Funds of Knowledge and Student Engagement: A Qualitative Study on Latino High School Students

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ABSTRACT

This article summarizes research conducted by a teacher researcher in a working-class community. The participants included 10 Latino students, five parents, and five teachers. This qualitative study utilized narrative inquiry to construct the stories of all 20 participants in order to investigate how funds of knowledge is perceived, interpreted, and used by students, parents, and teachers in this high school community. Interviews, observations, document analysis, and photovoice journals were used to gather data. Findings indicated that teachers perceived funds of knowledge differently than students and their parents, which may result in a loss of instructional opportunities.

> *Real education should consist of drawing the goodness and the best out of our own students. What better books can there be than the book of humanity?*
> *– Cesar Chavez*

his study investigates the engagement of Latino students in a high school English class. The teacher researcher utilizes the *funds of knowledge* theory made popular by Moll, Amanti, Neff, and Gonzales (1992) that used an anthropological approach to educational research. *Funds of knowledge* is defined as "historically accumulated and culturally developed bodies of knowledge and skill essential for household and individual functioning and well-being" (p. 133). This approach attempts to counteract the cultural deficit thinking that has inadvertently become prevalent in our school systems, preventing an inclusive environment. A *funds of knowledge* lens was applied to this qualitative study with the goal of

analyzing student engagement with regards to a population of this school setting that experiences much lower success rates than its peers.

In order to study *funds of knowledge*, one must first understand its antitheses—deficit thinking. Using Freire's (1970) theory of the banking model, one could interpret many elements of public education as a system that utilizes a deficit philosophy. Our system often forces teachers to focus on what students do not have, or cannot do, rather than the positive aspects of their abilities, thus alienating students facing academic struggles. The results are a perspective that education, for some students, means loading them up with more information because they are missing too much already—drilling with boring reviews and test-taking skills in remedial classes. Freire (1970) argues that this process is oppressive because it holds the teacher as a giver of needed valuables and puts the students in a role of those who are needy and devalued for their knowledge. Instead, learning should consist of utilizing prior knowledge to form new understandings; a concept that teachers consciously know, but often do not act upon due to the flawed system in which they work. Inclusion of all students in a positive educational process is impossible under the banking model.

Because of the injustice caused by this flawed philosophy, Ladson-Billings (2006) made a suggestion for changing educational lingo from "achievement gap" to "education debt." In other words, the blame for certain educational problems is often laid on students, rather than the system within which they are educated. Subgroups of students who do not perform as high as their peers are often labeled as *lacking skills, in need of intervention, in need of remediation, limited-English proficient, lacking relevant experiences, having special needs, at risk of failure, or at risk of dropping out*. Each of these labels demonstrates the limited value that is placed on the skills, language, or experiences of these students. These negative labels reflect deficit thinking, but are present in many schools. Many Latino students are trying to find success in a system that sees them as deficient. In order to repay this "education debt" owed to them, we must tap into their *funds of knowledge*.

Cultural Capital refers to the cultural knowledge that people carry due to their background, which can be used for upward mobility. Bourdieu and Passeron (1989) argue that schools often reproduce the class systems in our societies by unfairly distributing cultural capital—a theoretical explanation for why providing inclusion and equal opportunities is such a challenge. Considering the deficit perspective that is present in our education system, it is pertinent to next consider what kinds of cultural capital students have, maintain, gain, and even lose in the schooling process. Valenzuela's study (1999) found that it is possible for educational systems to reduce

Latino students' cultural capital rather than add to it. This process occurs by limiting access to certain educational opportunities, labeling, and tracking—all of which take place in public schools. This does not imply that there is not an academic dilemma regarding student achievement. Instead, Valenzuela's study highlights the need for pedagogical change. The *funds of knowledge* approach to educational research aims at this kind of pedagogical change (Moll et al., 1992). Therefore, rather than studying what students do not have or cannot do, we consciously seek to identify their *funds of knowledge* that can be utilized in an academic setting, thus allowing for the construction and increase of cultural capital and ultimately inclusion and success.

Purpose

The purpose of this study was to examine the influence of funds of knowledge on student engagement in order to contribute to research that assumes a positive approach to understanding the cultural skills and experiences of working-class Latino students. The goal of this study was to identify common themes related to *funds of knowledge* concerning Latino students as well as produce recommendations for instruction based on the findings.

The methodology used in this qualitative study was narrative inquiry: Interviews, observations, teachers' lesson plans, class discussion, and students' photovoice journals were analyzed in order to construct narratives that portray the authentic voices of participants (Sperling & Appleman, 2011). Seeking to construct an authentic voice of another is a huge challenge. Given this task, the teacher researcher chose to include a unique strategy for data collection called "photovoice," that is often used to give a voice to marginalized groups of people. Photovoice was chosen as a method to pair with other research methods in order to empower student participants to share experiences from their own perspectives (Whitney, 2006). Photovoice involves allowing participants to gather photos that illustrate an issue in their community, over which they may otherwise have no power.

Wang and Buris (1997) created Photovoice as a method of research that aims to reach policy makers with unique perspectives of people who are normally subjugated or oppressed. Although *subjugated* may seem like a strong word to describe the situation of these students, one must consider the purpose of a photovoice project—influencing policy makers. In the situation of these students, they are participants in a schooling system in which they are considered deficient and have little influence over.

Although the school site in this study has a positive reputation for being a safe environment with good teachers, GPAs and graduation rates for Latino students are still a huge concern in this community. Negative labels put Latino students in a position to have less of a voice over educational issues, which is a problem across the country.

Similar to many photovoice projects that seek to share the voice of a population in order to influence policy makers, the goal in this project is to share the authentic voices of students in order to influence instructional practices among educators. Obviously, this study is less political than many photovoice research projects, yet the issues are equally as important.

All students in the teacher researcher's class were given the photovoice journal as an assignment. Ten of the students were selected to be participants in the study. Students were recruited to be participants by fitting three criteria. 1) They were students of the researcher, 2) they were Latino, and 3) they agreed to participate with parent permission. The first 10 who fit this criteria and turned in their permission slips were selected. Students who participated in the study were given the option of using disposable cameras as well as their own personal resources to develop a journal of photos and writing that reflected their funds of knowledge. Incidentally, due to the use of modern technology, students were actually somewhat uncomfortable with the outdated nature of the disposable cameras and preferred to use cell phones, Internet, and social media to attain pictures. Students were told that this research was to help teachers better understand them as learners, which seemed to please many of them and make them proud to participate.

Each group of participants—students, parents, and teachers—produced two forms of data. Interviews, which included open-ended questions, were conducted with teachers and parents. Observation field notes were also used for parents. Teachers' lesson plans were analyzed as well. Students' photovoice journals and observation field notes were used. All of these data were analyzed to form narratives for each participant.

Prior to gathering data, *Esri* (Environmental Systems Research Institute) mapping was used to establish demographic details about the school community. These statistics were compiled in Figures 1-4 in order to create a picture of the economic situations and daily lives of most families in these neighborhoods, and also to establish concrete frames of reference to go along with the term, "working class." The blue arrow in each map indicates the approximate location of the school in this study.
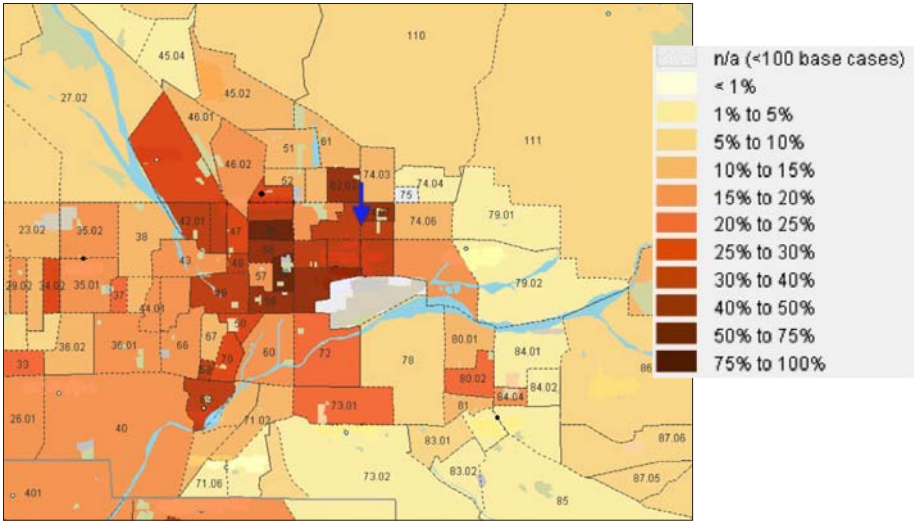
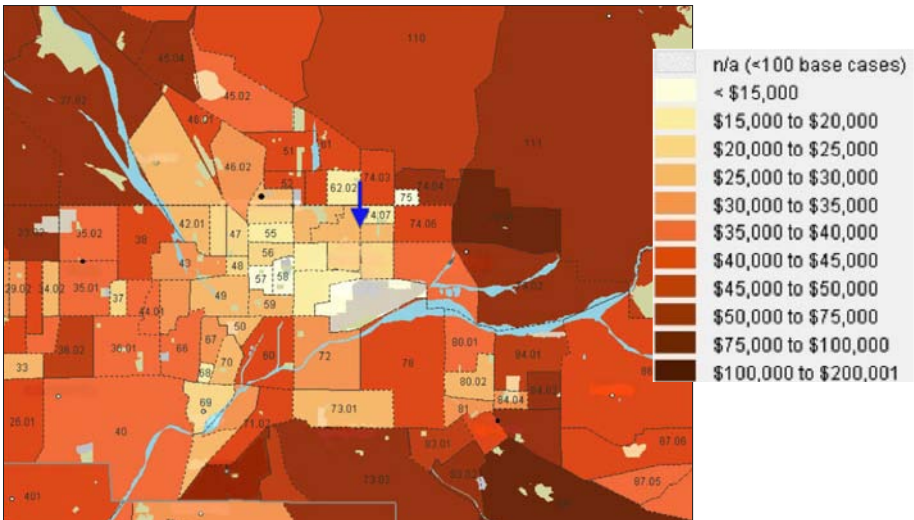Fig. 1: 2000 census tract – % living in poverty

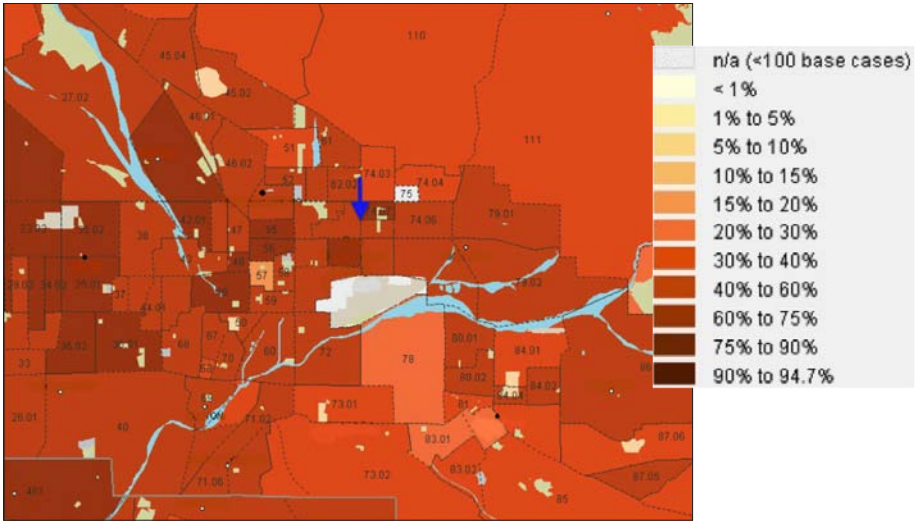Fig. 2: 2000 census tract – Median household income

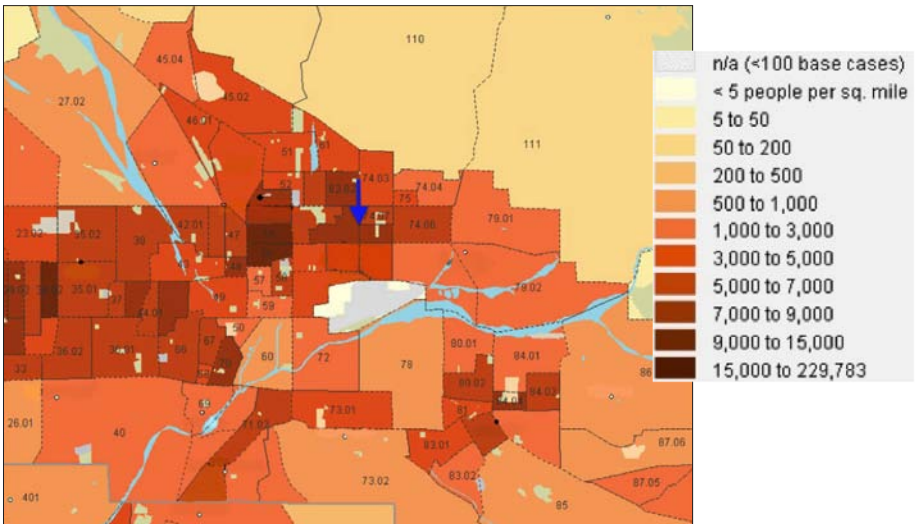Fig. 3: 2000 census tract – % households with kids

Fig. 4: 2000 census tract – Population density per sq. mile

Knowing details like this about poverty, income, population, and homes with children can help to paint a more complete picture for the setting in which these narratives take place. At the time of this study, the entire school district was under program improvement utilizing Title 1 funding due to the low-income needs of students. This particular school had a population of more than 2,500 students and two smaller high schools are located less than five miles away. As shown in Figures 1-4, students in this school are likely to live in low-income neighborhoods with a fairly high population. Inevitably, these factors will play a part in what kinds of funds of knowledge they bring into the classroom.

Data Collection and Analysis

Participants included 10 ninth-grade students, five parents, and five teachers. The parent participants were parents of students in the study, and the teacher participants were all teachers of the students in the study. The students were all of Mexican descent and come from Spanish-speaking homes. Each of the students is either first generation or immigrated here at a young age. These students all attend a high school in a working-class community of Southern California.

Photovoice & observations. Photovoice is defined as "a process by which people can identify, represent, and enhance their community through specific photographic technique" (Wang & Burris, 1997, p. 369) and is meant to allow participants to enable change in their own community. Data was gathered from students via photovoice journals in which students included original photographs and writing responses that address the prompt, "What affects your learning?" Students were asked to take or find photos and images of people, places, things, and situations that affect their learning in hopes to inform the teacher researcher and, in turn, the teaching community of this high school about their funds of knowledge. The prompt was left very open in order to allow participants to select their own ideas and topics to include in the photovoice journal.

All students in the teacher researcher's classes were assigned the photovoice journal, and no distinction or special treatment of the participants was used in class in order to create the most comfortable learning environment possible. Several days were spent preparing for the project in class. Students took notes on ethics of using photos and discussed what the reflective style of journal writing entails. Student brainstormed what skills, qualities, and issues are present in their lives that affect learning. We also discussed the variety of types of learning that take place in and out of school.

Students were required to have at least seven entries, although many chose to include more. In fact, a heightened amount of engagement was evident in the project concerning effort and quality for all students. Flexibility was given for topics and due dates. On average, students completed all or more of the requirements with much more detail and attention than the teacher researcher had seen all school year. Although students had the freedom to write about any topic, the majority of journal entries focused on important people in their lives and school-related topics. Many of these journal entries also overlapped in topics, such as important friendships or family members that support school success. Figure 5 demonstrates the overall emphases found in each journal by each of the 10 student participants, and meaningful quotes that reflect these themes.

	OVERALL EMPHASES	MEANINGFUL QUOTES
1	Personal Strengths, Religion	"I encourage myself to succeed." "I give thanks to God for sending me this beautiful gift."
2	Confidence, Competitiveness	"Seeing the smile on her [older sister] face when she looked at my report card was fascinating. Hopefully there will be many more smiles." "We actually compete with each other to see who will get better grades."
3	Supportive Relationships, Following Dreams	"I want to make my parents proud of something; make them see that I am something in my life." "She [mom] always told me to keep my head up high and chase after my dreams and goals."
4	Academic Support, Cultural Roots	"They affect my studies because when I need their help on any class they try to help me." "I like dancing because it's what my ancestors did back then, and I feel like I need to do this too because I want to bring back our culture and where I came from."
5	Family Support, Parent Relationships	"They always help me in the things I need." "...like my dad, I always know that I could count on him because he is the only thing I have."
6	Focus on the Future, Family Support	"I will only get that car that I want if I go to college." "Church helps my family stay bonded."
7	Academic Focus, Motivation for Success	"I want to be the first in my family to go to college." "My friends in Honors tell me to stay after school with them for help...Most of them want me to be successful."

Fig. 5: Student photovoice journal emphases and meaningful quotes

	OVERALL EMPHASES	MEANINGFUL QUOTES
8	Motivation for Academic Success, Individuality	"My aunt and uncle are the first…to graduate… which inspired me because I want to do the same." "With music, I can be who I really am, instead of pretending to be someone I wish I was."
9	Family and Friend Support	"My family has so much love inside them." "My friends are like family to me, we are close to each other, and they always have my back."
10	Encouraging Relationships, Role Models	"She affects it [my learning] by giving me so much advice when I need it most." "She makes me be a good role model, so when she's older she follows good paths."

Fig. 5: Student photovoice journal emphases and meaningful quotes (cont.)

As indicated by the data in Figure 5, overall the emphasis of personal supportive relationships in contributing to success at school was overwhelming. Every student included pictures and wrote about at least one person who supported him or her academically. These photovoice journals gave a candid look at family and friendship dynamics.

The complexity of the network of relationships demonstrated through these photovoice journals builds a reference for where these *funds of knowledge* begin and reproduce in a cycle of support systems through friends and relatives. Additional *funds of knowledge* revealed by this study were skills related to household responsibilities, sports, technology, art, dance, and other specialized fields. Even with these detailed skills included, the data suggests overwhelming evidence for *funds of knowledge* consisting of skills well beyond everyday tasks. When given the opportunity to write about any kind of learning and anything that affects it, students emphasized relationships.

The data analysis with photovoice journals was a long process. Each day, I observed students in class working on their journals and took notes on the kinds of conversations that were taking place as they reported out to their peers about selections they had made for their journals. The discussions indicated that these were carefully made decisions. Students would answer simple prompting questions on the board such as "What picture did you bring today?" "Why is this important for you to include in your journal?" and "How does this person, place, thing, or situation affect your learning?" The conversations held at each table group proved to be a valuable process that students relied upon for organizing their thoughts as they wrote journal entries reflecting on

their photos. Many students found similarities as they were discussing their selections, even though it was made clear to students that they should not feel pressured to make their journal resemble anyone else's project—the similarities occurred naturally. It is likely that much of this similarity comes from living in a densely populated area (Figures 3 and 4). Students are able to easily relate to one another due to the closeness in the community, allowing for the kinds of relationship networks described in the journals. This essentially is an example of *funds of knowledge* produced by their environment.

Multiple levels of analysis were utilized for photovoice journals. First, topics chosen by students were compiled into a list based on headings and subheadings. Second, entries were read for additional topics that were not listed in headings. A list of topics was created and entries reread to determine the frequency of topics. The third level of analysis involved identifying interconnectedness of topics by determining which topics were frequently combined within student responses. Finally, each journal was again analyzed as a whole in order to construct individual narratives for each student participant.

As shown in Figure 6, the overwhelming themes that appeared by frequency of topics were related to relationships with friends, family, and mentors. Rather than the general concept of family or friendship, students tended to select specific people on which to focus. In fact, 43% of journal entries were focused on specific people in the students' lives.
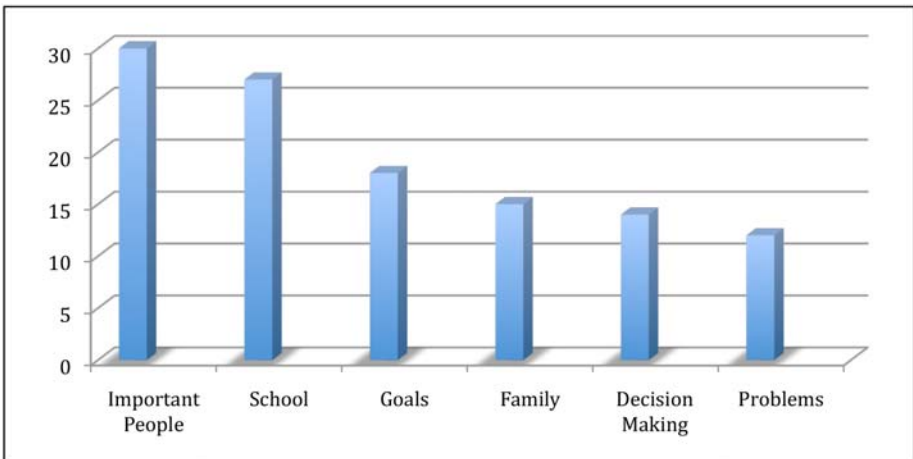

Fig. 6: Frequency of topics in photovoice journals

As Figure 6 indicates, another common theme that emerged related to relationships was school success. Students often wrote about people who helped them in school whether through academic support or encouragement. Many photovoice journal entries mentioned school-related topics, even though students could write about learning in any aspect of life—indicating the importance of school success and people who help them in these goals.

Unexpected funds of knowledge. The photovoice journal writing in small groups provided a nice setting for students to share ideas and practice writing strategies through editing and revising journal entries. The personal topics, journal format, and casual environment for sharing allowed for less pressure than is usually faced with writing assignments. Additionally, it seems that students were freer to open up about their personal *funds of knowledge*. This produced rich data for the study and also, in many cases, enriched the students' overall school experience.

Each participant, as well as the rest of their classmates, included beautiful photos and journal entries that revealed personal cultural capital that a teacher would not likely have access to otherwise. For example, Student 1 described personal strengths and hobbies such as cake decorating and cooking. She included striking pictures of her work that showed beautiful cupcakes, desserts with home-made ingredients, and meals she had prepared for her family that resembled entrees from a gourmet restaurant. This opportunity to write about personal *funds of knowledge* allowed for the teacher researcher to connect her with the catering club on campus to allow her to use these talents in an organized school program.

Another example of such unexpected *funds of knowledge* emerging was in Student 4's journal. This student wrote about cultural heritage that she has learned from her family. Her family practices and performs traditional Aztec dancing she calls Danza. The journal included remarkable photos of her and her mother wearing homemade costumes with intricate designs of brightly colored hand-sewn beads and feathers. The journal entry went on to explain that she regularly performs in front of huge crowds of people, an astonishing skill unexpected in this very shy student. After this discovery the teacher researcher was able to direct her to making a guest appearance in the dance club on campus to demonstrate some of her skills. Additionally, this conversation seemed to stir a new confidence in this child to discuss this hidden talent. She told all of her teachers about upcoming performances. This inadvertently resulted in an unofficial fan club on campus of teachers and students who enjoyed attending these events.

All of the student participants included unique unexpected *funds of knowledge* that they gained from their own family life such as music, sports, child care, computer skills, and many more. One major find through these journals was the amount of technology skills that students possessed for word processing, photo editing, and design. Knowing this allowed the teacher researcher to feel more confident in assigning computer-based assignments in the future, an instructional decision that many of the teacher participants indicated they struggled with due to the fear of limited access.

Interviews. Five parents participated in the interviews, each in their own homes. Each of the parents was a parent of one of the 10 student participants. Parents were asked open-ended questions that revolved around overall school experience of their children and engagement in school. A translator was present to ask all questions in Spanish and translate answers back into English. The teacher researcher also took notes on responses, which were revisited later by the translator in order to assure accuracy.

Throughout the interviews, several open-ended questions that centered on topics including school environment, academics, student activities, challenges, resources, and skills were posed to parent participants. The overall satisfaction with the school was positive. Parents heavily emphasized family values, supportive relationships, and wisdom for future decision-making as key to their child's academic success. Figure 7 describes overall emphases of each interview session as well as meaningful quotes related to these themes. Two of the parents attended session one and participated together, so there are only four sections for five parents.

	OVERALL EMPHASES	MEANINGFUL QUOTES
1	Parents trust daughters to communicate problems; parents teach daughters to choose friends very wisely	"I encourage my daughters to be very selective with their friends so they pick friends who are equally or more educated so that they are around people who elevate them."
2	Maintaining extremely high expectations for going to college; parents must be highly involved in children's education	"I learned that language was not a barrier or an excuse for getting the appropriate education for my child."

Fig. 7: Parent interviews: overall emphases and meaningful quotes

	OVERALL EMPHASES	MEANINGFUL QUOTES
3	Hard work will help students achieve goals; open honest communication with children allows for better lifelong learning	"I tell my daughter that this is the time in her life and learning is beautiful. If I could go back in time I would go get that education."
4	Utilizing family and friends as a network of support; family bonding through cultural practices	"She needs to try her best, not just be another body or another person there, but to be more than that and to stand out. She is not documented, but that just means she has to try harder."

Fig. 7: Parent interviews: overall emphases and meaningful quotes (cont.)

As shown in Figure 7, one prevalent theme was that all parent participants revealed a close network of relatives, friends, and community members which they relied on for help with their children's growth and academics. One particular example of this was sibling and relative mentoring relationships. Parents and students alike emphasized the importance of older siblings, cousins, aunts, and uncles who mentored younger children in the family. For example, one mother described how she had visited the school and saw that her daughter was not doing well, and witnessed some bullying of other students on campus. She arranged for her daughter to spend time after school with her older brother who had already graduated. The daughter mentioned this relationship in her journal, as well, and described how he gave her an outlet of getting involved in sports and how they went to the gym together daily. Two of the parents described how relatives who were attending the local colleges were in charge of tutoring the high school students in the family and checking their grades. This mentoring was a great source of pride and family tradition for these participants. However, teacher participants seemed unaware of this when asked about students' academic support at home.

Teachers were also interviewed and asked similar open-ended questions about overall school experience and student engagement. Teachers, similar to parents, had a fairly positive view of the school. However, teachers expressed concern for students' relationships having a negative influence on academics. Teachers commonly expressed the following concerns: friends were often a negative influence, parents do not know about or take advantage of resources, and the neighborhood itself does not offer a safe and accommodating place for learning. On the other hand, the parents often reflected on resources in the neighborhood and people who helped their children succeed.

The issue concerning this discrepancy is not whether one party is correct, but simply that there are two interpretations to a complex situation and both may be correct. Generally, parents may be unaware of the negative relationships that distract students from learning in school, and, likewise, teachers are unaware of the positive relationships and resources that students do have access to in their family and neighborhood. Implicit in these findings is a possible lack of communication about these key issues that affect students learning.

Teachers' interview responses and lesson plans indicated that they noticed key learning activities, which produced higher engagement than others. However, it seems that teachers attributed the engagement to lesson design and content rather than the interaction of student relationships, allowed through group projects, such as students indicated in their journals. Interestingly enough, the two teachers whose responses resembled the perspectives of parents most were actually alumni of the school, indicating that the connection to the local culture is helpful in understanding funds of knowledge. This demonstrates the differences in perspective of two adult roles in students' lives—parents and teachers. The comparison of these two participant groups indicate that students are dealt the task of maneuvering two differing sets of expectations from two sets of adults.

The process used to analyze interviews and lesson plans was similar to the photovoice journals in that they were evaluated for themes several times. Multiple levels of analysis were needed to attain an authentic voice of each participant. Some additional steps were needed in interviews. For example, parent interviews were translated since all parents were Spanish speakers. During the interviews, the teacher researcher read the questions, which were then translated into Spanish by the translator. Parents and the translator took extra time to answer and relay information. The teacher researcher took notes during the interview and a voice recording was used as an additional reference. The interviews were then transcribed into a document. This document was then given to the translator for review and compared to the audio recordings to confirm accuracy. Finally, a list of topics was compiled from each conversation. These lists were then merged to result in overall themes that were prevalent among parents and overall themes prevalent among teachers.

Each parent interviewed focused on decision-making in social and academic situations. This seemed to be a very obvious value for each family that participated. One mother said, "I encourage my daughters to be very selective with their friends so they pick friends who are equally or more educated so that they are around people who elevate them." This is representative of the kind of guidance all of the parent participants

focused on regarding their children's relationships with others. This is further evidence that these students have *funds of knowledge* related to constructing and maintaining relationships that support growth and success.

Prevalent Themes and Contrasting Perspectives

A contrasting perspective on *funds of knowledge* was evident in the data gathered from parents and students compared to teachers. The following figures demonstrate general views of each group of participants related to the four most common themes described by all participants: friendships (Figure 8), siblings and relatives (Figure 9), communication skills (Figure 10), and decision-making skills (Figure 11). Each of the following figures demonstrates the similarities and differences among students, parents, and teachers' perspectives on these themes.
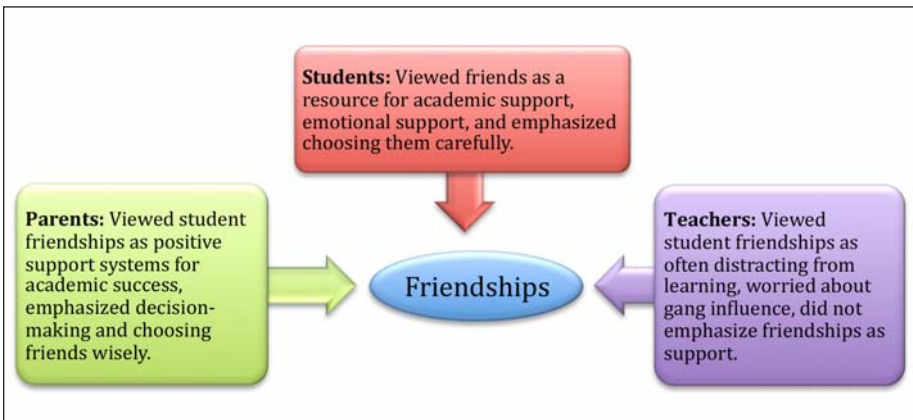

Fig. 8: Friendships

As indicated in Figure 8, students chose to write about friends that they see as a support for their academic success. Although they may also have friends that distract them as teachers indicated, these relationships may not be as important to students since they chose not to write about them in their journals. Parents seemed aware of all kinds of friendships, but emphasized the parenting strategy of decision-making and choosing friendships that would serve as a personal and academic resource. Understandably, the teachers' perspective on student relationships is limited to the time and space that they see students daily in class. For these students, apparently there is a far more intricate network of relationships that teachers could focus on in conversation or encourage students to utilize for academic success.
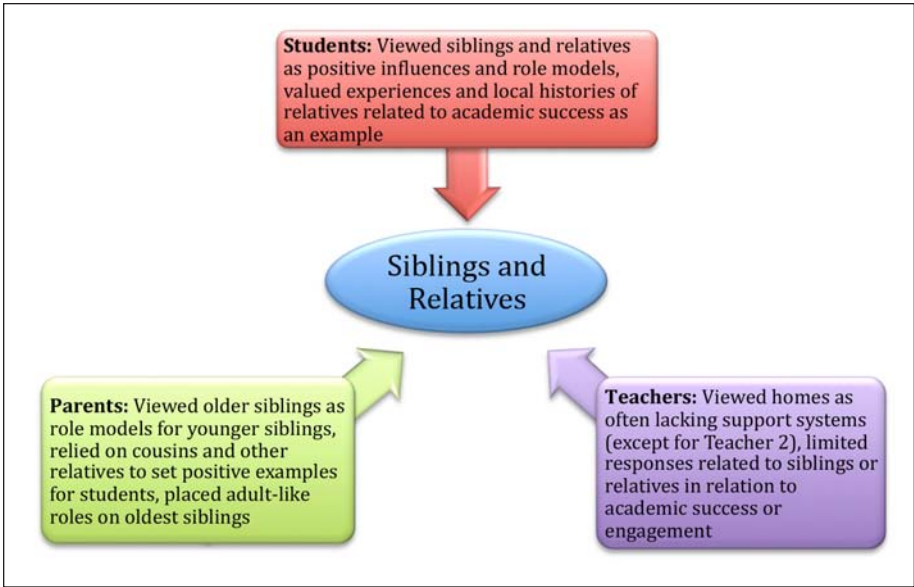
Fig. 9: Siblings and relatives

Figure 9 shows some of the function that intimate relationships offer students, which teachers have no way of seeing in class. Each student in this study seemed to have at least one person in his or her family that functioned as a mentor. In many cases the older siblings and relatives were currently attending this same school or were recent graduates. This offers an untapped resource that teachers could use to promote school success. For example, after this study the teacher researcher began contacting and, in some cases, inviting older siblings into conferences for students who need extra support. This addition is a simple way to utilize this network of support that parents have purposefully orchestrated. Additionally, this concept of mentoring seemed to be a clear usable teaching tool that many students in this school community may understand. Although it is true that teachers' understanding of the school community was not completely uninformed due to the low-income condition of this neighborhood, the picture could be explained as somewhat incomplete since teachers were not aware of this social dynamic and how it could be a resource.
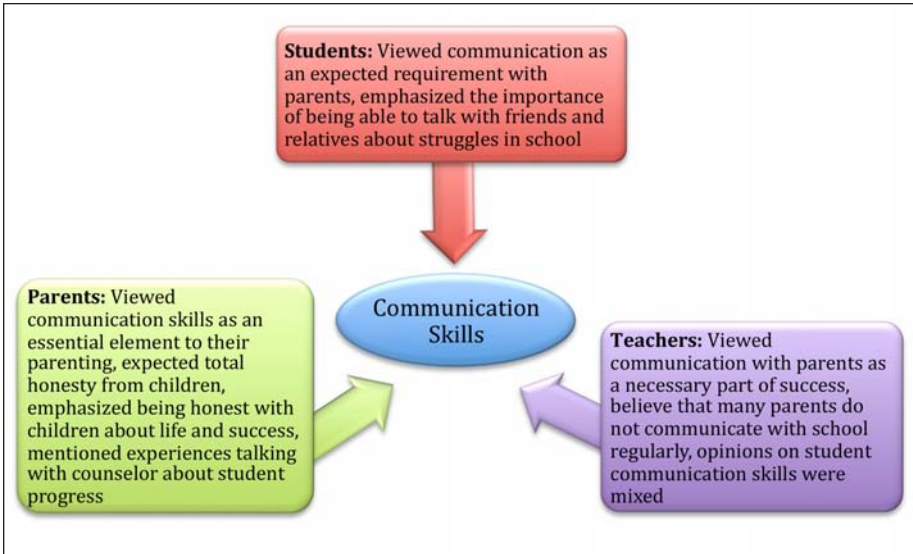
Fig. 10: Communication skills

Figure 10 indicates another instance of an incomplete picture. From their perspective, teachers expected to have more contact with parents and saw this as a weakness within the school community. This need for more communication with teachers did not seem to be expressed by parents. It seems that communication is lost between the school and home. It is possible the expectation teachers have for parents may remove the students from a position of responsibility that their parents have intentionally created, thus creating a miscommunication between parties. In other words, teachers expect parents to call, come in for meetings, and email, but do not assume that they could possibly go straight to the student or another relative to relay a message to parents. Adding this responsibility in communication on the part of the students could show them that teachers understand what parents expect. In these homes, students held much more adult-like roles than teachers may be aware. Therefore, leaving them out of the equation when communicating about school issues may send a mixed message. Although it may be true that communication between teachers and parents needs to be improved, it is possible that the students are actually the missing link in this chain.
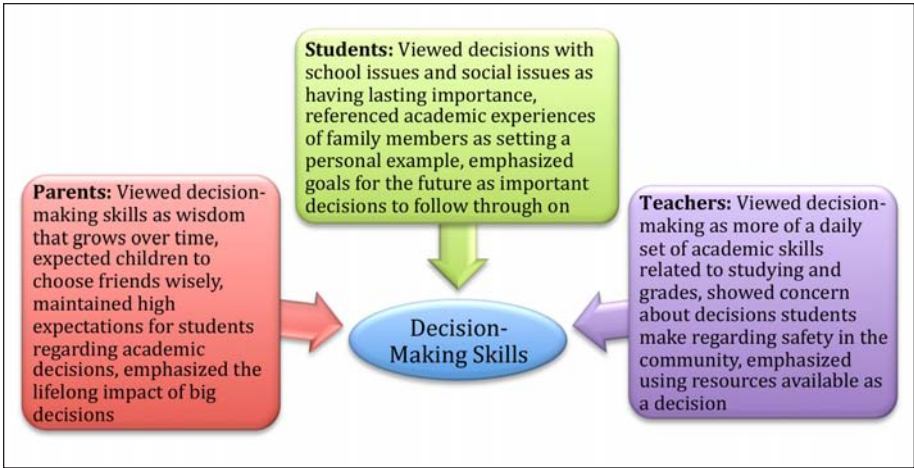
Fig. 11: Decision-making skills

Similarly to the first three themes, decision-making skills seem to reflect a different perspective of all three parties. Figure 11 indicates that all parties see this skill as important. However, teachers focus on different areas than parents and students. While parents see lifelong decisions such as completing school and forming positive relationships as important, teachers focused more on minor daily skills that lead to school success. While students see the value in both of these perspectives, they may not see the connection. It could serve teachers and parents well to learn more about the other perspective on decision-making skills in order to reinforce the importance and how daily decisions do affect lifelong decisions. This kind of conversation could be started by teachers and explicitly laid out for families so that parents can reinforce it, and, likewise, teachers can include the bigger picture in their daily lessons so that both sets of adults are reinforcing the same concepts.

Implications & Conclusions

Based on the results from interviews, field notes, lesson plans, and photovoice journals, one could conclude that there may not be major flaws in the curriculum, instruction, or school environment affecting student engagement in this school community. However, there seem to be contrasting perspectives on students' *funds of knowledge* that may create an inconsistency between home and school, causing learning situations that do not utilize these skills and values to the highest potential. An analogy of a fracture in a bone paints an apt picture of this problem. Rather than

a huge break in our educational system at this school site, such as inaccessibility or completely inappropriate curricular or instructional practices, the problem is almost invisible. Teachers continue to teach daily, receiving less than desirable engagement due to this fractured education—inconsistencies between home dynamics and classroom dynamics that hinder maximum engagement with academic content.

Analysis of lesson plans and interviews with teachers revealed that certain instructional strategies were more effective than others. Teachers seemed to know strategies that worked, but not know why they worked, making it difficult to re-create this engagement in all lessons. For example, most teachers agreed that hands-on group projects resulted in higher engagement than individual seatwork. One even said in reference to a successful lesson,

> It was a really great thing to see…students being so involved in this project. They were up there on the table building…they were writing, team playing, and socializing with other students and it was a wonderful lesson. They all worked together as a group.

One obvious piece of information missing from the teacher interviews was that they did not realize the reason behind certain classroom successes could be due to the parenting styles that have used group problem solving and sibling mentoring in the home. Therefore, some group projects work better than others depending on how well they reflect this dynamic. In other words, teachers attributed the engagement to the assignment or content rather than the specific roles students were allowed to take on, which mirrored home dynamics. In lessons that involved group problem solving and a mentoring relationship structure with such specified roles, students were more successful.

The solution to this fractured education could be a mixing of best practices for lesson design and instruction combined with the expertise of the roles, structures, and dynamics of students' home life. The *funds of knowledge* identified in interviews with parents, observations, and student photovoice journals were combined with instructional strategies from teachers' lesson plans. The result is what we are calling *Cross-Educational Teaching*—a newly structured lesson plan style that imitates home dynamics for higher engagement in academic content.

The results of this study showed that Latino student participants were placed in very adult-like roles in their homes. Often problem solving was conducted as a group effort. Older siblings were trained to mentor younger siblings by leading them academically

and in passing on family values and wisdom. Additionally, a huge emphasis on decision-making was prevalent in parenting style. It makes sense that lessons that utilize these skills will be more effective with these students. The following table (Figure 12) represents elements taken from teacher participants lesson plans and matched with similar elements of learning at home in order to produce an approach for classroom instruction that allows for better use of these students' funds of knowledge.

ELEMENTS OF THE LESSON PLANS	CONNECTION TO HOME	ELEMENTS OF LESSON WITH FUNDS OF KNOWLEDGE IMPLEMENTED
A starter or opening question was often given to students as they enter class to begin the lesson.	When students come home, their first interaction with parents is most often an update of their day when personal successes or problems are shared.	Rather than a question with a specific answer to be written down, students could be asked to share something more personal related to the content through discussion.
The beginning of lessons often included an objective or essential question to focus on the academic goal for the day.	To teach lessons to their children, parents often shared personal experiences or experiences of close family members and friends.	To hook students' interests, personal stories related to content could be shared by the teacher.
Direct instruction such as PowerPoint presentations with note taking followed by teacher modeling was a common method of delivering content.	Rather than passively listening, parents expect children to take on adult-like roles. All members of the family participate equally in a task.	Instead of teachers leading a presentation while students take notes, teachers could give each student some information to share. This way note taking becomes a shared group process instead of a passive activity.
Independent practice often follows direct instruction. This involves answering questions or completing a learning activity in pairs and sharing answers with the class.	At home, parents assign older siblings to lead or supervise younger siblings. Children take this role very seriously. Although younger siblings still have an equal part in a task, older siblings who act as mentors guide them.	Although the process of working in pairs does seem to reflect the cooperative environment of home life, students could take turns fulfilling a mentoring role throughout assignments. This may better reflect the mentoring role of siblings at home.

Fig. 12: Better use of students' funds of knowledge

ELEMENTS OF THE LESSON PLANS	CONNECTION TO HOME	ELEMENTS OF LESSON WITH FUNDS OF KNOWLEDGE IMPLEMENTED
Assessments within lesson plans varied from teacher to teacher. Some use written assignments, some use quizzes, and others projects.	Parents at home were not generally concerned with the details of each lesson or concepts taught. Instead they focused on the big picture of progress. They assess this by open and honest conversation.	Although with our content areas we cannot ignore details, we can mimic this oral communication in order to assess comprehension. Rather than assessments being completely written products, an oral element can also be implemented. Students can be required to share out the big picture. Students can be given a partial grade on this progress of being able to articulate orally the main concepts learned.
Many lessons concluded with a reflection question which students finished before they left class. This allows for one final step in checking comprehension with the lesson.	Reflection happens at home as well. Many students wrote about music and how it helped them focus. Parents also discussed how they expected their children to share feelings about problems they faced at school.	The reflection in class can be modeled after this personal reflection that happens at home. It may build importance to the issue if students are allowed to listen to music and quietly focus on the question. Then discussion in small groups can follow before they turn this in to the teacher. As evident with parent interviews and photovoice journals, students may feel there is more importance attached to a concept if they have to reflect and share about it.

Fig. 12: Better use of students' funds of knowledge (cont.)

The significance of this study is not the reusability of these particular strategies, but rather the process of investigating students' *funds of knowledge*. Educators could create their own version of *Cross-Educational Teaching* in any school community. For this school community, the high school students in this study are given very adult-like roles in the home, take on a mentor role with siblings and relatives, develop networking skills for support, and work in a team-like setting to solve problems and pass on family values. However, these valuable skills—or *funds of knowledge*—may go unused if students are expected to remain passive. Parents emphasize communication skills and decision-making, but often students are expected to be quiet and have little influence on the decisions made in schools. If teachers in other school communities investigated the

funds of knowledge their students have, the process of developing cross-educational teaching could prove to increase student engagement—particularly for low-income, minority students who often have a cultural background different from many of their teachers. Overall, a much more inclusive educational environment could be achieved by utilizing the valuable *funds of knowledge* attained through home dynamics in the classroom.

Reflections From a Teacher Researcher

This study showed me many things about the research process, this school community, and the richness of cultural capital my students have. The best part of researching funds of knowledge is the message that is sent to students in this process—*I care about who you are and what you have to offer!* Although at first students were confused by a writing assignment that was not completely dictated to them, they eventually showed huge gains in engagement and put forth a genuine effort to improve writing skills. I believe this is because the topics were extremely personal and reflected their funds of knowledge, creating an affirming environment that is much more inclusive than traditional methods.

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