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The Influence of Social Class on Family Participation in Children's Education: A Case Study

SALVADOR R. VAZQUEZ

University of California, Los Angeles, United States

PATRICIA M. GREENFIELD

University of California, Los Angeles, United States



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Correspondence concerning this article should be addressed to e-mail: svazquez@ucla.edu

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Abstract

Parental involvement in children's education is commonly accepted as beneficial. However, family social class plays a crucial role in the efficacy of homework help. In a comparative case study, a low-income immigrant family from Mexico and a middle-income family in Los Angeles were observed helping their children with math homework and were asked questions about goals, tutoring strategies, and beliefs about learning. Qualitative analysis focused on two effective teaching methods: scaffolding and productive struggle. The low-income mother with little formal education provided direct help rather than a scaffold, and disapproved of hard problems. However, an older sibling with more education than her mother used scaffolding and believed that difficult problems aid learning. In these respects, she resembled the college-educated middle-income mother. The sister exemplifies how older siblings in immigrant families provide bridges to educational achievement for younger siblings. We suggest effective ways for schools to involve parents who lacked educational opportunity themselves to participate in the education of their children.

Keywords: family involvement, latino immigrants, math learning, productive struggle, social class.

La Influencia de la Clase Social Sobre la Participación Familiar en la Educación de los Niños: Un Estudio de Caso**Resumen**

La participación de los padres en la educación de sus niños es establecida como beneficiosa. Sin embargo, la clase social de la familia tiene una fuerte influencia sobre la eficacia de su ayuda con las tareas. En un estudio de caso comparativo, una familia inmigrante de México, de bajos ingresos, y una familia de Los Ángeles, de medianos ingresos, fueron observadas ayudando a sus niñas con deberes en matemáticas. Además, el investigador hizo preguntas sobre metas, estrategias de enseñanza y creencias sobre el aprendizaje. El análisis cualitativo se centró en dos métodos efectivos de enseñanza: proporcionar el aprendizaje de manera de andamio y estimular la lucha productiva. La madre de ingresos bajos proporcionó apoyo directo a su hija en lugar de proporcionar un andamio, y ella desaprobó los problemas difíciles; sin embargo, una hermana mayor con más educación que la madre proporcionó un andamio y creyó que los problemas difíciles ayudan al aprendizaje. En estos aspectos, la hermana mayor era similar a la madre de ingresos medios con educación universitaria. La hermana demuestra cómo hermanos mayores en las familias inmigrantes proporcionan puentes al éxito educativo para los hermanos menores. Sugerimos modos efectivos para que las escuelas puedan alentar a los padres con falta de oportunidades educativas a participar en la educación de sus hijos.

Palabras clave: aprendizaje matemático, clase social, inmigrantes latinos, lucha productiva, participación familiar.

STRUGGLING WITH a math problem is something that teachers and students try to avoid and often consider an impediment to learning, but recent research is showing that struggling can be productive towards enhancing learning (Kornell & Son, 2009). Productive struggle is defined as expending effort to make sense of something that is beyond one's current level of understanding (Hiebert & Grouws, 2007). With roots in Vygotsky's theory of cognitive development, productive struggle is based on the notion that destabilizing a child's knowledge of the world and exposing them to scaffolded activities that are just beyond their individual level of understanding drives learning (Vygotsky, 1978; Wood et al., 1976); however, the ultimate goal of a scaffolded activity is a child's ability to do that same activity independently. Productive struggle is based on maximizing the child's independent learning by encouraging effort and persistence in the face of challenging problems. It goes beyond scaffolding in emphasizing that the step just beyond one's current level of understanding should feel a bit difficult to the learner. In essence, scaffolding and productive struggle are mutually reinforcing and serve to keep a child within a zone of proximal development where they can struggle productively (Van de Pol et al., 2010).

However, these methods are based on the value of independence, a value that is very dependent on social class. Here, social class refers both to level of education and income. Independence is much more valued and practiced in middle-class than working-class families. Working-class families, in contrast, emphasize interdependence in their values and practices (Stephens et al., 2014). For these families, helping behavior is an important component of interdependence (Raeff et al., 2000).

Without taking into account the working class value system and other economic disadvantages that working-class parents may have, the No Child Left Behind legislation in 2002 in the United States led to school policies that encourage more parental involvement in schools and children's education

(Epstein, 2005). But working-class families, especially working-class immigrant families, are in a double bind: on the one hand, for many parents who work long days and must accomplish household chores, helping with homework is usually the preferred method of involvement as opposed to taking time out of their schedule to volunteer at school. In fact, this situation may result in many working-class parents feeling that it is an obligation to help their children with their homework (Hoover-Dempsey et al., 2001). Indeed, national surveys in the United States have shown that parents with less education and lower income are more likely to help their children with homework than families with higher education and income (Robinson & Harris, 2014).

On the other hand, parents often immigrate to give their children more educational opportunity than they had in their home country (Schaller et al., 2007); thus, parents may not have the educational background to be able to help their children with homework, no matter how motivated they may be. In Southern California this situation is especially true for Latino immigrants, who generally immigrated to provide more educational and occupational opportunity for their children than they had in their countries of origin (C. R. Cooper et al., 1999; Greenfield et al., 2020). (Note that we use the term Latino because this is the term used to self-identify by members of the group in Southern California, where the case-study family is located.) In one study in California, Mexican immigrant parents worked as farm laborers or in canneries and had left school in Mexican villages at a very young age. By fifth grade, their children exceeded their level of schooling (Azmitia et al., 1996). In this situation, older siblings are often intermediaries who have attained more education than their parents and are more able to help with homework (C. R. Cooper et al., 1999).

Investigations into how families help with homework are abundant, but the results as to whether or not familial help is efficacious are mixed (H. Cooper et al., 2012; Martinez, 2011). A

few studies that specifically look at mathematics and the role of scaffolding do exist, but few have considered the role a family's social class may have on their ability to help a child with math homework (Baranovich et al., 2019; Hyde et al., 2006; Pratt et al., 1992). Hyde and colleagues (2006) demonstrated that a mother's education level did indeed positively correlate with their use of scaffolding techniques when helping with math homework. In other words, mothers who had higher levels of education were able to convey more math content and were better able to scaffold the problems for their children (Hyde et al., 2006). Although data for that study were collected in the home, mothers were given a set of problems and shown two types of strategies for helping with the problems, in lieu of relying on actual homework assignments and existing parental math knowledge.

Studies of parental homework help in Latin America demonstrate, that another aspect of social class, income, has an effect on parents' views and ability to help with homework. In Brazil, mothers of low socioeconomic status said that they had less time and not enough knowledge to help their children with homework. These comments led the author to conclude that homework can worsen existing inequalities (de Carvalho, 2006, as cited in Torres & Hurtado-Vivas, 2011). In Chile, low-income mothers who gave their children more autonomy in solving the problems had children with higher gains in reading comprehension (Levyva, 2019).

While studies have specifically looked at how middle-income families navigate homework, in addition to other daily demands, studies have also demonstrated how these families do everything they can to give their children the best opportunities for a successful and fulfilling life (Kremer-Sadlik & Gutiérrez, 2013). Research from the same group has also shown that middle-class parents feel it is their responsibility to make sure that homework gets done, but that it also manifests in everyday life as a source of tension (Kremer-Sadlik & Gutiérrez, 2013). However, to our knowledge, no study

comparing parents from different social classes explores specific links between family social class and ability to help children with the daily demands of homework. Our study is a first step.

This Study

In this qualitative research, we show through a comparative case study that an older sibling who has attained more formal education than her immigrant mother provides homework help that uses the same techniques as a middle-class mother with a college education. More specifically, she scaffolds the math homework of her younger sister in order to maximize the younger child's independent thinking and also has beliefs consonant with the concept of productive struggle. In contrast, her immigrant mother, who reached the 6th grade in Mexico, focuses on helping techniques that reflect the interdependence valued in a working-class milieu. In this way, the older sister provides a bridge to an educational environment that is consonant with middle-class values and considered pedagogically constructive. However, we also discuss how social class creates additional barriers that prevent her from being a maximally effective educational bridge.

In sum, we use qualitative observations to analyze and compare the instructional processes used by the working-class immigrant mother, her 20-year-old daughter, and a middle-class mother. We also show an awareness on the part of each of these three tutors that their own education has influenced what they can and cannot do as math tutors at home.

Method

Researcher Description/Positionality

This study was motivated by the first author's own experiences with math homework as a child and working as an in-house tutor for low-income families later as an adult. Growing up with working-class parents who had immigrated from Mexico and were not able to help him with math homework

after he reached the 7th grade, he had a hunch that there were many parents out there like his own, who felt obligated to help their children with math homework even when they did not have any familiarity with the math problems or had little to no exposure to the content since they themselves were in school. As a tutor, the first author would also hear stories from immigrant Latino families who grew up outside the United States and could not afford to go to school beyond the 6th grade. For these parents, not only did they lack the mathematical knowledge to help their children, but they also lacked familiarity with the culture of schooling in the United States. Such familiarity can enable some parents to help their children form appropriate expectations of and schemas for the schools they attend (C. R. Cooper et al., 1999).

Participants

Lower income family. The lower income family is comprised of a mother (LM), younger daughter (LD) and older daughter (LS), and a father who did not participate in this study (See Table 1 for descriptives). The matriarch of the family is a close personal friend of the first author's family. The first author's mother liaised the recruiting process and was present at all three of the data collection sessions. Both adult participants signed and read consent forms prior to participation and the child participant signed an assent form.

Mother (LM). LM grew up in Southern Mexico and attended a small local school. The town she lived in was divided by a river with a school on both sides. She lived on the side with a small schoolhouse that was fraught with high teacher turnover. This resulted in her having to repeat several grades, including spending four years in the first grade. There was a larger school on the other side of the river, and it was not until LM began to complain to her mother about the small school that she was transferred to the larger school and began to advance in her studies. However, by the time she

reached the age of 16, she was in the sixth grade and was done with school. She also felt compelled to begin working. Her father, who would travel to the United States for work, never sent money back home. Financial need was therefore a strong motivator for her to leave school. At the age of 18, she had the opportunity to continue her education when her older sister offered to have her move in with her and pay for her schooling, but LM felt embarrassed to be continuing school at the age of 18 with peers who would be much younger than she. So, she decided to continue working instead.

She describes having liked school, especially reading and writing. Although she never considered herself good at math, she did enjoy it. Since arriving in the United States at the age of 25, LM has mostly remained employed by doing house-keeping jobs. At the time she was interviewed, she was no longer working and was helping one of her older daughters by taking care of her two grandchildren on weekdays.

Older Daughter/Sibling (LS). LS was 20 years old at the time of the interview and was working full-time. She was born in the United States, has a high school diploma, and had attended one year of college. Much like her mother before her, LS was motivated to work full time to help her family financially.

LS grew up enjoying mathematics. She always felt that she was good at math and took courses in calculus while in high school. When she was younger and had difficulty with her homework, she would often go to her older sisters first for help, before approaching her parents. Her full-time job at the time of this study meant that she was often unable to be present at home when her younger sister would do her homework and needed help.

Younger Daughter/Sibling (LD). LD was 11 years old and in the 5th grade when she was interviewed. She attended a local public elementary school and reported having difficulty learning in

school, in part because she felt that some of her teachers were too distracted by their mobile devices. In addition, LD also had an Individual Education Plan (IEP). This is a legal document in the United States that is developed for any public-school child who needs special education (Individuals with Disabilities Education Act, 2004). Although LM was not specific with her daughter's exact diagnosis, she described LD as having difficulty remembering things and requiring a lot of one-on-one attention. While LM was deeply concerned with LD receiving the help she needed, she also mentioned that some of her teachers did not consider LD's learning difficulties to be serious. LD particularly had difficulty with mathematics and expressed that she did not enjoy doing math as a result of the difficulty she had understanding it.

Middle income family. The middle-income family comprised the mother (MM), father (MF), daughter (MD), and son (MS). Data were collected from all four members of the family, but this study will focus on the interactions between MM and MD (see Table 1 for descriptives). This family was recruited via a close friend of the first author. After making initial contact via email, the family was sent a copy of relevant consent and assent forms to review and sign days before beginning the study.

Mother (MM). MM took calculus during her senior year of high school and said that she liked math. When she went to college, she went to a liberal arts school and figured out a way to not have to take math anymore. When MM was younger, her parents both worked and were not around much to help her with homework, but on occasion, if she had any trouble, she would get help from her father.

Daughter (MD). MD was a 4th grader who was described as someone who enjoyed school and never had much difficulty staying engaged with her schoolwork. MD attended a local public charter school in her neighborhood. (Public charter schools in the United States are publicly and privately funded schools that are exempt from most local and state regulations. Like regular public schools, they are free for the students.) During the observations, MD was diligent with her work and seemed to have a good sense of her assignments and what was expected of her.

Data Sources

Each family was visited three times in their home. A homework session of up to one hour was videotaped during each visit and the two mothers and the older sister were interviewed for 15 minutes at the end of at least one session. The child participants were interviewed for 15 minutes at

Table 1
Descriptive Information of Families

	Participants	Age	Country of Origin	Occupation	Education	Language
Lower Income Family (< \$15,000 father's income)	Mother (LM)	53	Mexico	Housekeeper / currently helping daughter by taking care of grandchildren	6 th grade	Spanish
	Father	47	Mexico	Auto mechanic	2 years of college	Spanish
	Older Daughter (LS)	20	United States	Dog groomer	some college	Spanish and English
	Younger Daughter (LD)	11	United States	Student	5 th grade	Spanish and English
Middle Income Family (\$50,000–\$75,000 parents' income)	Mother (MM)	43	United States	Fitness Trainer / Massage Therapist	Bachelor's Degree	English
	Father	Unavailable	United States	Actor	Bachelor's Degree	English
	Daughter (MD)	9	United States	Student	4 th grade	English

the end of the final visit. The first author also took field notes during each of the three sessions. The source for each of the observations is indicated in the findings section. When the source is an interview, the interview question is described.

Data Analysis

Early in the data collection process, the lead author reviewed interview field notes for themes and wrote analytic memos, where he developed his conceptual ideas connected with the literature. Subsequent analysis was initially guided by three research questions: 1) How do parents help with math homework?; 2) What do parents know about productive struggle?; and 3) What goals do parents have regarding math homework?. These questions served as broad themes that were later refined based on topics that emerged during the data analysis. Questions 1 and 3 were primarily analyzed using inductive strategies, whereas analysis for question 2 was guided by existing definitions and examples of productive struggle in the literature. This first round of coding was followed by a second inductive round that focused on emerging themes related to social class.

Recorded interviews provided direct responses to the three questions above. Field notes were the primary source of information about the home environment. Video recordings furnished most of the data concerning behavioral interactions between the tutor and the child. The video camera was focused on the child or children while they worked on their homework; any adults helping them were recorded only when they were near the child and within the frame.

Audio transcription and presentation of quotes. Audio transcription was verbatim, except that “ums” and other filler words were removed. Ellipsis (...) was used to denote long pauses or sentences without formal endings. The quotes in the Findings section transfer the transcription method to the article. Brackets in a quote indicate that a word or words have been added by the

researchers to the verbatim transcription in order to clarify its meaning.

Findings

Connecting Tutoring to the Tutor's Own Education and Knowledge

Low-income family. It was clear in speaking with LM that one of the main determinants of her ability to help LD with math homework was her own educational background. Having attended school in a rural part of Mexico, LM spoke in her interview about having to repeat many grades while in school.

LM is aware of her limitations as a math tutor. For example, when her daughter has a homework sheet on fractions, LM says that she cannot help with fractions and calls LD's older sister, LS, to help LD with the fraction problems [field notes]. During her interview, LM says “*No le puedo ayudar muy bien porque el concepto que uno tiene de matemáticas es muy diferente de aquí*”. (I can't help her very well because the concept that one has of mathematics is very different here.) Here she is making a distinction between what she learned in Mexico and how she thinks math is taught in the United States.

Sometimes LD makes her mother aware of her limitations as a math tutor: There are instances in the conversation as LM is helping LD that LD gives the correct answer but LM responds by saying that it is incorrect. LD had said that 12 divided by 2 is 6 and LM had disagreed with her. In order to check who is correct, LM grabs a laminated times table sheet in order to check the answer. They look it up on the times table and see that LD was correct [field notes].

The influence of one's own education on one's tutoring style is made very explicit by the older sister, LS. In her interview, she says, “*I teach her [my sister] the way that I learned, basically*”. For LS, this means using similar if not the same sort of methods that her teachers used in her classroom when she

was younger. LS, for example, makes sure that LD has read the instructions to her assignment and takes the time to check if she understands them. She does an initial problem for LD to demonstrate how the problem can be solved, but also takes time to explain each step and explain concepts that underlie the problem. For example, when attempting to help LD with her fraction homework, she takes the time to demonstrate with a pie chart how two fractions (e.g., $6/8$ and $3/4$) are the same quantities [video].

Middle-income family. This mother is also aware of her limitations as a math tutor. When asked in the interview about whether she feels capable of helping her children with homework, she answers *“There are times when I look at a problem and I’m like, «Oh, well this is how I would do it,» and she’ll [daughter] say, ‘No, that’s not... We’re supposed [to] use this whatever technique’, and I don’t always know what she’s talking about...”*

MM also benefits from her more advanced education by being able to search the Internet when she is not sure how to help her daughter with a math problem. When asked how she helps her daughter with new problem-solving methods she stated: *“I’ve [done] some sort of independent information or research online to try to figure some stuff out here and there over the years, not recently. But, but once it’s... It’s an issue... It’s almost an issue of, like, speaking a different language, like, once you understand the language they’re speaking then it... It all makes sense to me”*. In response to a similar question LS described a similar strategy: *“I’ll look it up on the Internet and see a couple of math problems, like, that are done on there and see how they solve it and then I try to go ahead and solve the problems that I see on her paper, you know, obviously, if I get an answer, I do, like, to research, like, on the Internet and see if I can get that answer from them and see if it’s correct. But you know, I Google it so I know, kind of, what I’m doing at least”*.

Tutoring Style

Preview of findings. The low-income mother provides help. In contrast, the middle-income mother tries to get her daughter to solve problems herself, even when the problems are difficult. When needed she provides scaffolding to maximize her daughter’s contribution to solving a problem.

In the low-income family, the older sister, who has gone farther in school than her mother, has a tutoring style similar to the middle-income mother: she also uses techniques to maximize her tutee’s contribution to solving math problems despite LD’s extensive need for scaffolding.

With regards to implementing productive struggle, none of the tutors knew how to define productive struggle. This situation indicated that they lacked explicit knowledge of this concept that could be used purposefully during homework helping interactions. However, in practice productive struggle was nonetheless encouraged by the middle-income mother and the low-income older sister who had received her education in the United States and gone much farther in school than her mother.

Low-income mother. She is very willing to provide concrete help. Here is one example: LD tells LM that she needs 50 beans. Daughter then gets a bag full of black beans from the kitchen, and her mother helps her count out 50 beans. After the daughter gets her beans, she goes to the sofa and sits down to do her math homework. [field notes]

LM also tries to help by solving a problem for her daughter. For example, when LD appears to be having trouble counting by threes, LM counts by threes for her using her fingers to keep track of how far she has counted up. [field notes]

Unproductive struggle. LM’s beliefs about whether or not struggling with a difficult math problem is a good thing was colored by her daughter’s own struggles with math. She said *“No, no está bien. No debería de tener tantos problemas con las matemáticas.”* (It is not okay. She shouldn’t have problems with math). For her, struggling with

math seems to be closely tied with her daughter's low performance in math, which, according to the literature, would be more indicative of unproductive struggle, due to a potential lack of proper scaffolding at school.

Middle-income mother. She is very explicit that she should not do an assignment for her children. When asked about doing a problem for her children, she says "No. I try hard... I try not to do that". She provides scaffolding to encourage her daughter to solve problems herself. For example, MM comes by to check MD's work; she tells MD to look at a problem again and provides a hint to fix the problem after MD doesn't immediately see the issue [video]. This behavior signals to MD that something may be wrong, but does so in a way that still encourages her to figure it out for herself.

Productive struggle. Because MM has minimal interaction with MD during homework help, she explains how she typically helps MD: "A lot of times all that I need to do is have them go over and read the question again. Uh, because they'll say, especially her, 'I don't understand it, it doesn't make any sense,' Well then, read it to me and try to explain it while you're reading it to me, and that—And doing that, she's like, 'Oh, I get it!'" She seems to promote productive struggle through the practice of letting MD work independently as much as possible but also by encouraging her to work through her own mistakes. Although extreme, this is most likely possible because MM felt that her daughter could handle this when she said, "MD's sort of more naturally academic, I'd say, so... So she sort of needs less intervention, uh, generally". MD did on occasion request her mother's help, but most instances involved the mother serving an assistive role as in when MD requested that her mom staple her homework after she was done [video].

Another instance where MM promotes productive struggle is when she looks over the homework. When she encounters a problem that is incorrect, she simply calls MD's attention to

the problem and lets her figure out on her own where her mistake was made. When asked directly whether or not she felt that a child struggling with math homework problems is good or bad she said "Yeah, I think that if they get... If it's too hard and they get too frustrated and, you know. But I think having to kind of work through something that isn't easy right away is a good thing". Her tutoring style appears to match her beliefs on productive struggle, despite her not having any knowledge of the term productive struggle.

Low-income older sister. She also tries to get her tutee to solve problems herself. In her interview, she says, "So I teach her, like, a couple of times, then I let her do it by herself". When attempting to help LD determine the simplified form of the fraction $\frac{6}{8}$, she works step-by-step towards her sister's independent learning. LS begins by reading the instructions to the problem set and assessing whether LD comprehends. She then puts the current problem set in terms of the previous assignment which was a multiplication problem set by asking LD "what number can you multiply to make these two numbers [numerator: 6 and denominator: 8] and it has to be the same number for both". She then scaffolds the process by having LD look for that number on the times table herself. After LD finds the correct number (2), LS restates the problem for her in a familiar format by asking "2 times what equals 6?" On the following problems, LS continues to scaffold but gradually reduces the amount of input she gives so as to allow LD to incrementally work the problems out on her own.

Productive struggle. Despite having never heard of productive struggle, when asked whether or not she believed that one can learn more from a difficult math problem or an easy math problem LS expressed that "you could learn a little bit more from a difficult one [problem] because there's a lot of different aspects on how to solve it. And I guess you could get more out of something". This is also

apparent in the way she gives her opportunities to try doing problems on her own, as mentioned above.

Other Ways in which Lower Social Class Creates Educational Disadvantage in the Low-Income Family

Although LS uses techniques that have a lot in common with the mother in the middle-income family, she is not nearly as available to her tutee as the middle-class mother because she has to work. In contrast, the middle-income parents had more flexible schedules. The father was an actor, and he was always there during the observations. With both parents having a college education, the children always have knowledgeable homework helpers close at hand.

There was another class-related disadvantage: The mother in the low-income family tried unsuccessfully to obtain free tutoring for her daughter. However, there was no way the family could afford to pay a tutor. So, families who need tutoring most of all because the parents cannot do it are least able to afford it, another double bind situation.

Discussion

Productive Struggle as a Byproduct of an Individualistic Culture Value System

Productive struggle is a concept that emphasizes individual effort and persistence in solving difficult problems. Focus on productive struggle is something that is known and studied in the academy. Many studies indicate that engaging in extended effort to make sense of something that is not immediately apparent can lead to better retention and understanding (Bjork & Bjork, 2011; Clark & Bjork, 2014; Hiebert & Grouws, 2007; Kapur, 2008, 2010, 2014). However, when it comes to parents helping their children with math homework, a belief in productive struggle is not always explicitly endorsed (Vazquez et al., 2020). In this study, family members with more years of education in the United States used tutoring strategies that promote productive struggle,

despite not having any explicit knowledge of the term. This observation was further reinforced by statements from both MM and LS in which they specified that difficult math problems can be beneficial for the learning process. In contrast, LM felt that struggling with math is not good because it indicates a lack of understanding.

Thus, we see that parents may engage in activities that promote productive struggle without being familiar with the term “productive struggle”. However, one contributor to this method of teaching is the educational system in which they were brought up. Being brought up in an education system in an individualistic culture (United States) versus one in a more collectivist culture (Mexico) engenders ideals of doing things for oneself and knowing how to be independent. While it is true that, in Mexico, a higher education level leads to a more individualistic value system (Manago, 2014), LM immigrated to the United States at the age of 25 with a sixth-grade education and lived in a rural part of Mexico for most of her life. Both age of immigration and these environmental factors would indicate that it is very likely for LM to subscribe to a more collectivistic value system than her two daughters and the middle-income family who were born and raised in the United States (Greenfield, 2009; Minoura, 1992).

One way to teach independence during homework help is to promote a style of problem solving that encourages children to do things on their own without outside intervention. By reinforcing these behaviors during the homework helping process, parents who themselves participated for a longer period of time in a more individualistic education system may be inadvertently giving their children the skills necessary to engage in productive struggle and reap its long-term benefits. However, parents who participated in an education system much more briefly and in a collectivistic milieu may be more likely to view struggle as something that does not benefit the child—especially considering that struggling productively does not always

result in immediate performance improvement (Kapur, 2008).

Should parents be encouraged to help with homework? When are other forms of involvement more constructive?

Studies demonstrate that children with lower social-class parents are most likely to benefit from parental involvement, but the type of involvement is very critical in determining whether or not it has a positive effect on achievement (C. E. Cooper & Crosnoe, 2007; Domina, 2005). When taking social class into consideration, it is apparent from our findings that some parents will be better prepared than others to help with math homework. In parts of the world where there is a lot of social inequality, schools may need to change the sorts of messages they send to parents about their educational involvement. Within the United States, national surveys indicate that, after controlling for several sociodemographic factors, helping with math homework leads to statistically significant declines in child achievement for families of all social-class levels (Robinson & Harris, 2014). These same surveys also indicate that among lower social-class families, that is, where the parents have less than a high school education, having discussions about school and future plans can actually be more beneficial for these children. By having open discussions about future plans, expectations, and things happening at school, lower social-class parents can help their children perform better and remain engaged in school, without the pitfalls that come with direct homework help.

Other studies indicate the benefits of still other forms of parental involvement. One elementary school teacher in Southern California was teaching children from Latino immigrant families where parents had had little educational opportunity in their countries of origin; very few had attended junior high or high school. The teacher used ethnographic methods to understand what kind of classroom tasks available parent volunteers would feel comfortable taking on. Based on observing

and talking with the parents, she gave parents individualized tasks from arranging classroom materials to helping students practice reading skills. She also allowed them to bring younger siblings into the classroom, thus giving the siblings a taste of school that could help them to adjust better when they started school at a later point in time. Another benefit was the opportunity for parents to experience, and therefore better understand, the educational experiences of their children. Her methods were a great success—12 out of 17 families had a parent volunteer in her classroom (Trumbull et al., 2003). This experience indicates that appropriate volunteering activities are a productive alternative to homework help—a way to accommodate parents of different educational levels in their children's education.

Another way schools can help immigrant parents with little educational experience to aid their children is by helping them to acquire basic tools. In a study of parent workshops with Latino immigrant parents who had had little educational opportunity in their countries of origin, parents in one of the workshops asked where one could buy a Spanish-English dictionary (Esau et al., 2013). Clearly, if help were provided to acquire this kind of basic tool that middle-class families take for granted, such tools would scaffold parents' own academic skills, and they would be better able to scaffold their children's homework assignments. It is time that school messaging and educational policies begin to reflect the different forms of educational involvement that are appropriate and constructive for parents of differing educational and cultural backgrounds.

Our observations and interview with the lower-income older sibling, LS, also indicate that, at least among immigrant, lower social-class families, the role of the older sibling can be vital in providing a tutoring experience very similar to one provided by a middle-class family member. The role of older siblings as sources of knowledge and social capital is something that has not been well studied, albeit there being a ubiquitous understanding in many

low-income immigrant families that it is often the responsibility of the older children to look after and help the younger children in the family (C. R. Cooper et al., 1999; Orellana, 2003). When a younger child views an older sibling as doing well in school, older siblings can indeed have a positive impact on the academic engagement and success of their younger brothers and sisters (Widmer & Weiss, 2000). With this knowledge, schools and educators might better serve students who are beyond the educational level of their parents by encouraging these types of tutoring exchanges at home where possible. For parents, it could be advantageous to provide socioemotional support, while entrusting older siblings with tutoring their younger siblings when they need help.

Limitations and Future Directions

This was a small-scale study that focused on two families and how they help their children with math homework. A potential limitation for this study in particular was the low-income daughter's special educational needs. Although her mother expressed that LD's teachers thought her learning disability was not very serious in comparison to other students at her school, it may have nonetheless affected the nature of her homework tutoring sessions at home. This design limitation was overcome in our analysis by demonstrating that her older sister nonetheless provided scaffolded help and used methods that promote productive struggle—and did so with some success. We hope that this finding highlights the potential that more highly educated older siblings pose for overcoming the inequities of social class status.

An issue that can be profitably addressed in a future study with a larger, more diverse sample is the interaction of income and education with homework help and the digital divide. Although this family had adequate access to the Internet, many lower-income families still do not (Anderson & Kumar, 2019), a situation that is exacerbated for immigrant families (Cherewka, 2020). This particular low-income family may have had good

Internet access despite their low-income level because of the older sister's educational level. With a larger, more diverse socioeconomic sample, one could examine the separate roles of sibling education, parent education, and income in obtaining digital resources.

Although we did not interview LS or her mother about her financial and academic situation, we can make strong inferences about why the older sister was working full-time and had dropped out of school. As noted in Table 1, the parents' income was less than \$20,000 a year. This is far less than what is required for basic lodging and food in Los Angeles; clearly the older daughter's income was needed by the family to supplement parental income. In addition, family obligation values and practices, including material support for one's family, are very important among Latino immigrant families in California (Covarrubias et al., 2019; Vasquez-Salgado et al., 2015).

Another issue is that LD's diagnosis raises potential questions about the interaction of social class and learning ability/disability status and diagnosis. Children from low socioeconomic status backgrounds have greater rates of disability diagnosis and special education placement than their peers, and this social class disparity is potentiated for children from immigrant families. However, it is also the case that immigrant children with needs for special education services equal to those of nonimmigrant children are less likely to receive special education services during the first years of schooling. Delayed diagnosis and intervention reduce the possibility of mitigating the negative developmental consequences of learning disabilities (Hibel & Jasper, 2012). Given the fact that the mother was unable to access individual tutoring for her daughter despite an official diagnosis of learning disability, the possibility of social class disparities in service delivery also arises. In this case, we are limited in addressing these issues because we do not know the age or nature of LD's learning disability diagnosis. However, the evidence from her mother's expressed need for

individual tutoring for her daughter is that LD was not receiving adequate services to address her officially documented learning disability. The relationship between social class, immigrant status, mode and age of learning disability diagnosis, and service delivery would be extremely worthwhile to explore in future research.

Conclusion

Children are subjected to moments of teaching and learning in all aspects of their lives. Most if not all of those instances will be influenced by social class, be it their own or that of the person teaching them. We have demonstrated that for low-income families and, in particular, families with parents who do not have many years of schooling, an older sibling can facilitate learning for younger siblings in a similar fashion to a middle-class mother with a college degree. With about 13 years of experience in American schools, the older sibling was able to engage her sister in strategies that were in line with promoting productive struggle and scaffolding techniques that were adapted to her specific needs. Larger scale studies are needed to investigate the dynamics of family educational involvement in families with low income and low parental education. The goal of such studies would be to identify methods and behaviors these families and their schools can utilize to give children with class-based disadvantages opportunities for a prosperous future.

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