The State of Education for Indigenous Girls in Rural Guatemala

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In spite of large-scale efforts by the Guatemalan government and international supporters to increase enrollment and academic achievement of indigenous girls, these girls continue to lag behind both indigenous males and Ladina females. Since 1985, the government has moved towards a multi-cultural, multi-lingual, gender-neutral, and inclusive education policy for all children. However, the policies have proven difficult in practice, and the academic progress of indigenous girls manifests this challenge. Indigenous girls living in rural Guatemala have three obstacles to overcome in order to persist and succeed in school. First, indigenous people in Guatemala maintain mostly gendered cultures, which prescribe roles for girls that don't require formal schooling. Second, there are strong effects of poverty on both cognitive development and the ability to attend school for indigenous children. Third, the system of schooling indigenous girls have available to them does not necessarily match the developmental needs of indigenous children and girls in particular. This paper seeks to examine how these barriers work to limit the potential of academic achievement of indigenous girls in Guatemala.

In Guatemala, 54 percent of the population of 12.4 million people are under the age of 19.[2] The people of Guatemala speak 24 languages;[3] half of the population identifies themselves as indigenous;[4] and over half of the population lives in rural areas.[5] Additionally, 56 percent of the population lives below the poverty line.[6] Most of the cities in Guatemala are inhabited by Ladinos, while the indigenous people live in rural areas. "Indigenous people… reside primarily in rural areas, and are politically underrepresented and very poor."[7] In 1996, as the 36-year civil war came to a close, women made up just 27 percent of the labor force.[8] The correlation between being female, indigenous, poor, and residing in rural areas results in significant disadvantage.

Education Policy in Guatemala

Literacy rates in Guatemala are far below average for Latin America. In 2000, 31 percent of the adult population was illiterate, with much higher numbers for poor (46 percent) and rural adults (42 percent). Sixty-two percent of indigenous women are illiterate.[9] The average education for adults over

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[2] Lavarreda et al., 2005

[3] Lavarreda et al., 2005

[4] Tetzagüic & Grigsby, 2004

[5] Lavarreda et al., 2005

[6] Hallman et al., 2006

[7] Hallman et al., 2006

[8] O'Gara et al., 1999

[9] The World Bank, 2004

14 years old was 4.3 years in 2001. There was an ethnic gap of three years between indigenous and non-indigenous adults, and a gender gap of one year. However, 19-25 year olds have significantly more education than those over 40,[1] which matches a trend of increased education enrollment. In the 1970s, only half of the population enrolled in primary schools. By 1995, this proportion had reached 69 percent.

Net rates of schooling, 1995-2003			
	Grades	**1995**	**2003**
Preschool	--	19.8%	44.2%
Primary	1-6	69.2%	89.2%
Basic	7-9	20.3%	28.9%
Diversified	10-12	11.3%	17.3%
Source: Lavarreda et al., 2005			

Primary school enrollment rates 2000			
	All	**Male**	**Female**
Total Population	79%	81%	76%
Indigenous	75%	82%	67%
Rural	75%	78%	72%
Extreme Poor	58%	65%	53%
Source: ENCOVI 2000 (in World Bank, 2004) Instituto Nacional de Estadistica-2000			

Education in Guatemala is compulsory in grades 1-6, but this law is not enforced. While the first table above represents the incredible strides Guatemala has made towards educating all children, the second table sheds light on the disparities that persist. While "Mayan female enrollment is rising both absolutely and relatively," partially due to a 1993 national girls' education program, "extremely poor females of either ethnicity, in both rural and urban areas, are the least likely to have ever enrolled."[2] In writing about primary school completion by age 24, Hallman writes, "Mayan female completion rates are about one-third of Ladina female rates, while Mayan male rates are about two-thirds of Ladino male rates. Within Mayan groups, female rates are 58 percent of those of males, while among Ladinos female rates are 92 percent of those of males."[3] This signifies that being indigenous affects girls more than boys.

The history of Guatemala shows a philosophical shift from assimilation to multi-culturalism. However, modern parental views and teacher practices still reflect assimilationist tendencies. From 1821 to 1944, Congress built schools to "assimilate Maya into national society" and "extinguish the language of the Indians."[4] In 1945, education leaders introduced bilingual education and a stance of acceptance in order to encourage school attendance. However, the objective was still assimilation,[5] and and both teachers and the curriculum were biased against indigenous peoples.[6] "Even though teachers ultimately worked for the state, they undermined its efforts to educate (and assimilate) Maya. As the state was trying to deliver Mayan students to the classroom, teachers were turning them away and

[1] The World Bank, 2004
[2] Hallman et al., 2006
[3] Hallman et al., 2006
[4] Carey, 2006
[5] Tetzagüic & Grigsby, 2004
[6] Carey, 2006

encouraging them to drop out."[1] It is not surprising then that the 1950 census reported that 89.2 percent of school age Maya did not attend.[2]

The 1985 constitution brought the right to cultural identity and indigenous languages, and therefore introduced pluralism and multiculturalism into the conversations about education. There was a new push for bilingual education after a pilot program showed that "the use of the mother tongue in schools reduced dropout rate, improved motivation, and improved quality of teacher training."[3] However, it was the combination of the 1996 Peace Accords and the 1994 Accord on the Identity and Rights of Indigenous Peoples that really enabled the Guatemalan ministry to create policies that would promote enrollment and achievement of indigenous and female children. A new philosophy emerged, which was the "construction of national unity based on the respect and exercising of political, cultural, economic, and spiritual rights of all Guatemalans."[4] Bilingual, intercultural education mandates stated that schools in rural areas would be bilingual and multicultural, and that schools in urban areas would be multicultural.[5]

The Peace Accords recognize Guatemala as a multilingual, multicultural society, require integration of diverse cultures and languages into the curriculum, and "assert that education and training are key factors to achieve equity, national unity, economic modernization, and international competitiveness."[6] These accords led to: decentralization of the school system, community participation in schools, investments in bilingual, intercultural education and teacher training, and cultural and gender diversity in teaching materials.[7]

In the year 2000, a new president and the Ministry of Education set out to comply with the peace accords by increasing public spending on education, investing in teacher training schools, and building new bilingual, multicultural primary and pre-primary schools. But despite efforts by the government to improve access to and quality of education for all children, indigenous girls are still least likely to be enrolled in and succeeding in school.

Gender

Indigenous cultures in Guatemala prescribe particular roles to girls and women that don't require formal schooling. Historically, they have learned their roles through informal means at the market, through the radio, in the streets,[8] and by watching and listening to older women.[9] While

[1] Carey, 2006
[2] Carey, 2006
[3] Tetzagüic & Grigsby, 2004
[4] Tetzagüic & Grigsby, 2004
[5] Tetzagüic & Grigsby, 2004
[6] The World Bank, 2004
[7] Tetzagüic & Grigsby, 2004
[8] Carey, 2006
[9] Heckt, 1999

indigenous men are free to dress in modern attire, learn and speak Spanish, and assimilate themselves with Ladino culture through travel and business, women are responsible for maintaining the culture through dress, language, and other traditions which take place in the home and in the local community. Carey notes that, "Scholars argue that Mayan women's role as preservers of culture limits their mobility because communities fear that increased access to the public sphere and state institutions will result in assimilation."[1] This fear of assimilation prevents girls from attending schools perceived as state institutions driven by Ladino and male interests. While "Mayan communities defined men by their ability to negotiate with the outside culture… women came to represent Indianness."[2] As bearers of culture, women have a responsibility to maintain the indigenous language and the traditions of home, family, and other aspects of culture. This often drives parents to send their sons to school while keeping their daughters at home.

However, in light of the stark poverty that many indigenous families find themselves in, some girls are attending school because they recognize it as a tool for social mobility. Families sometimes "perceive that education plays an important economic role (creating opportunities, overcoming poverty), and many point to the importance of acquiring knowledge and to the role formal education plays in helping them overcome ethnic barriers and exclusion so that they may reach the 'ladino world' of opportunities."[3] These thoughts are echoed by children: children in seven of ten villages "see education as offering them a better future."[4] The top reasons for wanting to study among female scholarship applicants in one indigenous town were: to have choices, to have a better life than my parents, to not suffer like my parents, to speak Spanish, to have a job with a real salary, and to have knowledge.[5] The parents of these girls allow their daughters to attend school as long as they also get their work done.[6] These hopes of motivated girls and families are often shadowed by cultural and financial restrictions for girls. Therefore, there is conflict in some indigenous families and communities between the desire for education, employment, and social mobility, and the desire to retain culture.

Most indigenous girls have domestic responsibilities such as cooking, cleaning, and taking care of younger siblings. "Since the division of labor in Mayan households allotted the varied, numerous, strenuous, and time-consuming tasks that comprise domestic toil to females, girls' labor was more valuable than boys."[7] Girls are expected to work hard and fulfill important roles in the family. "One

[1] Carey, 2006
[2] Carey, 2006
[3] The World Bank, 2004
[4] The World Bank, 2004
[5] Limitless Horizons Ixil, 2008
[6] Limitless Horizons Ixil, 2008
[7] Carey, 2006

young girl revealed her dream of continuing her education, but said that family responsibilities were more important."[1] In fact, two women in their seventies share a historical perspective of girls' education. They were both told they would become lazy if they attended school, and wouldn't want to work anymore.[2] In a recent study of 13-24 year olds, household duties and lack of money were cited as the top reasons females did not attend school.[3] Because household duties are numerous and time-consuming, they require a lot of labor which is not culturally appropriate for boys to do. Therefore, boys (and the less-impoverished Ladina females) are often free to attend school while indigenous girls are needed at home. Child labor not only fulfils a financial need for indigenous families, but also a moral need. "Households value work not only as a tool for income, but as an activity worthwhile in its own right."[4] Patrinos and Shafiq note that work is how parents train their children to "lead a responsible life."[5] In rural, indigenous Guatemala, school does not replace child labor; it merely adds to the responsibilities of children.

Even if girls are supported through primary school, puberty and adolescence add additional gender-based challenges that prevent girls from attending school. "The sharp drop beginning at age 12 is especially steep for Mayan females; at age 16 only 25 percent of Mayan females are enrolled, versus around 45 percent of Mayan males and about one-half of Ladino females and males."[6] The termination termination of schooling at the age of puberty is not surprising, as children take on adult gender roles. A USAID report suggests that, "In many cultures and religions, the transition to physical and cultural adulthood is marked by ceremony, following which young women and men are expected to act in accordance with adult gender roles."[7] Additionally, "girls face more restrictions on mobility and behavior as they reach puberty."[8]

These restrictions are partially based on culture and labor requirements, but are also prompted by safety concerns of parents. Colom et al. (2004) found that "parents feared interaction between adolescent males and females as potentially damaging to their daughters' reputations and subsequent marriageability, and as putting females at increased risk for early, out-of-wedlock pregnancy."[9] Consequently, parents seek to protect girls from mixing with boys at school. Furthermore, children in rural areas often travel longer distances for secondary school than they would for primary school. Parents fear that the walk or bus ride to or from school, or the idea of living away from home, is too

[1] Hanamaikai & Thompson, 2005
[2] Carey, 2006
[3] Hallman et al., 2006
[4] Heckt, 1999
[5] National Statistics Institute and the International Labor Organization, 2003; cited in Patrinos & Shafiq, 2008
[6] Hallman et al., 2006
[7] O'Gara et al, 1999
[8] O'Gara et al, 1999
[9] cited in Hallman et al., 2006

risky: "Security concerns and the circumscribed lives of women in traditional communities conspire to prevent women from commuting to schools or taking up residence in villages where they have no family or spouse."[1] In adolescence, few indigenous girls are enrolled in school. Parents fear that mixing with boys at this age could put their daughters at risk, and the culture demands that these young 'bearers of culture' take on adult gender roles and fulfill life-path expectations for indigenous women.

In deciding whether their daughters will attend school, parents consider two factors: the cost of schooling and the return on investment. Families often consider sending girls to school a waste of time and money given their expectations for women. Women are responsible for marrying, having children, taking care of the children, cooking, cleaning, and often 'women's business' such as weaving and selling products in the market. These practices don't require formal schooling. "'I didn't know how to speak Spanish,' [one woman explains], 'because my dad would say that the only thing women were good for was to have children.' At 16, she took up with the father of her children and they had their first child when Juana was 18."[2] By the time women are 18, nearly 40 percent of Mayan females are married.[3] The practice of early marriage is also a factor in preventing adolescent enrollment of girls in school, as "only 3 percent of married 15–19-year-old females are enrolled in primary or secondary school, versus more than 40 percent of unmarried females."[4] Expectations of future roles may significantly affect both the parents' decision to send girls to school and girls' ambitions to succeed in school. Hallman, et al. found that, "Mayan parents' expectations of daughters' future roles may reduce parental incentives to invest in education beyond the age of puberty."[5] And as Entwistle points out, "Students' prior life experiences and the futures they have in mind for themselves matter too. Students who intend to go to college will function better because of that intention, while students who see only a bleak job market ahead may be tempted to drop out."[6] Ambitions for some girls include becoming teachers, secretaries, and doctors,[7] but if girls perceive that those roles are impossible to obtain culturally and financially, then the girl is unlikely to enroll or persist in school.

One aspect of indigenous gender roles that affects learning is the way that men and women communicate. Men speak in public and make decisions, and have a greater capacity, through the Spanish language, to communicate. "Women frequently use metaphors such as blindness, deafness, and muteness to allude to their inability to communicate in Spanish."[8] Their inability to speak Spanish

[1] O'Gara et al, 1999
[2] Morales, 2006
[3] Hallman et al., 2006
[4] Hallman et al., 2006
[5] Hallman et al., 2006
[6] Entwisle, 1990)
[7] Limitless Horizons Ixil, 2008
[8] Carey, 2006

prevents women from testifying in court, obtaining medical help, seeking employment, or otherwise using resources that might be available to them.

As Hanamaikai and Thompson write, "Men also participated in public, political, and community discussions, where women, as a general rule, did not."[1] Because women are often restricted to the home, "Mayan females… are severely socially isolated, with church groups being the only form of interaction most had outside their households."[2] Girls learn this gender difference at a young age and bring it into the classroom: "a girl might expect that her subordinate position in the community would require that she be less dominant in the classroom."[3] In fact, Hanamaikai and Thompson reported that fewer girls than boys initiated exchanges with teachers, and "teachers often felt frustrated when female students refused to respond when called on, much less raise their hands or participate voluntarily in class."[4] The academic achievement of indigenous girls suffers as a result of gender-based classroom participation roles.

The gendered indigenous cultures of rural Guatemala seek to maintain their cultures through women. The women, bearing this responsibility, must work in traditional roles, be protected, and maintain the indigenous language. Cultural expectations, work responsibilities, and the practice of early marriage "lead parents to enroll Mayan girls at older ages, not enroll them at all, or withdraw the girls early from school—usually before they have developed stable literacy skills."[5] As a result, literacy rates among indigenous women in Guatemala are among the lowest in the world. The struggle between social mobility and cultural preservation has prevented many indigenous girls from reaching the academic levels of indigenous males or Ladina females. In addition to traditional gender roles, this conflict is also partially shaped by the conditions of poverty and formal education structures.

Poverty

Research from both Guatemala and the United States demonstrate that poverty has negative effects on academic achievement through a variety of mechanisms. Indigenous girls in Guatemala are limited in their academic achievement due to the expense of education, health factors, and home environment factors, all of which are associated with poverty. According to her U.S.-based research, Seccombe notes that, "Children reared in poverty have poorer physical and mental health, do worse in school, experience more punitive discipline styles and abuse, live in poorer neighborhoods, and are more likely to engage in deviant and delinquent acts."[6] While discipline and behavior are outside the scope of this paper, the other factors hold true in Guatemala. In addition, they have less access to

[1] Hanamaikai & Thompson, 2005
[2] Hallman et al., 2006
[3] Hanamaikai & Thompson, 2005
[4] Hanamaikai & Thompson, 2005
[5] USAID, 1999
[6] Seccombe, 2000

reading materials and educated adults, have greater work responsibilities, crowded homes, and high costs of schooling relative to family income. These factors result in late enrollment, grade repetition, high rates of absenteeism, and early withdrawal from school.

Even public schools are expensive for indigenous families. While primary schools do not charge tuition, most secondary schools do, and both charge for uniform, school supplies, and transportation. Public primary schools cost families 7.8 percent of the poverty threshold, while public secondary schools charge 39.4 percent of the same amount.[1] Yet only 40 percent of all secondary students actually attend public schools, and private schools are much more expensive.[2] Evaluations of USAID programs showed that female scholarship recipients had higher "rates of attendance, promotion, and completion than control groups and overall national statistics," and "completed their elementary education in 6.9 years of schooling—more efficiently than the national average of 7.5 to 11.6 years."[3] These results prove that the cost of schooling is a factor in girls' academic achievement.

In addition to the financial costs of attending school, there are opportunity costs of not working during school hours. "Three-quarters of [paid] child laborers come from poor households, and 80% reside in rural areas."[4] Only 7 percent of children not enrolled in primary school cited lack of available available school as the reason for not attending, where as 50 percent of indigenous children cited lack of money, work, or domestic duties. At the secondary level, among poor students, 26 percent reported lack of money, 28 percent reported work, and 16 percent reported domestic duties as the main reason for not enrolling in school.[5] Indigenous, poor girls living in rural areas are the least likely to have ever enrolled in secondary school.[6] Poverty clearly is a factor in non-enrollment, because the small population of non-poor indigenous girls are performing as well as Ladina females: "The one-fourth of Mayan girls who are non-poor have primary school entry rates, school entry age, and grade-for-age levels equal to those of Ladina females, and, conditional upon primary school completion, have secondary school enrollment levels about 80 percent of those of Ladina females."[7] The secondary school inequality is probably due to factors associated with being indigenous.

Students from poor, indigenous families who are able to attend school have difficulty balancing school and work, which results in absenteeism, grade repetition, and early withdrawal. Guarcello, et al. found that students attended school more if they had access to electricity and water, with the assumption that children without this access would have more work to do: "For example, school

[1] The World Bank, 2004
[2] Lavarreda et al., 2005
[3] USAID, 1999
[4] The World Bank, 2004
[5] The World Bank, 2004
[6] Hallman et al., 2006
[7] Hallman et al., 2006

attendance rates in El Salvador and Guatemala decrease from 85 percent and 79 percent, respectively, for household with access to water, to 72 percent and 66 percent, respectively, for households without water access." He concludes that the value of children's time spent outside of school is reduced if water and electricity are available.[1] Because indigenous children are more likely to be poor and living in rural areas, they have greater work responsibilities: "Mayan children are twice as likely as Ladino children to be combining school and work."[2] In fact, work is currently cited as the main cause of absenteeism and drop out.[3] Therefore, the opportunity costs of schooling affect academic achievement. achievement.

Poor children in rural Guatemala are the most likely population of children to start school late, repeat grades, and drop out. Hallman's research on late enrollment concludes that, "Mayan children start school on average about 0.5 years later than Ladino children,"[4] and "Among Mayan females, those who are poor are much less likely to begin school on time. More than one-half of extremely poor and one-third of medium poor Mayan females start late, versus one-fifth of the non-poor."[5] In addition, addition, girls have high repetition rates, which is a predictor for early dropout. "High repetition rates also hinder girls' ability to eventually graduate because the more years a student spends in school to complete the basic cycle, the greater the expense to her family—and the less convinced they may be of her ability to achieve a reasonable return on their investment."[6] Because of late enrollment and grade repetition, many indigenous girls living in poverty are overage for their grade. Ninety percent of extremely poor, 79 percent of medium poor, and 60 percent of non-poor Mayan females are overage for their grade.[7] Being overage for grade predicts dropout in the United States[8] as well as in Guatemala.

In addition to real costs and opportunity costs, physical and mental health factors contribute to the lack of educational attainment by indigenous children. Children living in poverty are less likely to be healthy than non-poor families. Sixty-four percent of poor children in Guatemala are malnourished.[9] malnourished.[9] Seccombe writes that children living in poverty are, "more likely to be blind, deaf, and be deficient in iron or other vitamins and minerals," and "without proper nutrition, children are in a weakened state. They run the risk of more frequent colds, ear infections and other infectious diseases,

[1] Guarcello et al., 2004
[2] Hallman et al., 2006
[3] The World Bank, 2004
[4] Hallman et al., 2006
[5] Hallman et al., 2006
[6] O'Gara et al, 1999
[7] Hallman et al., 2006
[8] Alexander et al., 1997
[9] The World Bank, 2004

impaired brain function, and stunted growth; they are also more vulnerable to lead and other toxins."[1] This vulnerability is compounded by lack of access to proper medical care and health resources in rural Guatemala. Garcia Coll reports, "The development of competencies also is affected by the individual's health status, which is partly a reflection of adequate health care resources."[2] Finally, Evans (2004) found that, "living with hardship is linked to more illness and lowered cognitive development among young children."[3]

Poor health and malnutrition affect cognitive development, which is correlated with success in school. Brooks-Gunn and Duncan found that children living below the poverty line in the United States are more likely than nonpoor children to experience learning disabilities and developmental delays, and that "malnutrition in childhood is associated with lower scores on tests of cognitive development."[4] In fact, malnutrition in Guatemala is negatively associated with school enrollment and and attainment.[5] Yet, children need to be in good physical health in order to be able to attend school, focus, and succeed. Kindergarten teachers in the United States reported that good health was among the top three factors of school readiness and predictors of educational attainment in third grade.[6]

Mental health of parents and children is also a critical factor in educational attainment, but poor families are more vulnerable to depressive symptomology than nonpoor families. This seems to be due to the stress associated with economic constraints and lack of resources. "Parents who are poor are likely to be less healthy, both emotionally and physically, than those who are not poor,"[7] and many researchers have established that there is greater stress among low-income parents.[8] Jackson, et al. found that "Financial strain… was implicated in elevated levels of depressive symptoms."[9]

Indigenous families in rural Guatemala have the added trauma resulting from the 36-year civil war, in which the majority of the attacks were performed in the rural areas by the national army against the indigenous people. Post-war challenges to mental health include trauma, displacement, and fragmented families. These challenges, combined with poverty, have a negative affect on academic achievement of indigenous children. Poor mental health among parents has a negative effect on children's developmental outcomes.[10] Rouse, et al. reported that a child's cognitive ability was affected by chronic stress: "chronic stress or abuse in childhood can impair development of the hippocampus,

[1] Seccombe, 2000
[2] García Coll et al., 1996
[3] cited in Takanishi, 2002
[4] Brooks-Gunn & Duncan, 1997
[5] The World Bank, 2004
[6] Takanishi, 2002
[7] Brooks-Gunn & Duncan, 1997
[8] e.g. McLoyd, 1990; cited in Jackson et al., 2000
[9] Jackson et al., 2000
[10] McGroder, 2000

the region of the brain involved in learning and memory, and reduce a child's cognitive ability."[1] Indigenous families in rural Guatemala are mostly living in post-conflict poverty areas and therefore experiencing elevated levels of stress, which can impair learning and cognitive ability.

In addition to stress, other home environment factors are associated with both poverty and academic achievement, including parental education, availability of learning materials, and family size. Hernandez suggests that less educated parents in the United States are less able to negotiate educational, health, and other social institutions, have lower wages, and are linguistically isolated.[2] He goes on to write that "parental educational attainment is perhaps the most central feature of family circumstances relevant to overall child well-being and development, regardless of race/ethnicity or immigrant origins."[3] Marks and Garcia Coll found that parental educational attainment among American Indian and Alaska Native populations was associated with math and reading skill development.[4] A positive association has been found in Guatemala between parental education and likelihood of children enrolling in school.[5] But indigenous children are at a significant disadvantage; Hall and Patrinos (2005) found that, "indigenous adults have less than half the level of schooling of nonindigenous adults: 2.5 versus 5.7 years."[6] Low parental educational attainment disproportionately affects indigenous children in Guatemala.

Poor children in both the United States and Guatemala have less access to reading materials at home. Kim found that enabling access to books was associated with more student reading over the summer, noting that availability of books was a factor in literacy development.[7] In Guatemala, nonpoor nonpoor families enrolled in public schools spend three times more than poor families on books and school supplies, and poor and indigenous schools are less likely to have textbooks.[8] Therefore academic achievement might be related to a lack of learning materials for indigenous children at home and at school.

The fertility rate for indigenous families in Guatemala is 6.2 children, compared to 4.2 overall.[9] overall.[9] This results in two barriers to academic achievement. First, parents are not available to spend as much time or money on each child as Ladino parents do. Second, the large families live in small, crowded homes. This would prevent students from having a quiet place to study. "A number of studies have found that a child's home environment – opportunities for learning, warmth of mother-child

[1] Rouse et al., 2005
[2] Hernandez, 2004
[3] Hernandez, 2004
[4] Marks & Garcia Coll, 2007
[5] The World Bank, 2004
[6] cited in Hallman et al., 2006
[7] Kim, 2004
[8] The World Bank, 2004
[9] World Health Organization, 2007

interactions, and the physical condition of the home – account for a substantial portion of the effects of family income on cognitive outcomes in young children."[1] Indigenous children in rural Guatemala suffer from a lack of opportunities for learning literacy, a lack of parent-child interactions, and a lack of study space. These poverty-related factors impact a child's potential success in school.

The home environment, including parental education, access to learning materials, and family size, together with physical and mental health factors, affect cognitive development and academic achievement. The real and opportunity costs of schooling affect the ability to enroll in and attend school. Indigenous children in rural Guatemala experience high levels of poverty, which is associated with poor home and health conditions and less opportunity to enroll in school. Therefore the environmental factors of poverty put indigenous children at a severe disadvantage, making academic achievement inaccessible for many children.

System of Schooling

The system of schooling indigenous girls have available to them does not necessarily match the developmental needs of indigenous children and girls in particular. First, there is a cultural and linguistic conflict between the home and the school. Second, the age at which school starts, and the practice of grade repetition, create a system of teaching and learning that does not match stages of cognitive development. Third, teachers attitudes and lack of experience prevent indigenous girls from learning on equal footing with Ladina girls. Fourth, despite attempts for gender-neutral instructional materials, most retain a gender bias. And lastly, distance from home to secondary schools can prevent girls from seeking a secondary education. These school factors together hinder academic achievement for indigenous girls.

Despite laws requiring bilingual education, Shapiro (2005) reported that only one-third of rural children had access to bilingual programs.[2] While this is an improvement over the 5 percent in 1999,[3] the majority of children are still receiving a monolingual education. Guatemalan ambassadors of bilingual education point to the ideas that children can learn more in their native language and that children have the right to learn in their native language: "A child develops better intelligence, better abilities of all kinds, if he learns in his mother tongue," said UNICEF Guatemala Assistant Education Officer Ana Maria Sanchez. "It's is very much related to the idea of child rights. The child has the right to use her own language to learn, and the right to develop within her own culture."[4]

The philosophy is backed up by U.S.-based research on immigrants' retention of language and culture, which suggests that bilingualism and biculturalism help students perform in school and reduce

[1] Brooks-Gunn & Duncan, 1997
[2] cited in Hallman et al., 2006
[3] USAID, 1999
[4] Chevigny, 2007

conflict both at home and at school. Schmid notes that bilingual students score higher on tests than limited English proficient or monolingual English speakers, and that there is also a correlation between average grades and native language proficiency."[1] In their studies of multiple countries, Peal and Lambert (1962), suggest that bilingualism is associated with intellectual development because it stimulates cognitive development through code-switching.[2] Biculturalism also proves important: "Both culture-specific and bicultural competencies are needed to promote these children's development."[3] Szapocznik and colleagues (1980, 1984) "found that Hispanic children with bicultural skills were less likely to experience school and family conflicts."[4] This research suggests that indigenous children would have the greatest chance of success in school if schools encouraged fluency in both Spanish and the native language, and both Ladino and the native culture.

Instead, schools promote Ladino culture and the Spanish language without fulfilling the national policy of inclusive schooling. De Carvalho highlights aspects of cultural mismatch between homes and schools: "Ethnic and language diversity create discontinuity between the types of socialization, child rearing, and skill development."[5] This creates a conflict between the home and school cultures which can have negative effects on academic achievement. Ford (1993) and Steele (1992), found that "poor and minority students are more likely to feel unconnected to an environment whose culture seems irreconcilable to their own."[6]

At home, the traditional teachings include values, respect, culture, customs, gender roles, and gender-based skill development, but elders in ten communities perceive that these cultural norms are being lost over time: "school children losing respect for traditions and elders, becoming 'lazy' at home, or having to do homework instead of traditional (gender-based) duties."[7] Heckt points out that life inside and life outside of school have little in common in some Guatemalan villages.[8] Therefore, school is held in high contrast to the home, making it difficult for parents to see the benefits of sending children to school. In terms of language, formal education is damaging indigenous language fluency. For each year a child goes to school, there is a 2.4 percent decline in probability of native language fluency.[9] However, Heckt reminds us that, "This apparent preference for Spanish as the language of

[1] Schmid, 2001
[2] cited in Schmid, 2001
[3] García Coll et al., 1996
[4] cited in García Coll et al., 1996
[5] De Carvalho, 2000
[6] Gutman & Midgley, 1999
[7] The World Bank, 2004
[8] Heckt, 1999
[9] The World Bank, 2004

instruction has also to be seen against a history of rejection of their own languages by the indigenous people."[1] Parents withhold their daughters from school as a means to preserve culture and language.

The age at which school starts, and the practice of grade repetition, create a system of teaching and learning that does not match stages of cognitive development. In Guatemala, children are supposed to enroll at the age of seven. However, 30 percent of indigenous girls enroll late.[2] Sameroff and Haith (1996) found that "all cultures that provide formal schooling for their children begin it between ages five and seven."[3] This universal conformity is probably due to the fact that children begin to reason ("in the commonsense meaning on the word") at age six.[4] This is also the time (age six to eight), that many children around the world begin working,[5] and children "become able to cooperate and to coordinate points of view."[6] Given the tremendous cognitive development that occurs between the ages ages of five and seven, indigenous children in Guatemala are missing a tremendous opportunity to learn by not enrolling until age seven or eight. Enrolling at age seven or eight puts indigenous children at a disadvantage compared to their Ladino counterparts, seeing as they also have fewer learning materials at home, less exposure to Spanish, and less access to pre-primary school.

Children living in poverty are forced to repeat grades more often than nonpoor children, and grade repetition is higher in primary grades than in secondary grades.[7] The grades with the highest repetition were grades 1-2, 7, and 10, which are the grades in which children are transitioning into the next school. A 1999 study of Guatemala and four other countries found that, "Most education systems in the casestudy countries were designed to weed out rather than include most students. High dropout rates are a predictable outcome. Teachers use repetition to ensure that children learn the required material."[8]

The combination of late enrollment and grade repetition means that indigenous students are in lower grades when they reach adolescence. Nineteen percent of indigenous15-year-olds are still in primary school,[9] and "by adolescence the pace of cognitive development is slow—probably one-tenth as rapid as in elementary school."[10] This implies that students are less capable of learning large amounts of material in adolescence than in middle childhood. Seeing as many indigenous girls are still

[1] Heckt, 1999
[2] The World Bank, 2004
[3] Eccles, 1999
[4] Eccles, 1999
[5] Heckt, 1999
[6] Rogoff, 1990
[7] The World Bank, 2004
[8] O'Gara et al, 1999
[9] The World Bank, 2004
[10] Entwisle, 1990

in primary school when they hit puberty, their academic achievement is limited by the mismatch between the ages of cognitive development and the ages of schooling.

Primary schools in Guatemala are also not constructed with the indigenous child in mind. This is clear in terms of both academic and social development. Schools begin at an academic level that is too high for indigenous students. A USAID report recognizing the high drop out rates for girls between first and second grade concludes that, "the curricula in many of these schools are too challenging for young children entering first grade from illiterate households."[1]

Eccles notes that beginning age 6, children develop a sense of competence, self-awareness, and an orientation towards achievement "that will play a significant role in shaping their success in school, work, and life."[2] In school, successes and failures become public, and children's heightened awareness awareness of others leads to social comparison.[3] The USAID report notes, "Early failure begins for many students a cycle of discouragement and lowered perceptions of academic competence."[4] If students are failing classes and asked to repeat a grade, children will most likely experience a drop in self-confidence and sense of academic competence.

While pre-primary school might be an answer to academic and social school readiness, and enrollment is increasing in Guatemala, it is often not available in rural areas.[5] In the United States, "Higher quality child care is associated with better cognitive and social development both while children are in child care and during their first few years of school."[6] Miles and Stipek "revealed significant associations between social skills and academic achievement."[7] While pre-primary schools are helping a small amount of indigenous girls get ready for school, the current Guatemalan school system does not currently meet indigenous children where they are academically or socially, resulting in high rates of drop out and grade retention in grades 1 and 2.

School transition is also a challenge at the middle and high school levels. Eccles and Gutman and Midgley write extensively about the "mismatch between the needs of the developing adolescent and the opportunities afforded them by their social environment."[8] The high rates of grade repetition and drop out in transition years (grades 7 and 10) show that students and school environments are not well-matched. "Scholastic anxiety and stress, loneliness and isolation, and feelings of low academic competence are all known to be risk factors for the psychological well-being of early adolescents as they make the transition to a new school environment and need to contend with new social and

[1] O'Gara et al, 1999
[2] Eccles, 1999
[3] Eccles, 1999
[4] O'Gara et al, 1999
[5] The World Bank, 2004
[6] Barnett, 1995
[7] Miles & Stipek, 2006
[8] Eccles et al., 1996

academic demands."[1] Many indigenous students making the transition into primary, middle, and high schools find the environment so challenging that many repeat grades or drop out.

Teachers in rural Guatemala are not well-prepared, and sometimes retain gender and ethnic biases. Most primary school teachers in rural areas have only completed a sixth grade education themselves, and vacancies and teacher turnover rates in rural areas are high.[2] This results in higher student-teacher ratios (average 38 versus 25 students).[3] Less educated, less experienced teachers are less likely to give students an education equal in quality to that Ladino children are receiving.

One study by Hanamaikai and Thompson revealed that interaction between teachers and students favored boys: "A distinct difference was revealed in the amount of positive teacher-to-student interaction, in that 16 percent of girls, as opposed to 45 percent of boys, received positive exchanges. In contrast, 15 percent of girls versus 14 percent of boys received negative interaction." Interestingly, the study found no difference between the behaviors of male and female teachers. However, "Girls seemed more apt to participate with female teachers (twenty-one percent) as opposed to male teachers (seventeen percent)."[4] There is a history of teacher bias in Guatemala in regards to both gender and ethnicity, and so recent policies will require both time and effort to be reflected in classroom practice.

Gender bias is also reflected in the curriculum and learning materials, which together with teacher bias might lower the academic aspirations of females enrolled in school. "This culture of discrimination was, for many years, expressed through stereotypes that appeared in school texts and educational materials… An analysis… concluded that textbook materials contained cultural and gender stereotypes and prejudices… It was through these materials that the national conscience of many generations was formed.[5] USAID attempted to reduce classroom bias in the early 1990s by providing instructional materials, sample activities, and "exercises to develop girlfriendly attitudes." However, the intervention "neglected to emphasize strategies to involve girls as active learners by including their interests, needs, and life stories in daily lessons" and were considered "supplementary and not integral to the curriculum." A program evaluation revealed that the materials were observed in fewer than half the classrooms.[6] Gender bias has been built into the school system in Guatemala, and while national policy has eliminated the bias in word, schools and teachers retain it in practice.

School systems which support girls in the primary grades might not meet the needs of female secondary students if secondary schools are not located near the home. "The farther school is from a girl's home and immediate parental supervision, the greater the fear she will be harassed, molested,

[1] Eccles et al., 1996
[2] The World Bank, 2004
[3] The World Bank, 2004
[4] Hanamaikai & Thompson, 2005
[5] Tetzagüic & Grigsby, 2004
[6] O'Gara et al, 1999

raped, or abducted en route. Many parents simply refuse to allow their daughters to travel far (*how* far varies by community) to school."[1] Seeing as girls are restricted by location, limited secondary school access has a disproportionate effect on female academic achievement.

Primary school funding consumed 48 percent of the entire education budget in 2000, while pre-primary used eight percent and middle school used 5.6 percent.[2] This is a result of the political push to give every child a basic (grades 1-6) education, but children would be able to achieve more in school if given the opportunity to go to pre-primary school at the ages when cognitive development is most rapid, and would have greater academic ambitions if given the opportunity to attend middle school. A system so narrowly focused on primary school may have been the right tool ten years ago, but currently it is restricting the ability of indigenous children to become well-educated citizens of Guatemala.

Conclusion and Recommendations

Children who are indigenous, female, rural, and poor are the least likely to achieve academically, and lag far behind their Ladina, male, urban, and nonpoor counterparts. National policy has dictated changes to the school system, such as an inclusive curriculum, bilingual education, professional development, and gender-neutral policies. However, these goals are not reaching indigenous communities and girls are the most marginalized subgroup. Some programs have addressed the needs of indigenous girls but haven't been brought to scale. USAID's active learning classrooms, scholarships, and publicity campaign had positive effects on girls' educational attainment.[3] Additionally, the Nueva Escuela Unitaria presented an approach to learning that emphasized teamwork among teachers, among students, and between the school and the community. This approach also encouraged student participation and active learning, and "researchers could describe girls' heightened interest, self-efficacy, and participation in NEU classrooms." The evaluators found that encouraging student activity allowed girls to develop their abilities, express themselves, and learn more effectively."[4] In light of these small successes and the numerous challenges involved with educating indigenous girls in Guatemala, policy recommendations that would help indigenous girls become formally educated include:

Finance. Increase education spending as percentage of GDP to match similar countries, and ensure that all schools are free of charge, including tuition, uniform, and instructional materials. Deliver free school supplies to rural communities.

[1] O'Gara et al, 1999
[2] The World Bank, 2004
[3] O'Gara et al, 1999
[4] O'Gara et al, 1999

Libraries. Open secure, quiet libraries with reading materials in rural areas in order to provide study space and access to learning materials.

Schools. Increase access to bilingual pre-primary and middle school education in rural areas.

Professional Development. Increase access to and quality of teacher training and professional development programs which prepare teachers for classrooms diverse in language, culture, and gender. Train teachers on active learning pedagogy, the needs of girls in the classroom, and how to create a school environment compatible with home culture. Work with teachers to develop prevention and intervention programs to address grade repetition and drop out.

Curriculum. Integrate girls and women into the curriculum in a positive light and invest in new instructional materials that appreciate gender and cultural diversity. Examine curricula for grades 1, 7, and 10 and adjust or supplement it to match the needs of indigenous children.

Health. Address the problem of malnutrition using model programs from similar countries, and increase access to physical and mental health services. Build partnerships between schools and health centers to ensure health resources access.

Women. Invest in women's education, including literacy and family planning. Encourage women's employment.

Child Labor. Increase access to water, electricity, safe stoves, and other technologies that will reduce necessity of child labor.

Publicity. Educate communities about the importance of starting school on time, and encourage adolescent and married girls to attend school.

These recommendations are expensive, but currently Guatemala spends little on education in comparison with similar countries. Also, several international organizations and local non-governmental organizations have vested interests in girls' education in Guatemala, including USAID, UNICEF, and the United Nations Girls Education Initiative. These efforts—and budgets—can be combined to address the challenges faced in implementing the inclusive education policy of 1994-2000.

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