Carlone & Johnson, 2012). A student’s funds of knowledge are derived from these environmental adaptations. Though axiologically rooted in cultural studies, the FoK theory’s focus on local community knowledge is a fundamentally different shift in thinking from the broader anthropological concept (Moll et al., 1992).

The FoK theory is defined as “those historically developed and accumulated strategies (skills, abilities, ideas, practices) or bodies of knowledge that are essential to a household’s functioning and well-being” (Gonzalez et al., 2005, p. 91-92). FoK encompass a community’s history and culture, and they also may refer to the experiences, knowledge, and ways of learning particular to a given family within a community. According to Basu and Calabrese Barton (2007), the most significant aspect of FoK is cognizance of the home experience of students with low SES and use of that knowledge within the learning environment. There are many ways to obtain this cognizance of home experience without mounting a formal research study. By adapting complex ethnographic methods and principles to the more practical action research paradigm, teachers can discover valuable cultural information to inform their instruction (Malin, 2003).

The FoK approach provides a way to meaningfully connect teachers and students from different cultural backgrounds. The American Education Research Association’s Panel on Research and Teacher Education found that the majority of new teachers in urban and rural schools with population predominantly of low SES have very different cultural backgrounds than their students (Cochran-Smith & Zeichner, 2005). To begin to correct this deficiency of cultural understanding on the part of teachers, schools must communicate to parents very early that they are aware of cultural differences between their teachers and their students, and that they are committed to increased interaction between teachers, parents, and students in an effort to bridge those divides (Barab, Thomas, Dodge, Squire, & Newell, 2004). This does not mean questionnaires and focus groups. It can mean student-led film nights, after-school discussions about important issues, guest speakers, and performances. Schools and teachers must communicate interest to their parents and communities (Barab et al., 2004). Such open and interactive school–community relations not only improve school climate but also correlate with higher student achievement outcomes (DiPaola & Tschannen-Moran, 2005).

Use of the FoK theory results in a non-deficit and deferential approach to student teaching and learning. Rather than blaming students from low SES

backgrounds for their poor academic performance, which is an ontologically negative stance, the FoK approach identifies the mismatch between the home and classroom environments of those students as the issue to be corrected (Moll et al., 1992). In this identification, students are seen as different, not as deviant. Bouillion and Gomez (2001) found that learning issues in students of low SES result from a disconnect between students, who cannot relate the curriculum to their lived experience, and the school teachers, who do not align their instructional methodology to the ontology, epistemology, and axiology of a child's home experience. In other words, students cannot merely suspend the core paradigm in which they live to meet the expectations of a potentially very different paradigm at school. Incorporating FoK theory into such learning environments bridges the potentially incompatible worldviews of student and school by advancing the idea that education can promote social relations between schools and homes (Bouillion & Gomez, 2001).

Educators know that students from low SES backgrounds who make strong connections between home and school environments are more enthusiastic about learning, retain knowledge better, and develop enhanced drive to acquire new information (Upadhyay, 2009). Children learn new ways of thinking and make sense of new experiences through their existing funds of knowledge. The FoK theory is rooted in the concept of applying community knowledge to the school environment for improved student learning (Basu & Calabrese Barton, 2007). Therefore, to better connect students from low SES backgrounds to the learning environment, teachers should incorporate students' funds of knowledge into curriculum development and instruction.

Selected Studies

The racial/ethnic, cultural, and SES differences between students and teachers drive the need to foster educational environments that are characterized by shared student and teacher understanding (Rodriguez, 2013). To establish those educational environments, teachers must create processes that facilitate communication of the funds of knowledge of students from low SES backgrounds for classroom use (Moll et al., 1992). For example, Amaro-Jimenez and Semingson (2011) described the use of family journals to communicate classroom issues and success with the student's teacher. By making the effort to engage parents and learn more about the children's funds of knowledge, teachers were able to partner with those families to improve the academic achievement of their students. The following studies highlight the use of innovative communicative processes to connect students' funds of knowledge to the classroom, thereby improving student academic performance (Dworin, 2006; Tan & Barton, 2010; Taylor, Bernhard, Garg, & Cummins, 2008; Upadhyay, 2009).

Two studies highlight the implications for the writing classroom that employs the FoK approach. Dworin (2006) presented evidence that linking the school curriculum to the funds of knowledge of students of low SES can improve students' writing capabilities. The study began by having the children read books that developed the theme of relevant family stories. During the next

phase of the study, the students used their funds of knowledge to interview family members whose oral stories provided a basis for the writing project. The children engaged their family members several times during the writing process to verify the accuracy of the family oral stories in their writing project. Finally, the students' writing projects were distributed to the other class members and their family members. By having the students engage their families to write about topics from their homes and communities, the study's use of the FoK approach enabled students to understand that their lives outside the classroom have importance and meaning inside the classroom.

Taylor et al. (2008) also conducted a study that presented evidence on the benefits of linking the funds of knowledge of students with low SES to the school curriculum to improve student writing skills. In this study, students used their answers to questions about themselves, their friends, and their families to write stories about their home experiences. Student families were asked to contribute photos and assist with developing their family members' stories. The results of this study emphasized the important role that families play within a curriculum and classroom environment to develop literacy for students in poverty. Additionally, the study argued for the use of multimedia strategies as a means to connect classrooms and home experiences.

Additionally, the Updahyay (2009) study showcased the ability to teach science using culturally-relevant pedagogy based on the funds of knowledge of students from low SES backgrounds. A fifth-grade teacher in an urban setting identified environmental science projects as an opportunity to incorporate students' funds of knowledge into the classroom. The students shared their home gardening experiences in small groups to learn from each other, and experiments were conducted that allowed students to see the benefits of learning science beyond the traditional school environment. The study's results suggested that use of students' funds of knowledge facilitated the integration of lived experiences and the science curriculum (Updahyay, 2009). According to Updahyay (2009), "teachers can teach science to underrepresented students more effectively if teachers spend the time to understand students' home environment" (p. 229). Tan and Barton (2010) also studied a middle school science classroom with the majority of students coming from low SES backgrounds that effectively connected students' funds of knowledge and their learning. The teacher linked a food and nutrition class to students' lived experiences by having the students bring and discuss associations with foods eaten at their residence. This activity increased student classroom engagement and access to the curriculum while giving the students a voice in curriculum development. The study's findings showed that the use of students' funds of knowledge improved the students' learning experience and attainment of the learning outcomes in a science classroom (Tan & Barton, 2010).

Implications for Practice

One of the most profound significances of the FoK approach is that it transforms the teacher into a learner. Teachers can broaden their teaching

repertoire by including students' funds of knowledge in their daily work. Every student, then, becomes a biography for the teacher to read, understand, and love. Only after a teacher becomes a devoted, passionate, and empathetic learner of the funds of knowledge of each student's family, can he or she make informed decisions about teaching. Utilizing FoK theory in teaching practice is a way to help achieve equity across students from a variety of historically-disadvantaged groups.

Although the teacher is a critical piece in the classroom, curriculum is also crucially important to student learning. If good relationships have been established and the teachers' motives for gathering cultural information about students (e.g., to use for adjusting curriculum and instruction to better fit the students' worldviews and experiences), have been communicated to and accepted by parents, teachers can gather rich information about students' and families' funds of knowledge through ethnographic-minded action research (Malin, 2003). This can take the form of student geographies (Raittila, 2012), a kind of autoethnography in which students map their neighborhoods and create descriptions of places, routes, people, distractors, points of pride, and personal successes. Teachers can glean much from these expressions of cultural values that should not only influence their classroom practice, but also their relationships with their students.

Even "slice of life" (Hays & Wood, 2011, p. 291) approaches like home visits, journaling, creative writing, video production, and annotated photographic essays can lend valuable perspectives to teacher practice, not only as practical background knowledge for immediate use, but also as a compounded reservoir of sensitivity to cultural difference in the teacher over years of practicing ethnographic action research. The information collected can be used to craft a more relevant and comprehensive approach to curriculum, instruction, and assessment. In turn, students whose cultures are underrepresented in the current curriculum or by current instructional practices will be able to make more significant connections between prior life experiences and new knowledge. As these connections are constructed, increased student learning will take place. Teachers and curriculum writers should also consider their own personal funds of knowledge and the funds of knowledge of the teachers who will be transmitting the curriculum to students. Exploring potential areas of discord—the hidden curriculum—in advance allows teachers to intentionally plan for ways to remediate any discrepancy between the curricula as it is written, transmitted, and received.

As just one example, teachers in a rigorous math course may traditionally assign an hour's worth of homework so that students can have substantial practice opportunities. However, students from low SES backgrounds may have additional obligations after school, such as looking after younger siblings or even working a part-time job to make money for the family, which would take priority over homework. The assertion of the hidden curriculum in this case is that learning math requires more time than some students may be able to commit; this is an exclusionary practice. If teachers are aware of this challenge, however, they

can plan to periodically operate a flipped classroom, where notes are taken at home and practice opportunities take place in the classroom. By flipping the classroom, the teacher ensures that the majority of meaningful learning opportunities take place in the classroom and that class time is not sacrificed for students to simply take notes. Teachers can also creatively provide other times for students to complete practice problems rather than after school.

Professional school counselors and school social workers can also lend valuable expertise to a school implementing the FoK approach. In their daily interactions with students and families, counselors and social workers can gain insights into the funds of individual families, as well as acquire a broad understanding of general trends in the school. As counselors work with groups of students on both academic and social skills, they can intentionally use a FoK approach as they seek to capitalize on students' strengths. These funds can then be communicated to teachers and administrators so that students' needs are better met in the classroom.

The FoK approach is also a way to motivate and inspire students from families with low SES. The substantial amount of time needed to construct an ethnography of a group would likely result in a close bond between researcher and subject. The commitment of the school to the needs of the families with low SES demonstrates care and investment to those involved. This ethnography would serve as a sort of a history of the family's successful adaptation to the challenges of middle-class society. Students and their families will feel valued simply because their requests are being heard and because school personnel are taking the time to meet with them.

Schools should also consider that discord exists in other areas outside of the academic curriculum. One example related to homework and more pressing obligations to the family was already mentioned. Other examples revolve around concepts of behavior, respect, and student codes of conduct. Many families with low SES, particularly those in urban areas, live in places where physical violence is a means of survival and self-defense. There are neighborhood or cultural codes about the need to not only defend oneself from physical harm, but also to defend one's reputation by fighting back instead of walking away. Such codes do not always translate well to schools, where zero tolerance policies for fighting—regardless of who is the aggressor in the situation—result in large numbers of students with low SES getting suspended. Schools need to purposefully examine their codes of conduct and the codes of behavior of students outside of school. Any areas of discord must result in training for students and staff alike. Students must be taught academic knowledge; in the same sense, they need to be taught about behavioral expectations as well.

Many of these suggestions are ideas that involve large quantities of resources, namely time. At the division level, these suggestions may be feasible. However, classroom teachers cannot be expected to conduct ethnographic research and overhaul curriculum along with their daily responsibilities in the classroom. There are steps that teachers can take to draw on students' funds of knowledge to impact daily instruction. Family conferences with

parents/guardians/other relatives and students provide valuable time to learn about a family's culture and expectations. Teachers could go one step further and conduct these conferences as home visits to gain a better understanding of the environment in which students live. From a curricular standpoint, teachers are ultimately responsible for delivering the transmitted curriculum to students. Teachers can do their part to make sure that the hidden curriculum impacts every student in a similar manner and provides like opportunities for all students to succeed. Finally, teachers can intentionally train students on the differences between school expectations and home expectations as well as provide ways for students to model and practice this new set of expectations.

Conclusion

That differences in outcomes between students can be explained by wealth and poverty demographics is contrary to the idea of a fair and equal public education. But it is not as simple (or, ironically, as insurmountable) as changing the curriculum. Because the disparity is a result of the discordant interaction between students and their school, teachers who find a way to communicate their expectations in a way that values the students' experiences will see better outcomes. The Funds of Knowledge approach is one that considers all aspects of students and their backgrounds. Identifying the nature of the hidden curriculum, or the potentially exclusionary values that teacher expectations assume, allows for schools to develop plans to make this discord as small as possible in order to minimize its impact on student achievement. Although ethnographic research is time-consuming, it shows students that their experiences are valued and that their school is committed to improving their educational experiences and academic achievement. As proposed, abbreviated methods like ethnographic action research can still produce a wealth of cultural information through typical classroom assignment, focused school programming, and community outreach. Once incorporated into the culture of a school, the Funds of Knowledge mindset becomes part of the way things are done, which is ultimately the best practice for all schools.

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