

Understanding Families' Educational Decision-Making Along Extended Learning Pathways

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Abstract: This paper explores the socio-cultural-historical influences on educational decisions made by a sample of families from an urban community in the northwestern United States. We report on three analyses of the everyday cultural and social contexts in which parents' and their children's ideas about formal and informal education are developed and applied through educational choices. The research employs a family-centered analytical focus and a cognitive ethnography of learning to examine educational decisions and knowledge about learning opportunities that families use in their homes, at school, and in their communities. Our analyses foreground the role of choice and values in families' everyday lives, their lived histories, and their educational decisions. Implications for better coordinating in-and-out of school learning experiences in light of extended learning pathways are discussed.

This paper explores the socio-cultural-historical factors that influence families' consequential decisions related to learning and educational opportunities. We report on three analyses of the everyday cultural and social contexts in which parents' and their children's ideas about formal and informal education are developed and applied, both in the United States and in other countries. The research employs a family-centered focus and a cognitive ethnographic approach to educational decisions and knowledge of opportunities that families use in their homes, schools, and communities. Research focuses on how families learn to navigate school and select and/or create out-of-school activities, with implications for theories that examine the coordination (or not) of home and school learning experiences.

After an overview of the cognitive ethnography from which these three case studies stem and an overview of our conceptual framework, the *first case analysis* examines the influence of Vietnamese immigrant parents' social and educational histories on the ways in which they view and construct academic identities for their children. The *second analysis* examines the parent-child interactions between three mothers and daughters around science and math learning experiences. The *third analysis* examines how two families negotiate decisions about in and out-of-school learning experiences as influenced by education ideologies formulated in Africa, Vietnam, and the United States.

Learning Ethnography of Educational Choices: Methodological Approach

These analyses share a learner-centered focus and a cognitive ethnographic approach, deeply exploring how families' personal histories interact with the educational choices they make relative to a myriad of available learning opportunities, including school, afterschool, and summer time activities. The data utilized in these analyses were collected as part of a three-year team ethnography. Researchers followed the same youth across the settings of their lives to study how these youth learn about science and technology specifically, as well as how they develop expertise in personally consequential domains (Bell, et al., 2006; Bricker and Bell, 2008). The majority of the observations of the focal participants have taken place in school and at home. However, focal participants have also been observed in a multitude of additional settings, such as religious institutions, after school clubs, museums, sporting events, camping excursions/vacations, neighborhoods, and parks.

Across all settings, data collection methods included: (a) observation and participant observation; (b) interviews (both ethnographic and clinical); (c) self-documentation techniques, in which focal participants were given digital cameras and asked to document various objects and phenomena (e.g., use of technology) and then interviewed about their photographs; and (d) document collection. Two surveys, designed to gather information about socioeconomic status, ethnic identity, and participation in science were administered. Researchers also conducted analyses of public census tract data for the neighborhoods in which families lived. Data sources include: (a) *field notes* of all observations, interviews, participant self-documentation, and documents collected; (b) *video- and audio-recordings* of all observations and interviews (when in settings that allow video and/or audio taping); (c) *digital photographs* taken during observations and interviews; (d) *video and/or digital photographs* taken by participants as part of their self documentation assignments; (e) *documents* collected during family visits (e.g., magazines, school work, writing samples from clinical interviews); and (f) *survey results*.

Study Design and Participants

In the spring of 2005, researchers formed a partnership with an elementary school in a large metropolitan area of the Pacific Northwest (pseudonym Granite Elementary). Granite caters to a diverse student body with respect to ethnicity, nationality, languages spoken, and socioeconomic status. Approximately 65% of the students are of Asian or Pacific Islander descent, 16% are of Hispanic descent, 12% are African American, and 5% are Caucasian. Many of the children are from first-generation immigrant families. During the 2004-2005 school year, 60% of the students qualified for free or reduced price lunch.

In the fall of 2005, researchers began recruiting families into the ethnographic study. Thirteen families agreed to participate, and the sample of focal participants from each of those families was balanced for age (six children in fourth grade and seven in fifth grade at the beginning of the study) and gender (seven boys and six girls). Study participants were chosen to reflect the school's diversity in racial/ethnic make-up and socioeconomic status. Currently, 128 people are consented into the ethnography, including the focal participants and their immediate family members, extended family members (e.g., grandmothers, cousins), teachers, and peers. In these papers, we focus on five of the thirteen focal families.

The Development of Everyday Expertise: How Significant Learning is Accomplished Socially and Culturally in Everyday Life

In this paper, we consider the influence of social, cultural, and historical factors on families' educational perspectives and decisions. One way in which scholars have investigated individual and social perspectives is through the lens of ideology. Ideologies mediate people's understanding and learning processes in profoundly important yet unconscious ways (Althusser, 1971; Bakhtin, 1983) through complex social processes (Thompson, 1984). The social dynamics around educational ideologies are particularly complex given that significant learning is constituted across settings, groups, and pursuits over extended timescales. Learners routinely navigate a range of diverse social, material, and discursive contexts every day—from the classroom to home, afterschool programs, informal education institutions, and out into their communities—with a variety of purposes and value systems in place (Banks et al., 2007). Learning is accomplished across these diverse pathways of participation in activity and affiliation with cultural groups in ways we do not fully account for in the literature. Consequently, the field needs empirically-informed theoretical models that fully reflect the complexity of everyday life and everyday learning. These models can be used to understand how and why learning is accomplished—or impeded—across sociocultural contexts throughout diverse social niches and networks in relation to enacted ideologies. Even as U.S. communities become increasingly diverse in terms of ethnic and racial group membership, immigrant histories, and linguistic variation, few teachers or university professors are equipped to work effectively with all students in their classrooms. Cultural and ecological perspectives are increasingly understood to be central in the scientific understanding of learning and development, and they have strong implications for educational practice (Lee, 2008; Banks et al., 2007; Bell, Lewenstein, Shouse & Feder, 2009).

Together our analyses answer two driving questions: *How do socio-cultural-historical factors influence families' consequential decisions related to learning and education? What role do individual family members have in the choices made?* Educational ideologies play a profound role in these learning processes. Our theoretical framework seeks to account for the social and material dimensions of sophisticated domain learning as it relates to the interests and practices of specific cultural groups (Bell, et al., 2006). The ultimate explanatory goal is to better understand the extended learning pathways (e.g., related to the accomplishment of expertise development in science and technology) that are culturally architected through complex sequences of contingent interaction and activity that occur across the breadth of everyday life. Our theoretical stance on sophisticated learning and expertise development builds upon the social, cultural, and material perspectives associated with situated perspectives on learning (c.f., distributed cognition [Hutchins, 1995], situated learning [Lave & Wenger, 1991], the agency-identity framework [Holland et al., 1998], and critical feminist perspectives [Barton et al., 2003; Suchman, 2007]). These perspectives allow us to develop a theoretical and empirical understanding of the social and material influences on what is taken to be sophisticated learning and activity that occurs within and across figured cultural worlds. Such figured worlds exhibit significant cultural variation, are often contested among social actors, and are inequitably available to individuals and groups.

Key to our analyses of these cases is the assumption is that educational choices and educational values are co-constituted. Families make choices building on what they value, and valuing develops through choices made in social and cultural settings. Researchers have documented that the development of learner's interest, reputation, and identification with forms of expertise and practice have a strong influence on what they choose to learn and to value (Barron, et al. 2009; Esmonde et al., 2009; Pea et al., 2007; Stevens, O'Connor, et al., 2008; Zimmerman, Reeve & Bell, 2008).

This work is part of the broader efforts of the Learning in Informal and Formal Environments (LIFE) Center to answer questions about the social genesis and expression of learning choices and the *socio-cultural-historical* values that drive them. Learners develop competencies and dispositions that contribute to their

choosing and valuing of learning opportunities. This includes social learning processes put in place between experts and novices (Bransford & Schwartz, 2009), choices and values that drive specialized learning interests (Barron et al., 2009; Reeve & Bell, 2009), preferred learning arrangements, such as seeking help or working alone (Stevens et al., 2008), social positioning of individuals in ways that support or constrain learning (Harré, 2008; Holland et al., 1998), as well as features of social cognitive development, such as strategies associated with learning through imitation (Meltzoff et al., 2009). In these analyses, we use ethnographic and interview data to document both choices families made and the values behind these decisions.

Paper 1: Negotiating Identity and Expertise in a Vietnamese Immigrant Family

Children of families who have immigrated to the United States must often negotiate different systems of values and ideas across home, school, and community settings. Even within the home setting, parents' and children's differing educational experiences, language abilities, and perspectives on the dominant culture can make for a complex network of influences through which young people must find their way. Though some scholars have begun to investigate these challenges (e.g., Lee, 2008; Orellana, Reynolds, Dorner & Meza, 2003; Phelan, Davidson & Cao, 1991; Suarez-Orozco & Suarez-Orozco & Todorova, 2008), the ways in which young people's learning is affected by the disparate worlds they traverse are still poorly understood. This paper discusses the experiences of one Vietnamese boy (pseudonym Luke Vuong) and how he is positioned differently by his mother in the domain of school learning and in his home-based expertise with technology (cf. Harré, 2008). It focuses on the question, *how do immigrant parents' educational life histories and value systems affect how they construct learner identities for their children in school and home-based pursuits?*

Findings

Luke Vuong (age 13) and his younger sister Anna (age 10) were born in the Philippines to Vietnamese parents, mother Agnes and father Sinh (all names are pseudonyms). The Vuong family immigrated to the United States from the Philippines in 2002, when Luke and Anna were young children. The family speaks Vietnamese at home, although both children are bilingual in Vietnamese and English.

Over the course of our team's acquaintance with the Vuongs, Luke's mother Agnes expressed deep and repeated concerns that Luke did not study hard enough or do well enough in school. Her concern about his academic performance caused her serious distress, and resulted in changing Luke's school enrollment, requesting standardized testing to test his cognitive abilities, and multiple efforts to support out of school learning opportunities including after school clubs, individual reading, and educational software. Agnes frequently described Luke as being "lazy" and needing constant "pushing" to complete and turn in his schoolwork.

As we continued working with the Vuongs, it became clear that the way in which Agnes positioned Luke academically was heavily informed by her experiences growing up in South Vietnam. Agnes's formative years were spent in a home and a national environment where economic and educational opportunities were both limited and often unequally distributed. Agnes often expressed to us that Vietnamese students were expected to study long hours and prepare intensively for admission to a limited number of university possibilities. She related her own experience of being unable to pursue a university education, and the subsequent great importance she placed on the educational opportunities of her children. Agnes' values, derived largely from her social and cultural histories, have clearly impacted the family's decisions related to Luke's learning.

At the same time as Agnes and other family members positioned Luke negatively with respect to his school performance, however, Luke had a developing identity within his family as someone who is knowledgeable and skilled in a home-based pursuit - operating and maintaining a variety of technological tools. When our research team first met the Vuongs, they did not own a computer, but Luke reported helping his father, Sinh, use the Internet in their apartment complex's computer room. The Vuongs bought their first computer in part with proceeds from participating in our study, and since then, they have owned a series of desktop and laptop computers, as well as other technological systems (e.g., televisions, speaker systems, handheld and console video games). Agnes reported multiple times that she calls on Luke for help with the family computer, including installing software and operating various programs. She also related that Luke was one of the main participants in putting together a new television and speaker system, and that the family calls on him to troubleshoot technological problems. While she continues to express concern that Luke's studying and academic performance are below her expectations, Agnes increasingly praises Luke's mechanical abilities and his understanding of technology.

The ways in which Luke is positioned in school- and home-based pursuits have been informed by family members' educational experiences and cultural values. Each of these factors can have multiple and complex influences on how learner identities are formed and sustained. For example, one reason Luke's parents (especially his mother) look to him for technological expertise at home is because of his comparatively stronger

abilities in speaking and reading English. At the same time, however, one likely factor behind Luke's difficulties in school is his challenge in developing academic English at the necessary level of sophistication.

This work sheds light on how families' sociocultural histories play important roles in educational identity formation. It also has relevance for understanding learning pathways among the growing population of immigrant and bicultural youth in the United States. As ethnic and cultural diversity continues to increase in the nation's schools, educators must take a complex view of the students in their classrooms and of the myriad of social and material influences on who these young people are and will become.

Paper 2: Orienting Children Towards Science: Influences of Parental Values and Family History on How Parents Arrange Children's Educational Experiences

This paper looks at the role of mothers in supporting and arranging for educational experiences related to science and math—both in school and out of school—for their daughters. Ethnographic methods are used to create three mother-daughter case studies. In each case study, the mother's family histories are analyzed in relationship to science and math learning experiences that they plan for and decide about with their daughters. This work identified four key areas of educational decision making: 1) middle school selection, (2) afterschool programs, (3) summer learning activities, and (4) the at-home structure created for homework, hobbies or other pursuits. The research question that guides this study is: *What is the influence of family histories and parental values on how parents arrange and encourage educational experiences related to science and math for their daughters?* The focus is on the four themes above as the girls transitioned from elementary school into middle school.

Work in developmental psychology focuses on parental educational beliefs—especially in the areas of academic stereotypes and achievement (e.g., Bhanot & Jovanovic, 2005; Raty & Kasanen, 2007). This work explores the psychological mechanisms underlying the under-representation of females in math, science and engineering fields. A related line of work adds social interactions to its psychological analysis of how parents foster disciplinary affiliations. Researchers (Crowley, Callanan, Tenenbaum, & Allen, 2001; Tenenbaum & Leaper, 2003) studied parent-child interactions and found that parents differentially orient their children towards subject matter learning—spending more time with boys on science. Other work analyzed how children engage in school science in comparison to their reported home experiences. Researchers (Brickhouse, Lowery, & Schultz, 2000) found that home activities and social networks were important in determining science identities. Barron et al. (2009) found that youth with more sophisticated STEM expertise had benefited from a greater variety of parental supports for their learning.

This paper adds on this literature in three ways. First, the majority of prior work analyzes large data sets, assessment protocols, and/or interviews. Observations of activities in family settings are added. Second, many studies compare the beliefs of the children to the beliefs of the parent. This comparison ignores the social processes by which the beliefs are shared. Here, the analysis is on parents' beliefs and values embedded in family practices to understand how the processes by which the daughters take up or resist their parents' ideas. Finally, much of the research looks to understand if mothers or fathers give more support to their sons or daughters. Instead, here the focus is on the experiences of girls and women.

Findings

This analysis focuses on three mothers and three girls—Raven, Wendy, and Penelope (pseudonyms)—when they discussed or reflected on decisions related to learning experiences or when they crafted learning arrangements. Overall, Wendy's, Raven's, and Penelope's mothers were active *learning advocates*. As advocates, the mothers were involved and involved others in helping their children. The mother arranged for or assisted with homework, helped with searches for relevant information, sought out learning activities for their child, and provided access to artifacts and tools. Mothers set up physical spaces for academic success in the home—including access to computers and materials needed for homework. These mothers also arranged for trips to extend learning (e.g., Raven to the library and Wendy to an organic garden).

The mothers' experiences with their own parents were often articulated as influencing their activities with their daughters. For example, Eve Smith, Penelope's mother, was born, raised, and schooled in the Philippines; where she received a bachelor's degree in management. Eve expressed that while education was valued in her family, higher education was not necessarily valued *for women* by her father. Eve told us her father "didn't want to waste his money sending her to school; she should just stay home and get married. – *Smith home, November 14, 2006*". Unlike her father, Eve often encouraged Penelope in math and science—and school more generally. Eve determined Penelope was going to college, sharing with the research team that she was already saving money. During multiple visits, Penelope teased the research team that she did not want to attend college at our institution—she commented instead about liking another local university and its mascot. While teasing was a communication genre common in the Smith household, it also revealed Penelope's

awareness at 5th grade of multiple colleges in her immediate area and her goal to attend one. In this way, Eve's views advocating for Penelope's educational experiences and Penelope's goals for herself were shaped from Eve's father's talk around schooling.

Raven's mother Cyndi also used her life experiences to navigate suggesting college. Cyndi cited her love of school and her own lack of success in getting her bachelor's degree as motivation for Raven. Wendy's mother Grace was more immediately focused on her daughter's success in middle and high school through joining the gifted and talented program, and Wendy's college was not such a primary focus for Grace.

The mothers worked to make their homes environments where scholarship was encouraged, high standards were achieved, and academics were balanced with recreational and social times. At the same time, mothers created home environments that were resources for learning the knowledge and practices valued by the families' communities. For example, the mothers set up homework spaces and/or resources, arranged with tools (i.e., Internet, rulers, books, etc.) for the children to use. They created social networks to support learning from cultural groups, from neighbors, from golfing partners, from family, and from religious groups. The social networks were used for science and math learning, and they were also used in support of hobbies and other interests.

In the case of Eve and Penelope, Eve encouraged Penelope to work on her homework and to participate in academically-related afterschool programs, like the science afterschool program. When the transition to middle school happened, Eve thought about how she could change her life to be more helpful to Penelope academically, as illustrated by this fieldnote excerpt: "Eve and I talk about her new schedule—she wants to be more help with Penelope and her middle school homework. She is trying to adjust her [work] schedule to help Penelope study math and science. – *Smith family home, 2006-11-14*". Eve relied not only on the school but herself to support Penelope's continued academic success. Eve did this through buying commercial books, arranging for one of Penelope's godmothers to tutor Penelope in math concepts, and encouraging her to participate in a science afterschool program as well as a church-centered music afterschool program.

Grace also created an academic environment for her three daughters including Wendy—often maintaining a library-like quiet during study times. During the academic year, Grace planned an afterschool schedule for Wendy that included homework time, music practice, a 30-minute television break, and a snack. In one case, when Grace was not home, she created instead an afterschool work-play schedule for Wendy on a Post-It™ note. Grace also encouraged her children to participate in supplemental activities. Cyndi was observed to give similar assistance through spending time on the Internet looking up help for math and related subjects and by taking Raven to the library.

Conclusion

One of the main findings is that the children's family life was a rich collection of learning resources to support science and math as well as cultural activities (music, religion, and cooking). Mothers acted as learning advocates to craft learning experiences for their daughters that they believed to be the most useful (based on their own histories and cultural experiences) is not readily available. Families tapped social networks to provide their daughters the kinds of science and math related experiences are believed (based on parental histories and cultural experiences) will provide the daughters the best experiences, and parents gave their daughters choice, in varying degrees, about their educational decisions. Additionally, families were thoughtful when selecting educational opportunities for their children—to balance academic and social needs. Parents are not commonly studied in the learning as resources that provide science-related help, yet these cases show how parents, and mothers in specific, have a huge impact in helping a child learn science-related knowledge and skills related to both school work and out-of-school pursuits. This analysis argues that mothers need to be more considered in their role as learning partners when trying to understand the development of their daughters' disciplinary affiliation and identity.

Paper 3: Examining the Complex Ecologies Associated with Immigrant Youth and Family Educational Decision Making

Youth from immigrant families make up a large percentage of youth in the United States and the percentage is steadily increasing (e.g., Fuligni, 1997). Yet, little is understood about their lives (Suárez-Orozco, Suárez-Orozco, and Todorova, 2008). Many scholars studying immigration and education have focused on bilingual education (cf. Suárez-Orozco, Suárez-Orozco, and Qin, 2005) and academic achievement once youth from immigrant families become participants in the United States' educational system (e.g., Suárez-Orozco, Suárez-Orozco, and Todorova, 2008). In addition to these important areas of scholarship, we propose a focus on how immigrant youth and families *learn* what it means to "do" school in the United States, which we argue is a form of expertise (cf. Bricker and Bell, 2008; Ericsson, Charness, Feltovich, and Hoffman, 2006). Given the importance of prior experience relative to acts of learning (e.g., Bransford, Brown, and Cocking, 2000), our

analysis hinges on emic (Harris, 1987; Pike, 1954) and place-based (e.g., Holloway and Valentine, 2000) accounts of lived educational histories.

We wish to examine what meanings immigrant youth and families associate with the concept of schooling given their lived educational histories, which include educational experiences (both formal and informal) in countries of origin, as well as those along migratory paths. We examine the everyday spaces associated with schooling that immigrant youth and/or their parents inhabit over time, including the spatial discourses used in these everyday spaces (cf. Holloway and Valentine, 2000). Our *research question* for this analysis is: What ideologies and lived experience undergird educational decisions made by immigrant youth and families?

Findings

To investigate our research question, we utilize data from two case studies of Biqila Gamada and Ka-zee Cheung respectively. Biqila and Ka-zee are focal participants in the aforementioned ethnographic research. Biqila and his family arrived from Kenya two years before enrolling in the ethnography. Ka-zee was born in the United States but her parents came to the United States from Vietnam. As part of our analysis, we map both Biqila and Ka-zee's educational patterns, which are influenced by parental educational ideologies and experiences.

In Biqila's case, he understands the educational choices made by his family in the larger context of his and his families' lived schooling experiences in Africa (namely Ethiopia and Kenya). His father attended only a few years of elementary school in Ethiopia. Biqila's sister reports her father telling all of his children that without an education, everyone will "...use you as a napkin" (i.e., wipe their hands on you). All decisions are made in Biqila's household based on furthering one's education because Biqila's father wants his children to "...be somebody like he wants to see." In this analysis, we show how in one instance a particular educational decision becomes contested space (Low and Lawrence-Zúñiga, 2003) and threatens to pit obtaining an education against the development of significant expertise development in a sport (which if continues has a high probability of culminating in a higher education scholarship). We also use an interdiscursive analysis (e.g., Bricker and Bell, in preparation; Silverstein, 2005) to highlight the various spatial and temporal aspects of Biqila's lived educational history and choices as they unfold along extended learning pathways.

In Ka-zee's case, we note that all educational decisions are made by Ka-zee's father Mau. Ka-zee has been tracked into special education programs and classes since early elementary school. Mau makes educational decisions for Ka-zee based on his educational ideology that in Vietnam, only the top tiered students have a chance to compete for employment that confers economic advantages, while in the United States, even those who are mediocre can still "make it." Using interaction analysis to find patterns in discourse and behavior, we map Mau's educational behaviors and ideologies of what it means to "do" school to his own educational experiences in Vietnam. We also report on how Mau 'learned' what it means to make educational choices for one's offspring in the United States; learning that is situated in a space undergirded by racial and socioeconomic influences.

Conclusion

These cases show the influence of educational ideology and lived experience in educational practices and decision-making. Through geographic, linguistic, and interaction analyses, we uncover and explore these educational ideologies and patterns and show how they travel through space and time to influence educational decisions. In addition, we show that educational decisions, although made to offer youth the best education possible, can conflict with other possible decisions and experiences that might lead to the very educational opportunities that parents want for their children.

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