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Research Article

Leveraging Minority Students' Social Capital and Employment Opportunities: Mentorship and Technology

Regina J Giraldo-García,[1] Mamta Roy,[2] Catherine Hansman[3]

[1]Department of Educational Studies Teachers College, Ball State University, Indiana, USA.
[2]Department of Curriculum and Foundations, Cleveland State University, Ohio.
[3]Department of Counseling, Administration, Supervision & Adult Learning, Cleveland State University, Ohio.

I N F O

Corresponding Author:
Mamta Roy, Department of Curriculum and Foundations, Cleveland State University, Ohio.
E-mail Id:
mamtaroy@hotmail.com
Orcid Id:
https://orcid.org/0000-0001-5802-1873
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A B S T R A C T

The study seeks to determine the extent to which teachers' training to integrate technology in the curriculum as well as the students' participation in mentoring programs, would have an effect on minority students' perception of barriers for finding employment after secondary/higher education. The study, quantitative with a hierarchical logistic regression model, uses data from the Education Longitudinal Study of 2002 from the National Center for Education Statistics, including a nationally representative cohort of minority high school students.The findings indicate that students who had mentoring programs available in their high schools, as well as those who participated in career-related mentoring in postsecondary institutions, recognized the role of having more connections social capital as a means to attaining employment.

Keywords: Mentoring, Teacher Training, Technology in the Curriculum, Social Capital, Employment Barriers, Minority Students

Introduction

Mentoring is a process in which an older and experienced person invests in the time, energy and efforts towards helping a younger person to reach his or her potential, as did the ancient goddess of wisdom Athena who took the form of Mentor to help Telemachus, the son of her friend Odysseus, king of Ithaca, when Odysseus went to fight the Trojan War (Homer, 1967). The word mentor has the same connotation even today, as the role of mentors in terms of shaping young minds in the twentieth century is even more pronounced to prepare the youth of today for a workforce that is technologically far advanced. Ragins (1997) describes mentors as knowledgeable people with advanced experiences who are invested in providing upward mobility and support to the development of their protégés' careers. Mentors are also defined as people that provide professional guidance and "nurture and promote the learning and success of their protégés" (Sands, Parson, & Duane, 1992, p. 124).

In today's world, the wheels of globalization have had a strong effect on the way people make choices in terms of migration, jobs, and education (Ball, 2007; Jarvis, 2007). Advancement in communication technologies and fast modes of transportation has accelerated these changes, but the important question is: Are we preparing the youth of today to navigate these challenges? Is our educational environment (educators, policymakers, institutions) geared to mentor students in such a way that they are prepared for these changes?

The integration of technology in the curriculum provides multiple opportunities for students' access to information, mastery of innovative curriculum tools such as educational

computer programs, and other sources of academic support; leading students to have more positive learning experiences (Wang, Chiang, Tseng, & Wu, 2017). In the same way, having appropriate guidance and support to access not only information but also to develop the students' social capital, becomes crucial for their future professional careers. In this sense, caring and respectful relationships between teachers and learners - mentor-mentee - seem essential to develop and support social and psychological engagement in learning, and career success (Patton & Harper, 2003; Dunleavy & Milton, 2009). Hansman (1999) states possible benefits of psychosocial mentoring relationships in terms of friendship and emotional support, enhanced confidence, role modeling, which would possibly lead to career advancement and empowering minority students in undergraduate programs for more promising careeropportunities (Patton & Harper, 2003; Wallace, Abel, & Ropers-Huilman, 2000). In summary, minority students need to build strong technical and social skills for a demanding and competitive 21st century.Despite increased access to diverse forms of technology for students and teachers, public education schools experience difficulty in effectively integrating these technologies into existing curricula, possibly due to teachers' lack of adequate training. Research highlights the lack of teacher training as being one of the most significant barriers to integrating technology into a school's curriculum (Brand, 1998; Duhaney, 2001; Tondeur, van Braak, Siddiq, & Scherer, 2016), therefore limiting the students' access to information and virtual forms of social interaction. On the other hand, students' access to information and social networks may be enhanced by their participation in mentoring programs wherein supportive mentors help them navigate the system and create meaningful connections that will last and be useful beyond high school (Karcher, 2005).

The purpose of this study is to determine the extent to which teachers' training to integrate technology in the curriculum, as well as the students' participation in mentoring programs, would have an effect on whether minority students such as African-Americans and Hispanics consider a lack of social connections as a barrier for finding employment after secondary and higher education. The research questions guiding the study are 1- To what extent does teachers' training in integrating technology in the curriculum (English and Maths) predict students' perceptionsof lack of social connections as barriers for post-secondary employment? 2- To what extent does having access to and participating in mentoring programs in high school and during post-secondary education, predict the students'perception of lack of social connections as barriers for post-secondary employment?

Literature Review and Framework

The concept of mentoring and the role of mentors are defined in multiple ways in the existing literature (Homer, 1967; Levinson, Darrow, Klein, Levinson, & McKee, 1978; Ragins, 1997;Sands, Parson, & Duane, 1992, Hansman, 2002; Larson, 2006; Ragins&Kram, 2008; Stanton-Salazar, 2011); as well as the important role that technology plays in an ever-changing-technology driven twenty-first century wherein personal connections and technical skills are key factors for employment opportunities. Mentoring is a process in which an experienced person invests in the time, energy and efforts towards helping a less experienced person to reach his or her potential, as did the ancient goddess of wisdom Athena who took the form of Mentor to help Telemachus, the son of her friend Odysseus, king of Ithaca, when Odysseus went to fight the Trojan War (Homer, 1967). The word mentor has the same connotation even today, as the role of mentors in terms of shaping young minds in the twentieth century is even more pronounced to prepare the youth of today for a workforce that is technologically far advanced. Ragins (1997) describes mentors as knowledgeable people with advanced experiences who are invested in providing upward mobility and support to the development of their protégés' careers. Mentors are also defined as people that provide professional guidance and "nurture and promote the learning and success of their protégés" (Sands, Parson, & Duane, 1992, p. 124). Supportive mentoring relationships may foster students' confidence and guide them through career paths.

When the students have reached the level of postsecondary education, and life events occur, a transformative learning theory could be used to explain how a learning process in which the learners experience a shift in their perceptions and develop more reliable beliefs allows them to make more informed decisions (Taylor, 2010). It is then when transformative mentors may provide learners/ protégés the opportunities to think critically about their tacit assumptions and expectations, and by doing so they will evolve into critically reflective people (Brookfield, 2012) and, evaluate everything, especially situations related to networking that may help them in career openings and avenues (Mezirow, 2000). This transformation may pave the way for growth. Such a shift of perspectives can be influenced by the students' relationship with mentors in college who provide access to resources and higher levels of social connections as well as exposure to transformative learning processes.

According to Ragins and Kram (2008), mentors may perform both the academic/ career functions as well as psychosocial functions. Ragins and Kram (2008) further elaborate, "Psychosocial functions build on trust, intimacy, and interpersonal bonds in the relationship and include behaviors that enhance the protégé's professional and personal growth, identity, self-worth, and self-efficacy. They include mentoring behaviors such as offering acceptance

and confirmation and providing counseling, friendship, and role-modeling" (p .5).

Although the title has been used to describe helpful people in one's lives, and mentors are seen as teachers or supportive adults in the protégés' life, the concept is used in different ways to explain mentoring relationships (Hansman, 2002). According to Levinson, Darrow, Klein, Levinson, and McKee (1978), mentoring relationships are crucial for and development and growth because the mentees perceive mentors as "teachers, advisors, sponsors." Other authors describe mentors as a "professional guide who nurtures and promotes the learning and success of his or her protégé" (Sands, Parson, & Duane, 1992, pg. 124). However, Hansman (2002) states that the mentor mentee relationship could be affected by whether the interests of the mentee are the priority in the mentoring process rather than those of the organization or the mentor him or herself.

On the one hand, the work of Stanton-Salazar (2011) describes mentors as school agents that can increase students' access to information, networks, and resources while offering relationships that empower minority students from oppressed groups. On the other hand, Larson (2006) talks about mentors as adults outside the household that consistently provide emotional support, particularly supporting youth in high-risk environments. Similarly, to Larson (2006), Stanton-Salazar (2011) opine that such kind of support has the potential to change the students' lives in a very positive way, which is crucial to avoid ecological danger for low socioeconomic stratum minority groups (Stanton-Salazar & Spina, 2003).Roberts (2000) explains the supportive process as formalized andbetween a more experienced and knowledgeable person and a less experienced one, in which the former would assist the later with aims to improve their personal and career development.

The roles that mentors play in facilitating the steps necessary for minority students' academic success beyond high school may have relevant outcomes on many aspects of their academic lives(Giraldo-García, Galletta, &Bagaka's, 2019). These include their psychosocial growth, family and institutional support, social practice and networks inside and outside the school environment, and support by formal or informal mentors (Lave & Wenger, 2002; Hu & Ma, 2010; Larson, 2006; Stanton-Salazar &Spina, 2003). Valadez and Lund (1992) stated that mentees come with concerns about their academic survival, safety, self-esteem needs, and belonging, while Benner (1984) noted that mentees progressively assume responsibility and start acting independently when they feel protected. However, since mentoring is considered as an intense relationship "between the novice and the expert that enhances a newcomer's socialization and role success" (Hayes, 2005), in the case of minority students, mentors become an important form of social capital and a bridge between their aspirations and their academic attainment. High school youth, particularly members of minority groups, face increasingly severe obstacles in the attainment of their educational goals (Kenny, Blustein, Chaves, Grossman, & Gallagher, 2003).

Technology and Mentoring

In the present educational settings, mentoring relationships are crucial to the educational choices the students make, and technologically relevant tools they need to operate in this world. The Horizon Report (2009) details the needs in the educational settings in order to support and prepare students for the workforce in the following way: Providing formal instruction in key new skills including information literacy;implementing visual literacy and technological literacy; adapting educational practice and materials that support that practice to the specific needs of each student; incorporatingreal-life experiences to aid in the application of new skills; new technologies must be used as an everyday part of classroom activities, effecting this change is difficult, and the pace of change is slow.

Mentor student relationships may be influenced by the characteristics of the student population, including different characteristics in learning styles. The diversity issues come to the surface when one tries to understand and address the needs of all populations, especially those of minorities, who face a multitude of barriers while trying to navigate the educational settings, which could be due to their lack of understanding the educational settings and systems. This lack impedes their progress, and they remain fixed in a cycle of underachievement. At this juncture, a student-centered approach, such as mentoring, is needed to keep supportive strategies in mind that equip and empower students. A possible resource to improve teacher/mentor-student communication and support is a computer-mediated communication (e.g., E-mail, listservs, chat groups, computer conferencing, etc.) to enhance the mentoring process (Bierema, L. L., & Merriam, S. B. (2002).

According to Low (2003), socio-constructivism proposes that the meaningful construction of knowledge happens as the result of the interaction between the learner and other learners. This meaning-making works in a very salient way when technology is used and integrated into the learning environment where student-student, teacher-student, student-content interactions assist in co-constructing knowledge. Although not all are designed to be student-centered, frequently,many technologically driven learning courses (both blended and face to face) are are student-centered and have the potential to have a socio-constructivist effect (Hiltz&Turoff, 2002). Technology can be used to facilitate student learning, and this goal is within

grasp because of the presence of interactive technologies (Giraldo-García, Roy, &Alotebi,2015). Teachers could use the collaborative and interactive aspects of technology and the affordances of the World Wide Web to make learning more student-centered as these affordances will enable the students to construct and co-construct knowledge. Moreover, socio-constructivist approaches are structured as a combination of the constructivist and sociocultural theories.

One way in which mentors can tap into the alternative settings in education is through the use of technology to have access to remote contexts for teaching and learning. With the increasing flexibility due to technological advances within traditional settings, there is tremendous growth in the way teachers can make use of technology. This educational setting has partly contributed to the transformation of the role of the teacher from that of sage on the stage to a guide by the side. The role of the teacher or any other more knowledgeable other is more of a "mentoring kind," as he or she will try to create a social context so that the students are pulled out from the zone of comfort to further their potential (Miller, 2010).

Technology and mentoring go hand in hand because they both may provide platforms for meeting the students' educational needs as well as their affirmation necessities (Reis & Graham, 2005). The use of the world Wide Web both in the face-to-face, online, and hybrid contexts helps in the formation of a community of learners that interact and learn from and with each other. Under the right conditions and monitoring, these learners may participate in reflection and critical discourse to co-construct meaning and understanding (Garrison, 2007; Giraldo-García, Roy, &Alotebi, 2015). The Community of Inquiry (COI) framework reinforces the importance of the formation of a community of learners (both face-to-face and online context) that fosters collaboration, interaction, and learning. The use of technology contributes to the development of students' skills, which may be useful for the minority students who may well feel connected because of their engagement in learning communities. E-mentoring programs, in addition to face-to-face mentoring, open up greater options for students, such as e-mentoring programs non-profit programs like I Could be (Gross, 2011) that use online tools to mentor students who need the more knowledgeable other to help them. Research suggests that mentor-mentee relationships mediate between the students' previous experience with the use of technology and their general and career effectiveness; and also point out the practicality of e-mentoring in terms of being a cost-effective and timely alternative for supporting students (DiRenzo, Linnehan, Shao, & Rosenberg, 2010).

Social capital and the role of mentors as agents of empowerment

In the context of this framework, it is appropriate to introduce the concept of social capital and the implications of its lack for minority students with aspirations of higher education and work opportunities. Social capital is defined as the non-monetary benefits people obtain through relationships, providing participants in those relationships with resources that facilitate the accomplishment of their goals (Coleman, 1988), as well as "key forms of social support embedded in one's network or associations, and accessible through direct or indirect ties with institutional agents" (Stanton-Salazar, 2011, p. 5). In the educational context, students' experiences of social capital can either support or constrain their access to assets such as information, resources, and opportunities (e.g., role of institutional agents /mentors) (Bourdieu, 1986).

Stanton-Salazar (1995) stated that institutional agents are those individuals that have the capacity of providing or facilitating access to key resources such as information about the school, programs, academic tutoring and mentoring, college admission, and assistance with career decision making. Similarly, institutional agents (e.g., mentors) who are capable of enabling the empowerment of the student or young person, and identifying themselves as responsible for advocating on behalf of low-status students and for providing them with various forms of institutional support, are considered by Stanton-Salazar (2011) as empowerment agents. This empowerment develops from the process of creating networks through socialization, a term defined by Stanton-Salazar (2011) as involving youth-agents engagement in a learning process for navigating diverse sociocultural environments (Stanton-Salazar, 2011).

Stanton-Salazar (2011) describes access to resources and supportive ties to institutional agents in the school success and social development of children and youth as a form of institutional support. The author argues that institutional support ensures that youth become effective participants within institutional spheres. Again, mentors as institutional agents play an important role in facilitating the steps necessary to help minority students achieve their academic goals beyond high school. Research also suggests that different background characteristics such as socioeconomic resources, the presence of role models in youth's lives, and other contextual support are important to shape Latina/o students' educational goals(Giraldo-García, 2014; Sirin, 2005; Wahl& Blackhurst, 2000). Moreover, the lack of such resources would further emphasize the paradoxical phenomenon of this vulnerable fastest-growing group that holds the lowest rates of educational achievement in the United States (Flores & O'Brien 2002).

Within this context of minority students needing extra support from mentors to improve their academic

performance,Wahl and Blackhurst (2000) rightly discussed that the country's economic prosperity would result from effecting a significant improvement in the academic achievement of those considered as underperforming. The authors highlight a need for technology education and career basedguidance for students in K-12 education to propel them to secondary education, better job opportunities, and improving the economy of the country as a whole (Wahl &Blackhurst, 2000).

The students' socioeconomic background, combined with a resource-limited academic environment, make a difference in the academic attainmentof Hispanic students, for instance(Lutz, 2007; Sirin, 2005). The effects of race and gender,also mediated by socioeconomic status, causes limited or non-existing access to important resources for students from low socioeconomic backgrounds, in consequence leaving them not as skilled at capitalizing on available resources as students from higher socioeconomic backgrounds. Similarly, students' educational aspirations and institutional supports, in the form of tutoring program at school influenced the academic attainment of Hispanic students in high school (Giraldo-García, 2014).

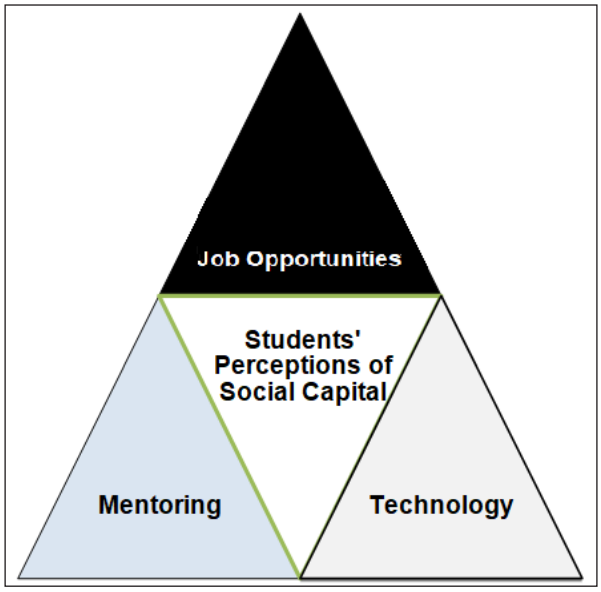

Figure 1.Students' Perceptions of Social Capital in Relation to Mentoring and Technology for Employment Opportunities

The authors hypothesize that students would highly benefit from having teachers that had received training for integrating technology in the curriculum so the students can take the best advantage of those resources and expand their communication and problem-solving skills, useful tools for future work. Besides, it is hypothesized that student-mentor relationships will positively influence the students' gain of social connections that will help them improve their chances of attaining employment after high school. In sum, mentorship and technology would act as the foundational supports for student perceptions of social capital as leading to successful job attainment. The following model illustrates the relationship between the variables considered in this study in connection with the students' perceptions of social capital and its implications for employment opportunities. See Figure 1.

Methodology

Data Source

The study seeks to determine the extent to which teachers' training to integrate technology in the curriculum as well as the students' participation in mentoring programs would affect minority students' perceptions of a lack of social connections as a barrier for finding employment after secondary education. The study is quantitative and uses data from the Education Longitudinal Study of 2002 (ELS: 2002-2009), from the National Center for Education Statistics (NCES), including a nationally representative cohort of minority (African-American and Hispanic) high school students.

ELS 2002 Database: The Education Longitudinal Study of 2002 (ELS: 2002) combines three important features: a longitudinal and multi-level nature along with a national representativeness. This longitudinal nature of data allows for the analysis of different students' characteristics and their experiences in their academic lives and also their experiences in the workforce. The characteristics of the data suit the purpose of this study, which examines the possible effect of events that occurred during the high school years that may influence work-related outcomes after the students' secondary education experiences.

Participants

The general ELS: 2002 base year data set contains information from 16,197 students with varying demographic characteristics. The current study is delimited to minority adolescents in 10th grade of high school and their information from 10th grade through years after college, given the focus of the study on minority students. More specifically, and considering the characteristics of minority students discussed in the literature, the analysis is based on 2020 Black or African American and 2217 Hispanic students, including males and females, self reported as belonging to either of these minority groups. The data at the student level included demographic information of the students, their socioeconomic status, participation in mentoring programs, and whether the teacher received training for integrating technology in the English and math classroom.

Data for the control and predictor variables correspond to the first data wave during the students 10th grade (ELS: 2002), and the data used for the analysis of perceptions of

employment barriers and placement are measured using the third follow up data wave of 2012 from the National Center for Education Statistics- NCES- (ELS: 2012 follow up). The National Center for Education Statistics surveyed and assessed a nationally representative cohort of high school students in the spring term 2002. The data set also included survey responses from 10th-grade teachers associated with the students' cohort.

The 2012 third follow up data includes answers from employed and the unemployed participants equally, who were asked about perceived employment barriers they may have encountered after high school, among other questions. The participants from the first and second round of data collection were approached again for the third follow up round, including 10th graders (2002) and 12th graders (2004) from previous years.

Measures

The study sought to answer the research questions by including in the analysis two control, five predictor, and two outcome variables that contextualize the students' academic and work experiences framing this study. The control variables pertained to the students' family and individual characteristics: (1) Socio-economic status, (2) Students' race. The variable accounting for the students' socioeconomic status is a continuous variable, while the variable for race was dummy coded as "1" and "0" where Black/African-Americans and Hispanics are combined into one group and labeled as Minorities: "1", compared to Other students: "0". The predictor variables addressed activities related to mentoring for students and teacher training for the integration of technology in the classroom. For example, (3) Mentoring offered to 10th graders is based on work-based learning experiences during mentoring sessions offered to 10th graders at school. The experience includes a school-arranged match with an adult in the career area of interests of the student for advice and support. Another variable relates to the students' actual participation in such activities: (4) 10th-gradeStudents' participation in mentoring. A third variable involving students' participation in mentoring activities is included to address the effect of such experience during post-secondary education on the students' later perception of social capital as a factor for finding employment: (5) - Post-secondary participation in Mentoring. The question asked for this variable was: "[Have you participated/Did you participate] in a program in which you were mentored as a part of your [undergraduate/college] education?(Yes/No), and was part of the third follow up in 2012.

On the other hand, there are two variables regarding teacher training and technology as predictors of perceptions of employment barriers: (6) -10th-grade teacher received training in integrating technology in the curriculum (English); and (7) - 10th-grade teacher received training in integrating technology in curriculum (math). The question asked was whether the teachers had received training in these areas from any sources within the last three years.

Lastly, the outcome variable, (8) - Employment barriers: Lack of social connections and contacts, serves as the measure of the students' perceptions of a lack ofsocial capital as a possible barrier for employment attainment. This item is a Yes/No answer question that includes information on whether the responders had a lack of social connections or contacts interfering with their career plans. These data correspond to the third follow up questionnaires from the ELS: 2002, which ask the participants about their experiences from 2009 to 2012 after completing high school and possibly higher education and had had some work experience. Data comes from the students, teachers, and school administrator questionnaires from the ELS: 2002-2012 longitudinal study from NCES.

Data analysis and Procedures

The study used a hierarchical logistic regression model to determine the extent to which participation in mentoring programs in high school and during college as well as having trained teachers on how to integrate technology in the curriculum can predict whether the lack of social connections/contacts is perceived as a barrier for employment. The hierarchical logistic regression model was selected as an appropriate method of analysis given that the primary outcome variable of the study is dichotomous in nature, and the independent variables are mixed, including dummy and continuous variables (Hair, Anderson, Tatham, & Black, 1998). To meet classical linear regression assumptions, with dichotomous dependent variables, the logistic model provides the maximum likelihood estimation by transforming Y(1, 0) into a logit (log of the odds of falling into the "1" category) (Menard, 2002).

The linear logistic regression model is derived from the

$$f(y) = \frac{1}{1+e^{-y}}, -\infty \leq y \leq \infty$$

Where $Y_i = \beta_0 + \beta_1(Mentoring_i) + \beta_2(Technology_i) + E_i$. As a probabilistic value, f (y) ranges from 0 to 1 in a monotonically increasing manner as y increases in value from $-\infty$ to ∞. The analysis uses data weighs from the base year and third follow up panel questionnaires.Data were entered using a stepwise regression approach wherein variables were added in steps to create different models and measure the influence of groups of variables to the model.

Findings

The research questions of the study examined the extent to which teacher training to integrate technology in the curriculum and students' access and participation in

mentoring programs would have an effect on whether minority students consider a lack of social connections as a barrier for finding employment after completing secondary and/or higher education. To identify the variables that predicted a perception of a lack of connections as directly connected to employment barriers, and answer the research questions, the study used a logistic hierarchical stepwise regression. The analysis indicates that overall, the set of independent variables included in the model contribute significantly to predict the dependent variable ($p < .001$). See Table 1.

In table 1 we include three blocks from the logistic hierarchical stepwise analysis. The first block includes the socio-demographic variables, where the predictor variable minorities (Black-African Americans and Hispanics/others) and the predictor variable addressing the socio-economic status of the students were analyzed and found to be statistically significant in predicting the dependent variable. Both, being part of a minority group (24%) and having a higher socioeconomic status (13%), predicted higher odds of perceiving a lack of social capital as a significant barrier for the participants' career plans.

In the second block, block 2, the variables related to mentoring, having mentoring offered in the 10th grade, and participation in mentoring programs a) in postsecondary education, b) in the 10th grade of high school, were entered in the model. The results of the analysis indicate that students that participated in mentoring activities during the 10th grade of high school were 27 % less likely to find a lack of social capital as having interfered in their career plans during their postsecondary life. However, the analysis found that students that attended high school where mentoring programs were available and those that participated in career-related mentoring programs during their experiences in higher education were 14% and 25%, respectively, more likely to see a lack of social capital and lack of connections as barriers for employment after completing their higher education.

In the third block, Block 3, the variables related to whether the teacher received training for integrating technology in the curriculum (Eng/Math) were added and found to be contributing to the model in a significant way, but in different proportions. For example, when high school teachers reported that they received training for integrating technology in their English classes, the participants (students) were 27% more likely to report that a lack of social capital interfered in their career plans after completing their secondary education than the students whose teachers did not receive the same training. On the other hand, when teachers reported that they received training for integrating technology in their math classes, the students were only 3% more likely to report that a lack of social capital interfered in their career plans after secondary education than their counterparts. In block 3, the influence of being part of a minority group and the students' socioeconomic status, as well as variables about availability and participation in mentoring activities, remained as significant contributors to the model. The model correctly classified 78% of the cases analyzed. See Table 2.

Table 1. Logistic Hierarchical Regression. Odd Ratios of Students' Perceptions of Employment Barriers (Lack of Social Capital)

	Predictor	B	S.E	Wald	Exp (B)	Constant
Block 1	Minorities	.214*	.005	1744.892	1.239	-1.315
	SES	.120*	.003	1525.885	1.127	
Block 2	Minorities	.213*	.005	1693.418	1.237	-1.376
	SES	.109*	.003	1260.375	1.115	
	Mentoring Offered-HS	.128*	.004	835.846	1.137	
	Mentoring Participation-HS	-.314*	.011	875.262	.730	
	Mentoring-Post-Sec	.224*	.005	1680.586	1.251	
Block 3	Minorities	.211*	.005	1660.660	1.235	-1.595
	SES	.109*	.003	1257.436	1.115	
	Mentoring Offered-HS	.126*	.004	796.020	1.134	
	Mentoring Participation-HS	-.323*	.011	918.807	.724	
	Mentoring Post-S	.216*	.005	1556.743	1.241	
	Teacher Trnd-Tech-(Eng)	.241*	.006	1905.149	1.273	
	TeacherTrnd-Tech-(Math)	.031*	.005	37.394	1.032	

*p< .001

Table 2.Classification Table and Goodness of fit Test

Observed		Predicted		
		EmploymentBarriers (Lack-SocialCapital)	Percentage Correct	
		No	Yes	
EmploymentBarriers (Lack-SocialCapital)	No	1061926	0	100
	Yes	304309	0	0
Overall Percentage Correctly Classified			78	
Test		**Chi-square**	**df**	**Sig.**
Omnibus Tests of Model Coefficients		8058.790	7	.000
Goodness-of-fit test (Hosmer and Lemeshow Test)		3961.089	8	.000

Discussion and Conclusion

The study was designed to identify the variables that could predict a perception of employment barriers as a result of a lack of social capital or connections. The literature states that social capital pertains to the non-monetary benefits people obtain through relationships, providing participants in those relationships with resources that facilitate the accomplishment of their goals (Coleman, 1988), and "key forms of social support embedded in one's network or associations, and accessible through direct or indirect ties with institutional agents" (Stanton-Salazar, 2011, p 5). The institutional agents and the non-monetary benefits that students obtain may be best defined in mentoring relationships, wherein a mentee goes through the transformative learning through the opportunities that the mentors provide.

This study looked at the influence of two major area variables, mentoring and integration of technology in the classroom, as two important possible predictors that address the influence of the interaction between mentors and mentees, as well as students' access to mentoring programs during their educational process. It also addresses the effective integration of technology in the classroom, which is more likely to happen when teachers are trained for it. In the current, more globalized world, students are expected to use and be exposed to more advanced technological resources in the classroom, so they are prepared to face the future with better opportunities in the workforce(Giraldo-García, Roy, &Alotebi, 2015). The study used teachers training in integrating technology in the classroom because the use of technology in educational settings is limited by the availability of resources and whether the teacher is trained for its implementation in the classroom. To this end, The National Educational Technology Plan [NETP] (2005) also recommended increment "pre-service and in-service educators with preparation and professional learning experiences powered by technology" (U.S. Department of Education, 2010b, p. xviii).

The findings of this study indicate that such training and possible integration of technology in the classroom was predictive of students' perceptions of barrier for employment, particularly higher when teachers were trained to include technology in the English, and lower when the teacher had been trained to include technology in the math classroom. The difference between the two findings could be the more effective use of critical thinking skills and engagement with different types of reflective activities and projects in the English classroom rather than the mathematics classroom where the skills may be limited to calculations and computations(Giraldo-García, Roy, &Alotebi, 2015).

In the literature, we found research that pointed to mentors as school agents, as able to increase students' access to information, networks, and resources, while offering relationships that empower minority students from oppressed groups (Stanton-Salazar, 2011). Minority students are described in literature as students of color, students who live in poverty with their families, and whose parents may not be educated enough to guide their children (Sleeter, 2011). Given that these students are also considered at-risk students for they have lower levels of success in school, high dropout rates, and deal with issues and life-situations that are very challenging (Moore, 2006), mentoring can potentially play a much-needed affirmative role in the lives of these youth in terms of addressing the negative effects of social isolation, and the ill-effects of high levels of unemployment through advising, tutoring, coaching, and counseling (Mullen, 2009).

The findings of this study indicate that students who had mentoring programs available in their high schools, as well as those who participated in career-related mentoring in postsecondary institutions, recognized the importance of having those connections. Furthermore, they developed more social capital and networks (or connections) to obtain employment and an understanding that a lack of social capital would hamper their career plans. Moreover, the

findings show that students who participated in mentoring programs during high school were less likely to perceive a lack of social connections as a barrier to employment. This finding may reflect Larson's (2006) position that mentors provide consistent emotional support and have a positive influence on youth development, especially facilitating the means for positive outcomes of children and youth in high-risk settings, which is the case for most minority students. High school students may find their participation in the programs, and the emotional support received as a reassurance of their capability for achieving their career goals beyond the access to networks and high social capital.

Nevertheless, we can make an argument for how technology can support mentoring in that it provides a wider range of opportunities for helping the students connect with others and build much needed social capital. Mentoring students in the 21st century plays a paramount role, particularly important for minority students, and is a challenging task, as it entails not only meeting the academic and psychosocial needs of the mentee, but also preparing them for a more globalized and diverse world which is technologically driven (Ball et al., 2007; Jarvis, 2007). Mentoring in this context means transitioning from uncertainty to certainty because of the support a mentor offers. The study found that for minority (African-American & Hispanics) students, the perception of lacking social capital would negatively influence their career plans, perceptions that were 24% higher for this group when compared with other racial groups.

The study provides further relevant evidence for the importance of mentoring programs for students from minority ethnic backgrounds(Giraldo-García, Galletta, &Bagaka's, 2019); suggesting that having such programs available would empower these groups and enhance their social capital. The literature indicates that racial background played a core part in determining both educational and occupational aspirations during childhood and adolescence (Wahl &Blackhurst, 2000; Sirin, 2007; Lutz, 2007), and the findings of this study indicate that racial background also plays a role in the students' perceptions of lack of social capital as a barrier for employment opportunities.

The implications for practice point toward the need for purposely providing teacher training in technology and including mentoring programs in high schools with predominantly minority student populations, in order to facilitate academic guidance, help expanding the students' social capital, and provide consistent emotional support to minority youth and young adults, facilitating the means for positive academic and career outcomes. Therefore, having multiple role models in the school setting, (e.g., resourceful mentors and technology-trained teacher) sums up resources which could also include e-mentoring services, for providing minority students with the needed technical tools and emotional support, for achieving academic and career goals. Although the measure of 2002-2009 data impact on participants' perceptions in 2012 may reflect slightly different in the current, ever-changing, use of technology and mentoring approaches, the results are relevant given that these populations are still holding a similar status and needs in current academic outcomesreported in the U.S.

The findings of the study suggest that minority students that have technology-trained teachers and active mentoring programs in school high school and beyond- would develop critical thinking skills and early reflective views about career paths and their related social capital connections, which would ultimately empower these groups and pave their way to job attainment after secondary education.

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