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ABSTRACT

California's population is expected to grow from 33.9 million in 2000 to 45 million by 2020. In addition, Latinos are expected to outnumber Caucasians by the year 2020. In Los Angeles County, the Latino population is already 45%, compared with 31% Caucasian, 13% Asian, 9% African American, and 1% other. This manuscript offers a new model of course completion for urban community college students who declare Hispanic/Latino as their ethnic group. It is based on an earlier model that included all the students in the Los Angeles Community College District (LACCD). Hispanics lead all other ethnic groups with the percentage of 16-24 year olds who have dropped out of school, have historically been the lowest group in terms of SAT scores, and are least likely to go to college. California's community colleges represent a pivotal point of access for Latino students. This study utilized the Transfer and Retention of Urban Community College Students (TRUCCS) questionnaire, administering the final instrument during the spring 2000 semester to 5,000 students in 241 classrooms in 9 colleges in the LACCD. Ninety-six percent of the sample signed release forms. Of those 4,433, 2,461 reported their ethnicity as Latino/Hispanic. The results indicate that the only credible effects on course completion or GPA were age and academic attitude. (Contains 53 references.) (Author/NB)

A Community College Model of Student Immigration, Language, GPA, and Course Completion

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A Community College Model of Student Immigration, Language, and Course Completion

California is experiencing an unprecedented population growth surge. While the state's population grew from 29.8 million in 1990 to 33.9 million in 2000 (California Statistical Abstract, 2001), California is preparing for a population swell to 45.0 million by the year 2020 (Myers & Pitkin, 2001). Although the state is the home to numerous ethnic groups, the fastest growing segment is people of Latino descent. Part of the reason for the increase is the rapid growth trend of California's immigrant population. The state's foreign-born population grew from only 8.6% in 1970 to 21.8% in 1990 (Myers & Pitkin, 2001) and is expected to reach 26% by 2020 (Pitkin, 2001). The 2000 Census indicated that Caucasians still form the largest population group in the state (46.7%), but Latinos are not far behind (32.4%) and are expected to outnumber Caucasians by the year 2020 (U.S. Census, 2001).

In Los Angeles County, the concentration of Latinos is even higher than the state average. Of the more than 9.5 million county inhabitants, approimately 45% are Latino (compared to only 31% Caucasian, 13% are Asian, 9% African American and 1% other) (U.S. Department of Census, 2000a). In the Los Angeles Unified School District (LAUSD), Latinos are by far the largest ethnic occupying more than 71% of all K-12 seats (LAUSD Net, 2001). It comes as no surprise, therefore, that the Los Angeles Community College District (LACCD) also has a large concentration of Latino students. Almost half (42.9%) of the students enrolled in the nine campuses that make up the large district report Latino/Latino as their ethnicity. Mirroring the situation in the state, Latinos are by far the fastest growing group in the district (LACCD, 2002). Figure 1 provides a graph of the enrollment trends by ethnicity for the district from 1972 to present. It is clear that describing Hispanic/Latino students in the LAUSD or LACCD as

"minorities" is not only misleading from a quantitative viewpoint but also may convey many incorrect assumptions.

Insert Figure 1 About Here

In this manuscript we acknowledge the importance and large representation of Latino students at the LACCD by developing a new model of course completion for urban community college students declaring Hispanic/Latino as their ethnic group. This model, based on an earlier model that included all students in the LACCD (Hagedorn, Maxwell, Pickett, & Moon, 2002), includes the effect of native language, English language proficiency, and foreign or domestic schooling.

The model is a product of the Transfer and Retention of Urban Community College Students Project (TRUCCS) supported by the Field Initiated Studies Program of the U.S. Department of Education, Office of Institutional Research and Improvement. TRUCCS is dedicated to the development of new gauges and measurement designs to better understand the community college experience, to more accurately predict activities and constructs leading to the success of urban community college students and to influence subsequent policy to aid students.

Review of the Literature

Historically, Latino students have been overrepresented in less affluent, overcrowded, lesser quality urban schools (de los Santos & Rigual, 1994). The Coleman Report of 1966 was one of the first comprehensive reports to note the achievement gap for Latinos. Using a national sample of 645,000 students, the report clearly showed persistent gaps between Latino and White students across all subjects (Coleman, 1966). Little has changed in more than three decades. As a group, Latinos tend to enter kindergarten at lower levels of readiness and lag behind their non-Latino counterparts in academic achievement in reading, math, and science while in the

elementary grades (NCES, 1999). They are more likely to be taught by a teacher lacking full credentials and are unlikely to have a teacher who shares their ethnic or cultural background (Delpit, 1995). Using high school indicators, Latino students do not enjoy the same level of academic college eligibility as other groups. White students are nearly twice as likely to have completed the "A to F curriculum" than Latino students (CPEC, Student Profiles, 2000, I-5 & I-6) and Latino students are less than half as likely as their non-Latino counterparts to be enrolled in intermediate algebra (CBEDS, 1997-1998). Latinos are underrepresented in advanced placement courses (CPEC, Student Profiles, 2000, I-5) and have historically been the lowest group in terms of SAT scores (CBEDS, California Department of Education, 1998, www.cde.ca.gov). Perhaps the most lamentable statistic is that Hispanics lead all other ethnic groups with the percentage of 16 through 24 year olds who have dropped out of school (27.8%) (U.S. Department of Education, 2001). It is therefore not surprising that Hispanics are the least likely group to go to college (NCES, 2001) and subsequently also the least likely to attain a degree (NCES, 1998).

Latinos in California colleges. California has a clearly articulated three-tier system of postsecondary education with a hierarchy of institutions based on admission criteria. Given the disproportionately lower numbers of Hispanics eligible for the state's top-tier institutions it is not surprising that Latinos are sorely underrepresented in the flagship Universities of California and are much more likely to be enrolled in one of the third-tier open admissions campuses of the California Community Colleges (CPEC, Student Profiles, 2000). Clearly the California Community Colleges represent a pivotal point of access for Latino students. Fully 29% of all Latinos enrolled in higher education in the *entire country* attend one of the campuses of the California Community Colleges. Using another perspective, 74% of all Latinos enrolled in a

California postsecondary institution are enrolled in one of the California Community Colleges (California Community Colleges, Pocket Profile, 2002, Community College League of California).

Completion and transfer rates. Although the actual rates of student retention, persistence, and transfer are elastic figures that remain a top issue for debate and argument, all interested parties agree on the basic facts: 1) the rates are far too low, 2) research to better identify and understand the factors that promote persistence and transfer is very much needed, and 3) the research must employ conceptual approaches relevant for these distinctive students. Reasons specific to Latino students for low completion and transfer rates may include their initial status of being less college-ready but also include factors such as residency status and pull factors such as work and family obligations. Indeed the colleges are aware of the problem and have been trying to address the issues. For example, in 1998 the California Community Colleges enacted the Partnership for Excellence Program providing more than $300 million to enhance multiple goals including transfer and retention. However, forced budget cuts have all but eliminated this revenue stream.

Despite the seemingly extensive body of literature related to student persistence, there is still much unknown about the process of student departure and the interplay of forces that give rise to it especially within community colleges (Bean and Metzner, 1985; Braxton, 2000; Tinto, 1987) and involving specifically Latino students. Among new students at two-year community colleges, approximately 50% exit before the beginning of the second year (Tinto, 1996). The most often quoted framework for predicting college student retention of all institutional types is the Tinto model (1975). However, those who desire to study two-year students in particular have found that the Tinto model of student retention (Tinto, 1975) has limited applicability insofar as

it is seems especially suited to four-year institutional analysis. Moreover, the predictive validity of the oft-used Tinto framework is not without a substantial number of critics (Cabrera, et al., 1992; Tierney, 1999). Other researchers promote models employing psychological, rather than sociological constructs such as Bean (1980a, 1980b) and Bean and Eaton (2000). The variety of non-retention of community college students may be unique in the community college environment in that students frequently do not finish their academic objectives, yet plan to return another semester to "pick up where they left off." Another perspective of community college students that has heretofore been ignored is that while theories of student attrition have been drawn primarily from the experiences of American-born students whose first language is English, urban community colleges enroll many foreign and native students, whose first language is not English. In light of the demographic situation in California, the importance of reacting to the large numbers of Latino students, many of whom are foreign-born is obvious.

Facility with the English language is certainly an important aspect of academic life and academic achievement when studying any level of American education (Ginorio & Huston, 2001, Geradi, 1996). Despite its importance, there has been very little research on community college students for whom English is not their native tongue. Nora's (1993) review of the literature on minority groups found very little research on persistence among various language groups in the community colleges. He stressed the need for examination of the factors that are distinctively related to the academic success of these students.

Methodology

This study utilized data collected via the TRUCCS project as well as transcript data from the Los Angeles Community College District.

Instrument. The TRUCCS questionnaire was developed to include items and scales relevant for culturally diverse community college students and to reflect the extant literature (Adelman, 1999, de los Santos and Wright, 1990, Hagedorn and Castro, 1999, McCormick & Carroll, 1997, Maxwell, 1998). After a piloting study the final instrument was administered during the Spring 2000 semester to 5,000 students across 241 classrooms in the 9 colleges in the Los Angeles Community College District (LACCD). Participating classrooms were identified through a stratified sampling method that sought to maximize variation on several main independent variables. The concern was thus more for internal, rather than external, validity. However, to assess the degree of external validity we compared the sample to the entire LACCD population on a number of factors (including ethnicity, primary language, age, etc.) and found similar distributions. In addition, transcript data were acquired from the LACCD for all students who signed the requisite consent forms (96% of the sample). The final sample for this study consists of 4,433 students for whom we could assess transcript data of whom 2,461 reported their ethnicity as Latino/Hispanic[1].

Dependent variable 1 – course completion. The dependent measure in the model is course completion. The use of course completion as a measure of success is especially appropriate for the study of community college students because it provides a valid and reliable measure of success. Measures of transfer are fraught with unreliability due to the difficulty in being able to follow students over a long period of time. One cannot determine with accuracy

[1] The questionnaire had many ethnicity choices including several pertaining to various types of Latinos. It is also important to note that respondents could choose more than one category. In total, 706 respondents marked "Mexican", 706 respondents marked "Mexican", 978 marked "Mexican-American/Chicano:,

who will ultimately transfer given sufficient time. Completion ratios are calculated as the quotient of the number of courses attempted (in a given semester, year, etc.) divided by the number of courses successfully completed with a grade of C or better (Hagedorn, et al 2002). This continuous measure of course completion, used in lieu of the customary dichotomous measure of retention, may be a better and more accurate measure of persistence behavior consistent with the nature and behaviors of community college students. Whereas university students generally decide to either complete their studies or not (making the dichotomous measure appropriate), the academic climate of the community college allows students the freedom to complete all of their courses, some of their courses, or none of their courses without the same level of consequences. The more lenient policies of the community college permit students to "stop out" and return in good standing. Although simple, the course completion ratio can indicate success with unprecedented validity far beyond that of the usual dichotomous measure of retention used in other studies. Further, the course completion ratio is ideal for the community college environment because it flexes to accommodate part-time enrollment that is prevalent among community college students. If a student signs up for six courses and successfully completes three, the completion ratio is .50; identical to the part time student who signs up for two courses and completes one. The course completion ratio measures success against students' self-proclaimed goals. Although many argue that community college students frequently signup for classes without the goal of transfer or graduation, it is less likely that students signup for specific courses with the expectation of NOT completing them.

Course completion is indisputably tied to the outcomes of interest: transfer and graduation. One cannot transfer without successfully completing the appropriate courses at the community college. Similarly, one cannot earn a community college certificate or associate

degree without course completion. Thus, course completion is the basic building block of student success. In the present study, course completion was based on course activities of Spring and Fall 2001

Dependent variable 2 – grade point average (GPA). To fully understand the components of success, we found it necessary to also test for those factors that promote good grades. Because the course completion formula uses GPA, to insert GPA into the same model would introduce significant error due to the high correlation between the two constructs. Despite this relationship, the two variables are distinct. We therefore deemed it appropriate to test the model twice exchanging the dependent variables, GPA and course completion. GPA is defined as the average grades for the year Spring and Fall 2001.

Socioeconomic Status (SES). SES is probably the hardest construct to measure for community college students. The problem is compounded by the jumble of students that includes those still living with parents or other family members as well as those who are living alone, or are the heads of entire households. The questionnaire item that merely asks students to report annual household income not only introduces great error due to student unawareness (especially for those still living with parents), but also neglects the case of students who may have come from affluent households but as a young adult beginning a career, are in a state of modest income. Conversely, use of annual income overestimates SES in those cases when students from poor families are earning larger salaries, or when students are living in homes with multiple wage earners (multi-generational or other extended family arrangements). Indeed, SES is more than income and virtually all measures used in research are imperfect proxies. In this study we used the approach of estimating SES using the parents' occupations as reported through a write-in response by survey respondents. Occupations were associated with Occupational

Status Scores (OSS) as calculated by Terrie and Nam (1994). In 1950 the U.S. Census Bureau statisticians developed occupational status scores to provide an objective referent for the relative socioeconomic interpretation of occupations. The scores have been updated and revised each decade (Terrie & Nam, 1994). Occupational scores are determined by a complex formula that includes the median educational and income levels of incumbents as well as the number of workers employed in occupations ranked beneath (Terrie & Nam, 1994). We employed the mean value of the OSS score for father and mother. When students reported only one parent, we used the sole reported score as the measure of SES.

The model. Paths were hypothesized to follow the examples of Fishbein and Ajzen (1975) and Benjamin (1994) but modified by our previous findings (Hagedorn, et al, 2002). Other paths were included to reflect the unique relationships regarding Latino students in an urban community college experience. For example, we opened several paths from the construct of English language ability to reflect its central role. The construct of number of weekly hours of employment and its paths were included because most community college students have jobs and must juggle work commitments with college responsibilities (Pascarella, Edison, Nora, Hagedorn, and Terenzini, 1998). We argue that these factors affect student behavioral outcomes to the degree to which a person has a favorable or unfavorable evaluation of the behavior in question (Ajzen & Madden, 1986), in this case attitudes toward course completion and GPA. However, since community college students have significant obstacles in the path to education, we also posit that obstacles have a significant effect on our outcomes of interest.

Data Analysis.

We examined the descriptive statistics including frequencies, means, and standard deviations for the constructs and items used in the study, and alpha coefficients of reliability of

the scales. We tested our community college models specifically for Latino student course completion and GPA using structural equation modeling (AMOS) to better understand the relationships between latent and measured constructs and to test causal links between beliefs, intentions and course completion. With this approach we developed an estimate of the role of latent variables on the dependent variable, ratio of course completion (Joreskog & Sorbom, 1984).

Results

Table 1 provides descriptive statistics regarding the nine campuses of the LACCD. Note that despite variation, Latino students are well-represented in the district. Table 2 provides the descriptive statistics of all of the constructs used in the models as well as the reliability coefficients for scales. Figure 2 provides the final model for course completion while Figure 3 provides the model when GPA was substituted for the final dependent variable.

Insert Tables 1 - 4 and Figures 1 and 2 About Here

To ascertain the fit of the models we provide an array of goodness of fit criteria in Table 3. Note that the indicators signify a fairly good fit between the hypothesized model and the data (Bentler & Bonnet, 1980; Byrne, 2001). Another indicator of goodness of fit is the squared multiple correlations that indicate the proportion of variance explained for each of the endogenous constructs. Table 4 provides the squared multiple correlations for the two models. Since both models are identical except for the dependent variable, the proportion of variance explained for all endogenous variables except the final dependent measure remained constant. Also included is the measure of explained variance for the two dependent variables (course

completion and GPA). Finally, we present Table 5 providing the direct, indirect, and total effects for the models.

Conclusions and Policy Implications

Although the model exhibited acceptable measures of goodness of fit, the proportions of variance explained was very low and problematic. We posit that the lack of explanation is due to several reasons. First, we emphasize the need to better understand community college students. Despite using constructs that have been shown to explain student behaviors, the model failed to explain the course completion and grade behaviors of this sample of community college students. Secondly, we posit that while other models of retention employed college GPA we chose to provide two separate models. The problem with including GPA in a course completion or retention model is that both variables are essentially measures of the same underlying behavior having to do with course achievements. To a substantial extent, correlations of the two variables are tautological. Students who do not complete their courses will have a failure or lack of success recorded through GPA.

Our model indicated that the only credible effects on course completion or GPA were age and academic attitude. We found that older Latino students tended to both achieve higher grades and finish their courses. Further, we found a causal link between Latino students who reported a positive academic attitude as measured by behaviors such as finishing homework with outcomes studied herein. In preliminary analyses, prior to the development of the model, we also found support for Dougherty's (1994) observation that there is no link between integration variables and academic outcomes. None of these conclusions were unexpected or add significant new understandings, though the findings do contribute further evidence for these ideas.

The results confirm the necessity of developing distinctive models for the community colleges. The four-year models do not apply here. Leaders on these campuses have long asserted the uniqueness of the community college. These data support their view that their students are likely to have a different experience than their four-year counterparts.

We have not found in this model many of the barriers to academic achievement that are notable at four year colleges. Our construct of "obstacles" included a measure about the difficulty of paying for college. For these students this obstacle did not have a substantial relationship with either course completion or GPA. Similarly, parents' socio-economic status was not correlated with the dependent variables or with our measure of obstacles. This is surely due in part to the distinctively low tuition costs in the California community colleges. We examined many different measures of English language ability, yet we did not find any that were substantially correlated with the dependent variables. In our preliminary analyses with zero-order correlations that underlie our models, we found clear evidence of moderate correlations between English language abilities and difficulties with scheduling classes and participation in the courses, yet there were no correlations between language abilities and the end of the semester measures of course completion and GPA. Moreover, neither the number of work hours nor responsibilities for children manifested substantial relations with the measures of obstacles and academic outcomes. These findings suggest that for the students surveyed here, there is opportunity for academic success that is not dependent on several factors that act as barriers at four year colleges.

One of our variables of interest was the measure created by summing the levels of education abroad. Given that all students included in this model reported their ethnicity as Latino/Hispanic, and that there are large number of immigrants from Mexico and Central

America living in the Los Angeles area, we believe it is a safe assumption that the vast majority of students reporting education abroad would have been schooled in Mexico, with lesser representation of students from Central and South America. While we expected a negative relationship between the level of education in these countries and the two dependent variables, the relationship in fact was small but positive and significant. Thus, not only does going to school in Mexico or Central America not have a negative direct effect on course completion and GPA, but it also appears that those who were educated outside of the U.S. actually had a very slight advantage in both outcomes. This advantage held despite the negative (indirect) effects due to the path through native language and academic attitude. This effect may be due in part to a tendency for immigrant Latino students, who have had some higher education in their native society, to attain college achievements in California than do North American born Latino students.

Despite the small explanation of course completion and GPA, we do note the model's ability to explain a significant proportion (51%) of the variance in the endogenous variable, goal orientation. Specifically we cite the strong relationship between academic attitude (seeing oneself first as a student rather than an employee) and reporting determination to complete goals.

We are compelled to conclude that our model lacks important constructs capable of explaining behaviors such as grade point average and course completion. Although Latino students are the majority in the LACCD, little is understood about them in community colleges. Constructs known for other populations to affect the dependent variables of interest were not adequate for this sample.

The implications for further research are clear. The future of the state of California rests solidly on the education of its citizenry. There is a need to better understand Latino community

college students so that policy can be erected to assist them to successful outcomes. One of the areas for further research concerns comparing the advantages for immigrants in community colleges with the processes whereby immigrant Latino children perform better in California schools that do the California born Latinos.

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Figure 1. Enrollment Trends of the Los Angeles Community College District from 1972 to 2001.

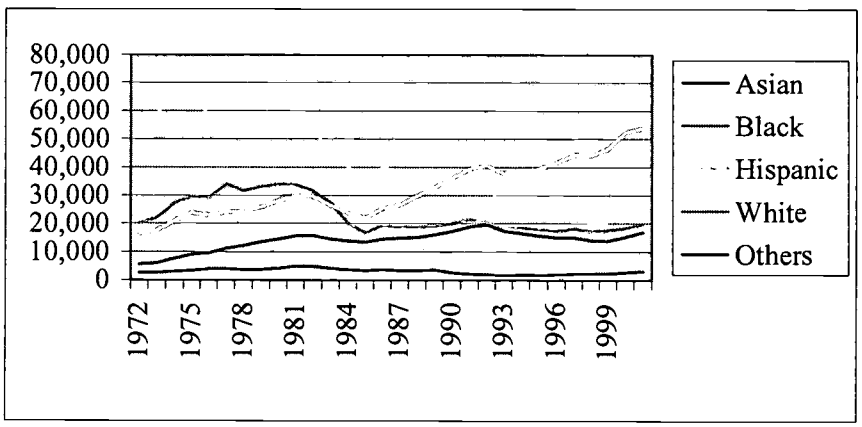


Table 1. Proportion of Campus Student Population Reporting Latino/Hispanic as Ethnicity.

Campus	Total Headcount (all students)	Latino Student Headcount	Campus Proportion of Latino Students	Number of Latino students in Sample
1	9,143	5,991	65.5	346
2	32,630	20,174	61.8	517
3	14,328	7,863	54.8	436
4	19,078	7,384	51.5	298
5	10,356	4,168	40.2	243
6	24,761	8,346	33.7	302
7	8,573	2,532	29.5	69
8	11,232	2,692	23.9	107
9	19,368	4,259	21.9	139
Total	150,209	63,629	42.3	2457

Table 2. Items and Scales used in the model

Scale name and Cronbach's Alpha	Items	Mean (standard deviation), Minimum, and Maximum	
Age	Age measured in years	Mean	24.4224
		Std. Dev.	7.74369
		Minimum	15.92
		Maximum	88.94
SES	Mean of Occupational Status Scores of Parents (Terrie & Nam, 1994). If student reported only one parent, that score was used.	Mean	34.7803
		Std. Dev.	20.81719
		Minimum	.70
		Maximum	99.80
Gender	Your gender: 1=Male 2=Female	Mean	1.60
		Std. Dev.	.489
		Minimum	1
		Maximum	2
Where educated (Extent of education in the U.S. or abroad)	Where did you attend school (in U.S. or another country)? Elementary school Junior high school High school College Note: 1 point per level of foreign education.	Mean	.5782
		Std. Dev.	1.01777
		Minimum	.00
		Maximum	3.00
Beliefs and consequences Alpha = .7216	Influences on decision to come to the particular college (1= very unimportant to 7= very important): Graduates get good jobs Students transfer to good 4-yr schools To get a better job To get a college degree To enroll in a special program or certificate	Mean	5.3054
		Std. Dev.	1.21543
		Minimum	1.00
		Maximum	7.00
# weekly hours employment	1= none to 9= 46 hours or more	Mean	5.55
		Std. Dev.	2.871
		Minimum	1
		Maximum	9
Children	How many children/stepchildren are living in your household? 1=None 2=1-2 3=3-4 4=5 or more	Mean	1.45
		Std. Dev.	.711
		Minimum	1
		Maximum	4
Native Language (Spanish)	Is English your native language? 1=No 2=Yes	Mean	1.30
		Std. Dev.	.458
		Minimum	1
		Maximum	2
Feelings of belonging	I feel I belong at this college (1=Strongly disagree to 7= Strongly agree)	Mean	5.11
		Std. Dev.	1.468
		Minimum	1
		Maximum	7

Obstacles Alpha = .69	How large a problem (1= not a problem to 5=very large problem). Parking Transportation Family responsibilities Job-related responsibilities Paying for college Scheduling classes for next semester Understanding the English language Difficulty of classes	Mean Std. Dev. Minimum Maximum	13.8791 4.98383 1.00 35.00
Aspirations Alpha = .7023	As things stand, do you think you will (1= definitely not to 5= definitely) Transfer to a 4-year college/university Get a bachelor's degree	Mean Std. Dev. Minimum Maximum	4.1366 .97860 1.00 5.00
Student Self Perception	How do you think of yourself? 0= Primarily as a parent who is going to college, or Primarily as an employee who is going to college 1= Solely as a student, or Primarily as a student who is employed	Mean Std. Dev. Minimum Maximum	.5717 .49494 .00 1.00
Academic Attitude Alpha = .6983	1=Strongly disagree to 7= Strongly agree Understanding what is taught is important I always complete homework assignments Success in college largely due to effort I can learn all skills taught in college Enjoy challenging class assignments Expect to do well/earn good grades	Mean Std. Dev. Minimum Maximum	5.9779 .72990 1.00 7.00

English Ability Alpha = 9066.	Ability in English (1= not at all, 2=with difficulty, 3= fairly well, 4=very well) Read Write Understand a college lecture Read a college text book Write an essay exam Write a term paper Participate in class discussions Communicate with instructor	Mean Std. Dev. Minimum Maximum	25.6309 4.83440 10.00 32.00
Goal Orientation Alpha =.7239	1=Strongly disagree to 7= Strongly agree Satisfied when I work hard to achieve I am very determined to reach my goals Impt to finish courses in pgm of studies Keep trying even when frustrated by task	Mean Std. Dev. Minimum Maximum	6.2366 .74216 1.00 7.00
Course completion	Ratio of courses completed with a C or better (or pass) divided by the number of courses enrolled (Spring 2001 –Fall 2001)	Mean Std. Dev. Minimum Maximum	.6235 .24071 .06 1.00
GPA	Average grade point average for courses taken Spring and Fall 2001	Mean Std. Dev. Minimum Maximum	2.4230 .95166 .00 4.00

Table 3. Measures of Model Goodness of Fit

	Course Completion	GPA
Chi Square (degrees of Freedom)	330.656 (70)	350.354 (69)
Goodness of Fit Indices:		
GFI, (goodness of Fit)		
AGFI, (adj. goodness of fit)	.984	.983
PGFI (Parsimony goodness of fit)	.968,	.966
	.506	.499
RMR Root Mean Square Residual)	.243	.248
CFI Comparative Fit Index	.949	.946

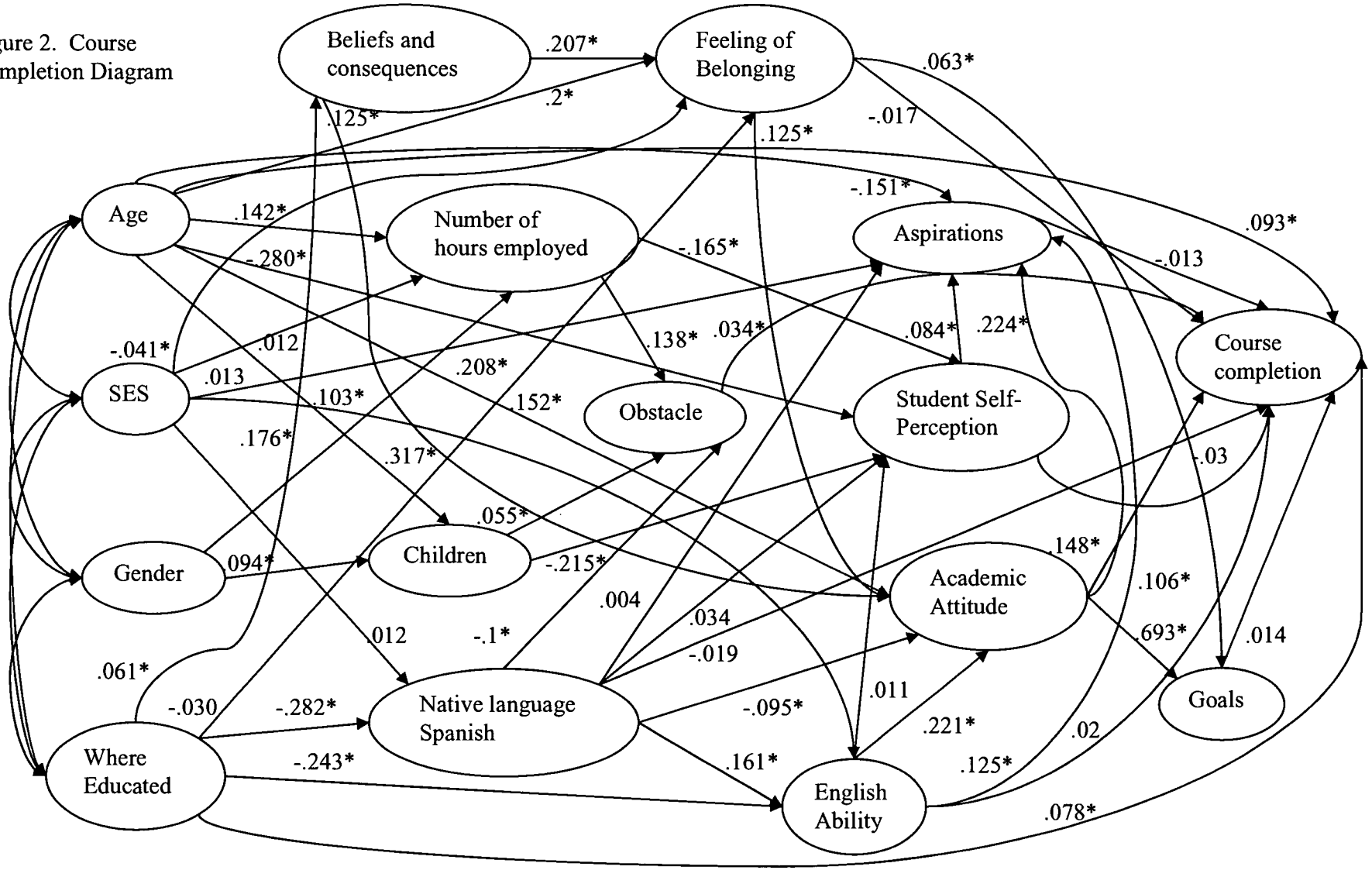
Table 4. Squared Multiple Correlations of Endogenous Variables (Course completion)

	R^2
Beliefs and consequences	.004
Native Language -- Spanish	.112
Feeling of belonging	.082
Number of weekly hours worked	.020
Number of children	.111
English ability	.125
Student self-perception	.212
Academic attitude	.165
Obstacles	.034
Goal orientation	.509
Aspirations	.106
Course completion ratio	.043
GPA	.075

Table 5. Direct, Indirect, and Total Effects for Dependent Variables

	Course Completion			GPA		
	Direct Effects	Indirect Effects	Total Effects	Direct Effects	Indirect Effects	Total Effects
Foreign Education	.078	-.0079	.07	.060	-.0251	.035
Gender	.000	.0008	.001	.000	-.0003	-.000
SES	.000	.0028	.003	.000	.0105	.01
Age	.093	.034	.127	.15	.0256	.176
Beliefs and consequences	.000	.0164	.016	.000	.0303	.03
Native Language	.002	-.0082	-.006	.02	-.0049	.016
Feeling of belonging	-.017	.0279	.011	-.005	.0437	.039
# Weekly hours worked	.000	.0098	.01	.000	.0008	.001
# Children	.000	.0085	.008	.000	-.0027	-.003
English ability	.02	.0229	.043	.046	.0419	.088
Student self perception	-.03	-.0011	-.031	.019	.0016	.020
Academic attitude	.106	.0071	.113	.162	.0158	.178
Obstacles	.034	.0000	.034	.03	.0000	.030
Goal orientation	.014	.0000	.014	.019	.0000	.019
Aspirations	-.013	.0000	-.013	.017	.0000	.017

Figure 2. Course Completion Diagram



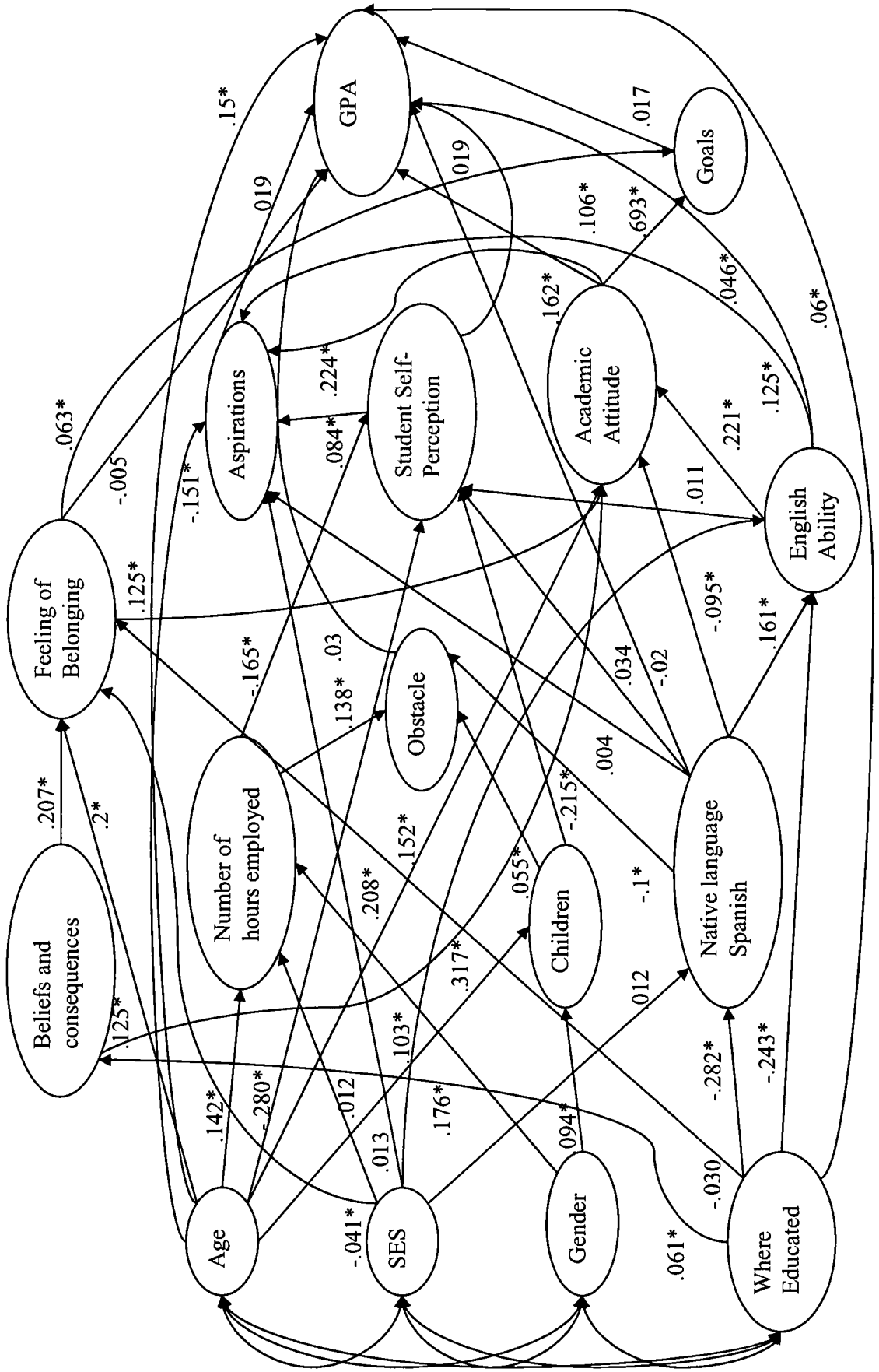


Figure 3. GPA Diagram

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