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Funds of Knowledge: An Underrated Tool for School Literacy and Student Engagement

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Abstract

This chief aim of this paper is to explore the concept of Funds of Knowledge (FOK) in relation to Cultural Historical Activity Theory (CHAT). This study unveils the basic tenets of FOK from the lens of activity theory and analyzes pertinent discoveries, key concepts, and scholars' arguments relating to FOK and literacy development over time. The major purpose of this study is to expand the perspective of FOK and make an argument that cultural identity has a great potential to promote school literacy. The literature review done on some education journals explicitly reveals that FOK is a concept embedded in one's cultural identity, and that the various aspects of cultural identity – such as ethnicity, language, and customs – are all linked to student engagement. This article illuminates the diverse cultural resources of different ethnic groups and proposes that academic institutions connect those resources with education.

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1. Introduction

One fascinating aspect of educational theory is the concept of Funds of Knowledge (FOK), particularly when considered alongside the idea of a school-home connection. Combining these concepts is useful in order to fill in the gaps that might occur when one considers FOK alone. The aim of this paper is to explore how teachers can incorporate students' backgrounds (specifically, their identity and community knowledge) through activities in formal classroom settings.

Moll, Amanti, Neff, and Gonzalez (2001) defined FOK as "the historically accumulated and culturally developed bodies of knowledge and skills essential for household or individual help, individual functioning and well-being" (p. 133). The term Funds of Knowledge was first introduced by Wolf (1966), and his definition included a variety of social funds that community members use to operate on a daily basis. Later, Velez-Ibanez (1988) elaborated on the term in an ethnographic study:

Information and formulas containing the mathematics, architecture, chemistry, physics, biology, and engineering for the construction and repair of homes, the repair of most mechanical devices including autos, appliances and machines as well as methods for planting and gardening, butchering, cooking, hunting, and of making things in general. (p. 38)

FOK is crucial in academics because when teachers look beyond their role as an authority figure and accept a role as a co-learner with students, they can get to know their students and the students' families with a new perspective. Teachers do not find it difficult to instruct students who come from similar backgrounds as themselves, but teaching students who have a different cultural background can be a challenging task. Often, students from different cultures are segregated and classified as having special needs. To avoid this marginalization, a focus on FOK would be the best approach for teachers to learn about their students and their students' families, household practices, and community knowledge. To accomplish this, teachers should be proactive about visiting the communities and homes of

their students to learn about them as individuals and observe their cultures.

There is also ample opportunity to incorporate FOK in classrooms when teachers simply ask students to share their stories while teaching subjects such as reading and writing. Researchers have documented the importance of FOK while teaching diverse learners, claiming that teachers can easily create an environment that fits the school curriculum while capitalizing on community resources (Gonzalez, Moll, & Amanti, 2005; Moll, Amanti, Neff, & Gonzalez, 1992). Gee (1996) explained that teaching culturally diverse students is not a neutral situation, however. A diverse classroom scenario inherently involves some underlying differences that can lead to misunderstandings between teachers and students (Rosebery, McIntyre, & Gonzalez, 2001). Researchers also mentioned that students' and teachers' FOK may conflict with each other. Therefore, it becomes even more important for teachers to understand their students. Heath (1983) presented her findings that teachers forming questions in a particular way helped them instruct students from the Trackton community with greater success. This type of accomplishment is possible when teachers recognize students as members of a particular cultural community and use appropriate cultural cues to facilitate classroom instruction.

With the above result in mind, this study intends to review a number of research papers on FOK and education through the lens of Cultural Historical Activity Theory (CHAT), which is inspired by Vygotsky's (1978) ideas of Zone of Proximal Development (ZPD) and Scaffolding. CHAT is a framework or descriptive tool for a social network, which is aptly described as containing the six elements of subject, object, tools, rules, community, and division of labor, all of which interact with each other (Cole & Engeström, 1993). FOK is gained through culture and history and does not merely represent household knowledge; rather, it is deeply embedded in culture. Culture and history are highly related. Therefore, employing CHAT in the classrooms enables teachers to make connections between the students' culture and the regular curriculum. This review seeks to use an understanding of CHAT to propose methods of incorporating

students' FOK in the classroom to create a more effective pedagogy.

The following articles present findings from an extensive review of literature. Only studies that were conducted inside the classroom are included. Other perspectives of FOK rather than those that involved direct classroom research or that tapped into community knowledge to implement classroom instruction were not considered in this review.

In its exploration of FOK through a literature review, this paper addresses the answers to the following questions:

- What are some significant discoveries, key concepts, and/or arguments that scholars have put forward in regards to FOK and literacy development?
- What areas have been neglected in these studies?
- What are the implications for today's classrooms?

2. Theoretical Framework

In this section the articles are reviewed and organized based on their main ideas.

2.1. FOK Based Group Activity

Moll (1992) presented the idea that community knowledge and skills are extensive based on his study of the lives of working-class Mexican-American students and their families in the *barrio* schools of Tucson, Arizona. Some of the families had knowledge about different soils, cultivation of plants, water distribution, animal husbandry, and ranch economics, while others knew about herbal cures and first aid procedures. Moll (1992) analyzed Mexican household practices and discovered literacy practices through Funds of Knowledge. Thereafter, he assigned group work to Mexican-American students to be completed in collaboration with their teachers. His home visits revealed that many families had substantial knowledge relevant to education that the teachers did not know about, and thus the teachers did not capitalize on that knowledge in order to teach students academic skills. Moll encouraged Mexican-American families to share their knowledge about agriculture, mining, economics, household management, materials and science,

medicine, and religion – information that was popular and accessible through the social networks in their community with the teachers to fix this problem. Moll (1992) stated that there was great potential for students' community knowledge to foster classroom learning. Because of these findings, Moll (1992) urged teachers to quit practicing a deficit approach to education with working-class, and to instead embrace a pedagogy that incorporates and promotes students' culture.

Gallego and Cole (2001) also found several successful instances of activity-based learning in which students brought their home and community knowledge into the classroom. Gallego and Cole (2001) categorized different kinds of activity-based learning like active participation, social interaction, integrated oral and written language, and background knowledge, all of which can be easily employed in regular classrooms. In another study by Moll et al. (1992), teachers visited students' homes to establish a friendly relationship with their parents, and families and members from the community visited classes to share their knowledge. For example, one Mexican woman was invited to share the candy-making process. On the first day, students learned about ingredients in candy and they compared different ingredients used in homemade versus store-bought candies. On the second day, as they learned the process and helped prepare candies, they participated in a rich discussion about differences between American and Mexican food consumption and production, and the nutritional values of homemade candies. Thus, students learned about math, science, health, consumer education, and cross-cultural practices etc., all through a single activity. Students were also assigned extensive reading and writing, and peer editing groups were formed to facilitate the process of English and Spanish writing.

Roth and Lee (2007) likewise developed group activities, applicable to students of all grade levels, to explore varying academic concepts. As part of their study, seventh grade students chose to investigate a local creek and the watershed because they read a news report about pollution and the health of the creek. Students divided the main work between groups; for example, one group investigated stream profiles and stream speed in relation to

its depth, while another group identified and documented the plants that grew nearby. During this community project, students took charge of better understanding their ecosystem and how to improve the situation.

In another study, Barton and Tan (2008) analyzed case studies in which students learned about the ingredients of salads by interviewing their family members. For example, some students wrote about potato salad, its ingredients, the procedure of making it, and how the recipe had evolved in their family over time. Students compared different food chains based on their nutritional value and then they used their community FOK to make healthy recipes for \$5 or less. It is evident from the findings that creating hybrid learning spaces promotes student engagement and learning.

2.2. Language and FOK

Connecting language teaching and FOK, Dworin (2006) supported the view that teachers should provide students with greater access to their own and their classmates' diverse social and cultural resources while teaching a second language. Students should feel that their lives outside school are equally important to their lives in the classroom, and Dworin's (2006) study included asking students to write about topics from their own communities and cultures. Dworin (2006) suggested that bi-literacy or multi-literacy must be viewed as a social and cultural tool. Both their home language and English can be used for thinking, writing, and communicating in school. In his research paper, one bilingual student was paired up with another student and they each wrote family stories in their mother tongue before translating their partner's story into English. The translation was often better in quality than their first language writing. In this exercise, the study connected FOK (specifically, stories gathered from family members) with second language learning. Dworin's study (2006) also recommended that children's intellectual development is enhanced when they are consistently permitted to use both languages for their work.

Townsend and Fu (1998) presented a case study of a Chinese second grader that supported the same idea that the FOK students bring to the classroom should be

valued as a beneficial tool for learning. In this article, student Xiadoi's English as a Second Language (L2) classroom provided explicit language instructions on sentence structures, vocabulary, and phonics. He listened to stories from his peers and he was able to talk about his own ideas in English, and he received assistance from his peers in reading, writing, and speaking. Teachers also structured classrooms to encourage such conversations. They explained to Xiadoi and other students the reasons to be literate in a Western society. His own language was always valued at school and he was invited several times to talk about his own country and language. Teachers focused on what he already knew rather than what he did not know. Xiadoi was skilled at drawing Chinese characters and he illustrated different stories through those characters, which enabled his classmates to learn about the Chinese characters. Townsend and Fu (2001) suggested further useful strategies while teaching minority students, such as helping students understand the expected norms of classroom interactions, letting the students interview one another and their family members, and providing students with choices so that they can connect with their lives for reading and writing assignments. Thus, their findings show the importance to connect school texts with students' lives outside school.

Newman (2012) examined how student writers transferred their lives and regions into writing. The researcher argued that home-based learning experiences or home language could be a great resource for classroom writing. Newman (2012) presented a model to ask the students to write about their lives, dismissing the idea that poor, immigrant students have nothing to write about. The study presented some examples of students writing about simple topics like a jacket, and explored the lessons taught in class through their writing. The researcher explained the way students' writing assignments could help them connect their personal experiences with the curriculum.

Similarly, in another article Conteh and Riasat (2014) promoted a learning approach that they experimented with among students, teachers, and community members. This article revealed that people born and working in England referred to their country of origin as home and

that a simple classroom activity like family tree helped diverse students understand honorifics and other words denoting relationships. This study also showed how learning stories from grandparents helped such children in language development. It also revealed that many classroom teachers were concerned about using two languages inside the classroom because they themselves did not have an adequate grasp of other languages to ensure that students were not saying anything inappropriate for a classroom setting, and they feared it could be confusing for the students as well. Yet, the researchers emphasized that despite those inconveniences, teachers should still consider using diverse languages inside the classroom.

Schwartz (2015) conducted a study in which the teachers redesigned their syllabi to foster FOK-based learning. Students learned about auto-ethnographic inquiry and the development of positionality for one essay assignment. For this exercise, students wrote their findings from interviewing their social networks of peers and extended group members. Students used their FOK while writing about life after high school or about their sense of daily struggles. Students were also assigned a community essay project in which the students learned about collaborative writing, interviewed community members, and were able to form identity-based questions for those interviews. Students learned to incorporate digital literacy with FOK as they analyzed visual texts. One particularly intriguing idea in this study is the ways students learned to reflect critically on the texts that they created; instead of writing them in a traditional format, some students created videos to explain their positions. This is a great example of teachers negotiating with students to decide who the audience of their assignment would be.

2.3. FOK and Disciplinary Literacy

Discipline-specific research studies are also available. González et al. (2001) suggested that mathematics practices cannot be taught separately from the students' social context. There are plenty of mathematical skills that exist inside a community, and the transformation of that knowledge into meaningful activity is critical in classroom teaching. This study examined how daily life can be brought into

the classroom in the form of activities to promote student engagement. Similarly, Williams, Tunks, Gonzalez-Carriedo, Faulkenberry, and Middlemiss (in press) conducted a qualitative study to identify unique FOK to support mathematics learning in seventh graders. The researchers identified sources of FOK such as family history, educational history, labor history, family networks, resources at home, knowledge transmission, values, and goals. This study discovered that families encouraged their children to solve contextual problems and the students encountered mathematics through daily activities such as cooking, shopping, sports, and music. Students learned about customary and metric measurement while cooking or being engaged in sports, as analyzing baseball scores engaged students in mathematical discussions with their parents.

2.4. Positionality

Campano (2005) presented the idea that students learn best when their own experiences and background knowledge interact with classroom literacy. He promoted culturally responsive pedagogy through a case study of a seventh grader named Carmen. His research determined that teachers should encourage students to share their stories. Carmen was a born leader who always took initiative and was interested in various extracurricular activities. However, the school curriculum failed to engage Carmen in classroom literacy even though she had rich experiences to share in her own social network. Campano discovered that Carmen was interested in writing about her father's life, as she had been the sole caregiver to her dying father at the age of thirteen. Her school failed to understand her perspective on life and did not pursue ways to tie in her experiences with classroom learning.

Luke (2008) similarly recommended that teachers stop making assumptions about students' likelihoods of success. He argued that learning about minority students' habits is not enough; teachers must learn to see students' activities as valuable areas of expertise. Another study supported the view that cultural tools must be considered from a historical point of view. Teachers must also become aware of students' skills with metaphors and figurative language, which are

critical for interpreting literature (Guitierrez, & Rogoff, 2003). Moje (2004) determined that students automatically draw upon different FOK, but school curriculums need to bridge the gap between everyday activities and academic education. School curriculums must shift from a mechanical literacy practice to recognition, recognizing the existing knowledge and discourses to produce new literacy, Moje argued. She also categorized four different sources of FOK that students bring into the classroom, including family, community, popular culture, and peer groups.

2.5. Tapping the Community Knowledge and Literacy Acts

One article did not include any classroom-based research, but its author argued that FOK is embedded in one's everyday traditional practices, which can be translated into literacy. Piedra (2009) studied hybrid literacy practices among bilingual speakers and addressed diverse literacy practices among a Quechua community in the Andes. He cited examples of literacy practices during different festivals of the Andean community and connected these practices from the perspective of CHAT. For example, on All Saint's Day, Andeans participated in textual practices by making a list of categories and inscribing them in memory of the deceased. During marriage ceremonies, the Andeans also engaged in textual literacy practices for keeping records of the gifts they received from community members. Community members also performed *lindaraje*, a ritual to confirm community's territory by using their bodies to form a map. Piedra's study demonstrated how FOK is embedded within a community. Based on this, identifying community knowledge would help teachers to connect community practices with school literacy.

Taken together, all these articles connected FOK with school curriculums through CHAT. Few of the researchers directly studied community knowledge, and some of them took the alternative stance of using students' identity as FOK, such as their family stories, home language, and cultural background. However, every argued that teachers should recognize students' cultural resources and transform their diverse intellectual capital into a way to promote school literacy. That is,

classroom literacy should not remain detached from students' lives.

3. Concluding Remarks

It is clear from the literature review that FOK has incredible potential to be part of today's classroom curriculums. However, if we consider the limitations of FOK research, it is evident that researchers are studying FOK primarily in North America, with little study into FOK conducted in other geographic locations. Additionally, most of the studies were conducted among elementary and middle school students, with a lack of studies conducted among high school students. Another limitation of these studies is that researchers primarily considered the academic subjects of language, science, and mathematics. However, FOK can be a beneficial tool for culturally diverse students or multilingual students to learn English, and to be part of a social studies curriculum and future research has a vast scope to explore that. Furthermore, most of the ethnographic studies were conducted in Mexican-American and African American communities, with no studies focused on any other minority community. I feel there is a huge opportunity for future researchers to focus on other ethnic community's FOK.

Fostering FOK can make students feel accepted inside the classroom, and these students will benefit from learning more about their own cultural practices. I believe FOK is a unique and effective method to foster collaboration inside the classroom. Conducting further FOK research will also benefit culturally diverse students as it will lead to students realizing there are a variety of ways of learning that can be drawn from their own everyday activities. The definition of FOK is just not limited to one's household or culture, as Moll et al. (1990) explained that FOK "refers not only to the categories and content of knowledge found in households, but to how this knowledge is grounded, embedded, in the social and cultural relations that make up family life" (p. 1). This reveals that there is plenty of room to conduct more FOK research in the future by observing students' everyday lives. Hedges (2011) introduced popular culture as part of FOK research; his research is an example of how even activities such as discussing a television series or sewing capes

have the potential to be part of a curriculum (in his study, students played Teenage Mutant Ninja Turtles and they how to make planes to shoot boomers, which led to a discussion of the construction of boomers). Popular culture is a clearly a viable tool for today's classrooms. Teachers can utilize students' knowledge and interests to promote reading and writing. Therefore there is a huge existing opportunity for researchers to tap FOK into today's classroom.

Teachers can bring community practices into classroom learning through activities pulling from diverse contexts. It is important to note that now, FOK research is no longer limited to one's community practices. In one study, researchers extended the definition of FOK and linked it with one's cultural, social identity. Esteban-Guitart and Moll (2014) identified the new term "Funds of Identity" (FOI), which is derived from the concept of FOK. The researchers define FOI as "historically accumulated, culturally developed, and socially distributed resources that are essential for a person's self-definition, self-expression, and self-understanding" (p. 31). FOI is inspired by the community and group identity, geographical funds, cultural funds, and institutional identity that is related to a person's identity and, at the same time, can be considered as a resource. The researchers called for a pedagogical approach in which teachers draw inferences from students' prior knowledge. This is only possible when teachers are willing to consider their students' cultural and social artifacts and tools. Therefore, FOI provides a resource for teachers and decision makers to include students' identities in classroom content and instruction, and it opens a new topic for future researchers. I feel in future researchers can connect one's identity with FOK to promote a culturally relevant classroom setting.

Frankly, today's classrooms require teachers to teach diverse students (Gollnick & Chinn, 2002). To meet those challenges, teachers must not only be theoretically sound, but also incorporate background knowledge of their students into classroom literacy. Ghadiri, Tavakoli, and Ketabi also (2014) proposed the concept of Culturally-adaptive English Language Pedagogy (CELP). They stated that learning in a foreign language can totally

conflict with the norms of the first language of the learners. Culture and language interact with each other all the time. The researchers suggested that the syllabus should be designed in such a way so that the learners get accustomed with the culture of the target language and at the same time teachers develop an understanding of where the students come from. Teachers should be able to utilize the cultural and linguistic resources that students bring into classroom.

Therefore, teachers must create a classroom in which all students are welcomed regardless of their distinct backgrounds. FOK offers a means to incorporate students' backgrounds in the classroom. Students would not feel detached from the curriculum if their personal lives were valued in their schools.

This review highlights coherence and incoherence of research in this field, illuminates the diverse resources of different ethnic groups, and finally offers a need to bring FOK into common practice inside classrooms. This article review makes it evident that cultural capital offers a fantastic potential to connect students' home environments with their academic education.

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