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Nontraditional students' learning and developmental experiences at two-year institutions: an assessment of Hispanic/Latino(a) students' experiences at selected community colleges in Iowa

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**Nontraditional students' learning and developmental experiences at
two-year institutions: An assessment of Hispanic/Latino(a) students' experiences
at selected community colleges in Iowa**

by

Jaime Hernandez Mijangos

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY

Major: Education (Higher Education)

Major Professor: Larry H. Ebbers

Iowa State University

Ames, Iowa

2001

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has met the dissertation requirements of Iowa State University

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ABSTRACT

Despite the latest substantial increase in Hispanic/Latino(a) students enrollment in Higher Education institutions, more than 20% since 1993 at two-year and four-year colleges and universities and an increased enrollment of 4.7% in community colleges during a one-year period (1996-1997), issues of retention, transfer, and graduation are still the main focus of educational researchers, practitioners, and policy makers. Iowa community colleges have followed similar enrollment trends in the last decade or so when considering the growth of nontraditional students (Hispanic/Latino(a)s among them) entering such two-year institutions. As any other ethnic minority student group, Hispanic/Latino(a) students face a multiple challenges to succeed in their college education and community colleges retention, graduation and transfer are the key areas to inquiry in order to understand the complexity of these educational experiences.

In order to fully understand the nature and dynamics of Hispanic/Latino(a) students' collegiate experience while enrolled in and attending Iowa community colleges, the study was designed to assess: (1) what Hispanic/Latino(a) students experience in their education; (2) the extent they are involved in their learning and developmental pursuits; (3) if there are validating environments fostering their academic and social integration; and (4) how their transfer motivations are enhanced.

Based on the Quality of Effort concept developed by Pace (1984) and the research findings of Rendon's (1996) study of Hispanic community college students, the present study used the mix method approach which utilizes both the quantitative and qualitative

framework. A randomly selected sample of Hispanic students (N=174) was drawn from a set of listings of community colleges throughout the state of Iowa during the 1995 and 1996 academic years. For the quantitative phase of the study, the Community College Student Experience Questionnaire (CCSEQ) was administered to participants to assess such experiences as learning, quality of effort, college environment, and interactions in their classroom and out of the classroom. To complement the first part of the study, a qualitative approach was utilized by designing and conducting focus group sessions to determine further aspects and meaningful themes in community college experiences of Iowa Hispanic students by capturing the students' perceptions in three particular educational themes: Involvement, Validating Environments, and Transfer Intentions and Aspirations.

CHAPTER 1: INTRODUCTION

Background of the Study

Minorities now comprise nearly one-third of the U.S. population. The 2000 Census (U.S. Census Bureau, 2001) lists the population by percentage as follows: White, 68%; Latino (of any race), 13%; African American 12.1%; Asian/Pacific Islander, 3.7%; other races, 2%; and American Indian, 0.7%. Latinos represent the largest minority group, surpassing African Americans by nearly 1.4 million. In particular, the population of Latinos has more than doubled (22.4 mil – 35.3 mil, or +58%) in the U.S. from 1990-2000. Surprisingly, during the same time period, the Hispanic/Latino(a) population in Iowa has more than tripled (32,647 – 82,473, or +153%). This dramatic change in demographics has resulted in a need to revisit the higher educational needs of Hispanic/ Latino(a) students.

Nontraditional students in community colleges (i.e., minorities, older students, first generation students, students from low socio-economic background, students with low high school achievement records) are attending two-year institutions in an increasing trend. For example, Wilds (2000) reported that in 1997 nearly half (46.5%) of all minorities in U.S. higher education attended community colleges.

A case in point is the fact that in fall 1997, 56.6% of Hispanic/Latino(a) students enrolled in public and private colleges and universities were attending two-year institutions (Wilds, 2000). The comparable enrollment for Native Americans was 50% while African American students recorded 42.23%. In contrast, only 36.7% of white students were attending two-year colleges (Wilds, p.77) (see Table 1.1). Moreover, Wilds estimated that,

Table 1.1. Percentage of community college enrollment in two-year institutions versus all institutions for selected years from 1984-1997

Group	1984*	1988	1991	1993	1995	1997
White ¹	35.90	36.00	38.21	37.37	36.80	36.72
Total Minority ²	46.09	46.14	46.78	46.61	46.05	46.54
African-American ¹	42.70	41.86	43.30	42.40	42.13	42.23
Hispanic/Latino/a¹	54.30	56.47	55.82	56.32	55.63	56.57
Asian American ²	42.82	40.00	40.19	40.75	39.52	39.70
Native American ²	42.76	53.76	55.26	51.64	50.38	50.00

¹Nora, 1993, Two-year colleges and minority students' educational aspirations: Help or hindrance? In J. Smart (Ed.), *Handbook of theory and research*, Vol. IX, pp. 212-247.

²Carter & Wilson, 1997, *Fifteenth annual status report (1996-97) on minorities in higher education*. p. 76. Washington, DC: Office of Minorities in Higher Education.

*Calculations for 1984 made by this researcher based on Wilds (2000), p. 77, Table 4, Data: U.S. Department of Education, National Center for Education Statistics, 1994, 1999.

among the four ethnic minority groups, Hispanic/Latino(a) students recorded the largest one-year gain (4.7%) at two-year institutions in 1997.

Overall, the number of Hispanic/Latino(a)s enrolled in U.S. higher education increased 79.2% from 1988 to 1997 (Wilds, 2000, p. 20); this increase was the largest among the four major ethnic minority groups. Without question, Hispanic/Latino(a) community college enrollment has played a crucial role in such growing presence of those students in higher learning institutions.

Despite those increases in enrollment, numerous reports have indicated that Hispanics/Latino(a)s have low high school completion rates, lower college persistence rates than other minority groups (42.3% for 1980 high school graduates), and lower degree completion rates. Those figures are comparable or even higher in two-year colleges (Carter

& Wilson, 1991; O'Brien, 1993; Rendon et al., 1996). Even though educational statistics described earlier shows aggregate data on enrollment and academic progress of Hispanics/Latino(a)s in two-year institutions, it is of paramount importance to review not only enrollment but also the academic performance of those students at regional and state levels. A high percentage of Hispanic/Latino(a) students enroll in community colleges in southwestern states (like Arizona, New Mexico, California, and Colorado), in addition to Illinois, New York, Florida, New Jersey, and Texas, but mid western states (including Iowa) are showing a considerable growth of Hispanic/Latino(a) two-year college enrollment (see Table 1.2).

Table 1.2. Percentages of Hispanic/Latino(a) population by state, compared with percentages of Hispanic/Latino(a) enrollments in two-year colleges

State	National		State	Regional	
	Population (%)	Two-Year College Enrollment		Population (%)	Two-Year College Enrollment
Arizona	9.10	15.10	Indiana	1.00	1.10
California	11.80	18.20	Iowa	0.70	1.10
Colorado	7.50	11.60	Kansas	1.70	2.70
Florida	9.90	13.40	Michigan	1.10	1.75
Illinois	3.50	9.80	Minnesota	0.70	1.20
New Mexico	25.20	31.40	Missouri	0.80	1.10
New York	5.10	9.50	Nebraska	1.30	2.60
Texas	14.60	21.80	Wisconsin	0.90	2.00

Source: Bureau of the Census, 1992; National Center for Education Statistics (NCES), Washington, DC.

Despite these numbers, Hispanics/Latino(a)s remain underrepresented in the number of degrees conferred when compared with their college enrollment. They earned only 7.6% of all associate degrees (with 12.29% of community college enrollment, Wilds, 2000, p.77), 5.3% of all bachelor's degrees, 3.7% of all master's degrees, and 4.6% of all first-professional degrees in 1997 (Wilds, 2000, p. 30). In 1993, white students, who comprised 71.2% of community college enrollment, were awarded nearly 80% of the associate degrees; whereas Hispanic/Latino(a)s comprised 10% of community college enrollment, earned nearly 6% of the associate degrees (p. 82). On the other hand, in 1997, white students comprised 67.25% of community college enrollment but they were awarded with 75.3% of the associate degrees; in contrast with African Americans who comprised 11.7% of enrollment but obtained 9.8% of two-year degrees conferred. Meanwhile, Asian Americans comprised 6% of community college enrollment and obtained 4.4% of those degrees. Lastly, according to the National Center for Education Statistics (1999), American Indian students comprised 1.27% of two-year college enrollment and earned slightly more than 1% of associate degrees conferred.

These statistics provide reasons for concern when nontraditional students register at two-year institutions. In order for those community college entrants to continue their education at four-year institutions and beyond, it is imperative to understand their attrition and retention experiences alike at two-year institutions since it is this process the first step for them to transfer to a four-year institution and eventually their staying after transferring. Several research reports indicate that attrition rates of community colleges students are higher than their four-year college counterparts (Dougherty, 1994; Rendon et al., 1996).

Furthermore, attrition is highest for non-white students, as well as for those with modest academic preparation (Rendon et al., 1996). In other words, nontraditional students are the very students most likely to drop out of a community college.

In their review of the last twenty years of research on the influence of college on students, Terenzini and Pascarella (1991) suggested and discussed eight important issues, one of which reads: "Certain areas of study are particularly in need of attention" p.89; one of two areas of inquiry that those scholars content, is the nature and dynamics of the collegiate experience for significant groups of nontraditional students (e.g., minority students and older students). A unique example of this area of inquiry is the experience (academic and nonacademic) of Hispanic/Latino(a) students at two-year institutions among other nontraditional students.

Purpose and Need

Due to the fact that community colleges are less able than four-year colleges to integrate their students into the academic and social life of the institution, the purpose of this study was to assess the learning and developmental experiences of Hispanic/Latino(a) students attending Iowa community colleges and to seek or learn about institutional factors as well as student-related factors that affect attrition and retention of those Iowa minority students. Considering the level (or lack of) of academic and social integration provided by Iowa community colleges and the Iowa Hispanic/Latino(a) students' characteristics, the degree of interaction and environments during and after the teaching-learning process, the student developmental experiences have been limited to make those at-risk students into

potential learners and successful college participants. During the last ten years, Hispanic/Latino(a) student enrollment in Iowa's 15 community college districts has more than doubled from 1990 through 1999, as indicated by reports from the Iowa College Student Aid Commission (1999) and the Iowa Department of Education Community College Bureau (1999).

Furthermore, in Fall 1999 and according to calculations from the Iowa College Student Aid Commission (1999) data, nearly 35% of the total (undergraduate) Hispanic/Latino(a) students enrolled in Iowa higher education institutions attended two-year colleges (i.e., two-year independent and community colleges), in comparison to nearly 27% enrolled in four-year independent colleges. At the same time, and in terms of total enrollment, two-year colleges in Iowa recorded a total matriculation of students higher than the enrollment at Iowa three-public universities. Another highlight in enrollment is the fact that in Fall 1999, two-year colleges enrolled more students (about 38%) than independent four-year Iowa colleges did (slightly higher than 25%), confirming the pivotal role of the two-year institutions in the Iowa higher education system.

Research Questions

Despite those enrollment gains, Hispanic/Latino(a) students at Iowa community colleges are still underrepresented in terms of retention, graduation, and especially transfer rates. In order to fully understand the nature and dynamics of Hispanic/Latino(a) students' collegiate experience while enrolled in and attending Iowa community colleges, the present

descriptive study was designed to assess their learning and developmental experiences both in the classroom and out of the classroom by posing the following research questions:

1. To what degree are Hispanic/Latino(a) students involved in their Iowa community college experiences?
2. What are Hispanic/Latino(a) students' perceptions of their learning/developmental experiences at two-year institutions?
3. How are Hispanic/Latino(a) students' transfer intentions affected by their academic/social involvement while attending an Iowa community college?
4. To what extent do Hispanic/Latino(a) students experience (or not) a validating environment within college settings and in settings other than college?
5. Are there any differences (in Hispanic/Latino(a) students' experiences) if they attend a "large" community college versus attending a "small" community college in Iowa?
6. What factors significantly affect Hispanic/Latino(a) student's academic achievement success and their transfer aspirations?
7. Are Iowa Hispanic/Latino(a) students' experiences similar or different from their counterparts at other community colleges nation-wide and regionally?

Assumptions

The following assumptions were made in the present study:

1. All participants (subjects) identified themselves as Hispanic/Latino(a) community college students, regardless of their ethnic (subgroup) background and generational history;

2. These students were invited to participate in the study according to a student roster provided by each institution. The students identified themselves as Hispanic/Latino(a) at the time of application, admission and registration processes.
3. During the quantitative data collection process, more than 50% of the respondents declared Spanish as their native language, therefore, it is assumed that those individuals were either proficiently bilingual or they were able to read and understand the whole instrument in the English language;
4. In terms of the qualitative data collection process, the assumption is that “first generation” Hispanic/Latino(a) participants were able to understand the focus group session both in content of inquiries and the meaning of questions – for discussion purposes. In this context, first generation Hispanic/Latino(a) students might be the ones whose native language was Spanish.
5. The validity (internal and external) of the instrument (i.e. Community College Student Experience Questionnaire [CCSEQ] is assumed to have a high value since such an instrument has been tested by its developers for validity purposes (Friedlander et al., 1990).
6. Respondents received a letter of invitation, a copy of the questionnaire, and follow-up calls to participate in the study. Furthermore, some participants met with the researcher while he was visiting their campus. It is the assumption then that subjects’ participation was voluntary.

7. At the same time, it is worth noting that during the qualitative data collection sessions (i.e., focus groups), participants were involved voluntarily after receiving a letter of invitation, follow-up and confirmation phone calls.
8. The subjects in this study were either Iowa residents or Iowa nonresidents, full-time or part-time, but all were attending an Iowa community college at the time of the research phases.

Limitations

The major limitation of the study was that Iowa Hispanic/Latino(a) students were the only participants in the investigation. Therefore, the findings of the research may not be applied to other student populations like minority students in Iowa community colleges, to other nontraditional students elsewhere, or to other two-year colleges, such as independent Iowa two-year colleges or those located nationwide.

Secondly, participant institutions were selected in terms of the Hispanic/Latino(a) population of their “districts,” as well as their size, i.e., “large” vs. “small” community colleges. Thus, generalizing the findings of this research to other community colleges or other ethnic minority populations may not be appropriate and should be approached with considerable care. Next, even though the response rate reached a 45.5% mark, there is no information readily available to determine if non-respondents were similar to respondents.

Finally, since the study has both quantitative and qualitative content, data collection processes relied on self-report both by questionnaire and group interviews. Students may not

be fully aware of their perceptions/feelings or they may be hesitant to provide their real experiences.

Those conditions described previously at may place restrictions on the conclusions of the study. Therefore, the limitations should be taken into consideration when reviewing the findings since this study may be restricted in its application to other situations.

Delimitations

Some of the relevant delimitations of this study were the boundaries of the study, itself, and included the following:

1. By design, the study was limited to public two-year colleges (i.e., Iowa community colleges). Thus, the study does not incorporate independent Iowa two-year colleges which enroll Hispanic/Latino(a) students as well as other non-traditional students.
2. Hispanic/Latino(a) students were the subjects considered in this study, therefore, findings may not be generalized to other student populations (e.g., ethnic minorities, white students, etc.).
3. In terms of the quantitative research design portion of the study, a questionnaire (i.e., the CCSEQ) was applied as a specific-designed data collection device in community college settings.
4. As far as the qualitative research design part of the project is concerned Iowa is the environment where all experiences were assessed. Regional or national settings may be considered but just as a comparison framework when discussion of the findings will take place.

Definition of Terms

In order to establish the frame of reference with which the investigator approached the problem, it was important to define specific terms that were used in this research to avoid any misinterpretation. According to Pyrczak and Bruce (1992) there are two types of definitions usually found in empirical research reports: conceptual definitions, which refer to the general concepts; and operational definitions, which define traits in concrete, step-by-step physical terms.

Hispanic. This term has been used by the Bureau of the Census as an *ethnic* label and not to denote a race because Hispanics belong to all of the human races. Furthermore, Hispanic as an ethnic label is the product of a decision by the Office of Management and Budget (OMB) in 1978 to operationalize the label as: “A person of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race” (Federal Register, 1978, p. 19, 269).

Latino(a). This label has been proposed recently by a number of individuals including various social scientists. It is perceived as more accurately reflecting the political, geographical, and historical links present among the various Latin American nations (Marin & VanOss-Marin, 1991). It is worth noting that the term “Spanish speaking person” was used in Iowa in the middle 1970s to identify those individuals of Hispanic/Latino(a) descent as described in different reports like “*Conoceme en Iowa*” (Iowa Governor’s Spanish Speaking Task Force, 1975).

First Generation Hispanic/Latino(a). Those individuals born in Latin America whose parents (both) were born in Latin America;

Second Generation Hispanic/Latino(a). Those nationals born in the United States whose parents (both) were born in Latin America.

Third Generation Hispanic/Latino(a). An individual who was born in the United States and whose parents were born in the United States as well, and whose grandparents were also born in Latin America.

Nontraditional students. Those college participants like minority students (including Hispanic/Latino(a)s), first-generation students, older students, part-timers, working-class students, those employed while attending college, those with low socioeconomic backgrounds, and those with modest high school achievement records.

Organizational Outline

Throughout this study, the terms Hispanic and Latino(a) are used interchangeably to identify the same ethnic minority student population that was the subject of the present research project. Chapter 1, the introduction, is followed by the corresponding literature review, Chapter 2, on Hispanic students at community colleges and their progress status or background in terms of retention, degree attainment and transfer experiences.

As mentioned previously, the focus of the study was the assessment of learning and developmental experiences of Latino(a) students who attend Iowa community colleges. This section is included in Chapter 3, the methodology.

The results of the study are presented in the Chapter 4. A discussion of the findings and conclusions of the study are presented in Chapter 5, along with the implications for practice and recommendations for further research.

CHAPTER 2: REVIEW OF RELATED LITERATURE

Although there is an extensive amount of material on enrollment in higher education and even a growing body of literature on minorities in education, the enrollment of Hispanic and Latino(a) students is becoming an issue of importance due to the growing numbers of their inclusion into education and the workforce as well. The purpose of this chapter is to identify related literature and discuss research on Hispanics in higher education. The chapter begins by discussing previous research on enrollment, retention, transfer, and persistence of minorities and Hispanics/Latino(a) students nationally. Then, the focus moves to discuss research and issues related to minorities and Hispanics/Latino(a) students at Iowa's community colleges.

Enrollment, Retention, Transfer, and Persistence of Minorities in Higher Education

According to Wilds (2000) the total enrollment among Hispanics in higher education increased 79.2% from 1988 to 1997. This increase the author adds, "the highest among the four major ethnic groups, reflects the growing trend of the U.S. population of Hispanic college-age youths, who have more than doubled in numbers since 1977" (p. 29). By 1997, 1.2 million Hispanic students were enrolled in college, an increase from 680,000 nine years earlier. This chapter reviews the literature on issues and factors related to Hispanic/Latino(a) enrollment, retention, transfer, and persistence when transitioning from high school to community college, four-year institutions and graduate school, and also the theoretical framework which form the basis of the current study.

Enrollment

In terms of community college enrollment, Hispanics recorded a one-year (1996-97) increase of 4.7% and a 23.7% increase since 1993. It is important to note that in 1997 more than 56% of these total students attended two-year institutions, up slightly from 1988 (56.47%). As a quantitative measure of college success, the degrees awarded to Hispanics in higher education show an upward trend. For example, Hispanics recorded gains in all degree categories in 1997, ranging from a low of 2.2% in the number of first-professional degrees earned to a high of 11.7% in the number of associate degrees earned. This high increase (in the number of associate degrees) was the largest one-year increase at this level among all racial and ethnic groups. Both Hispanic men and women contributed to the increase (Wilds, 2000, pp. 29-30).

In spite of progress in the number of degrees earned, Wilds (2000) adds that Hispanics remain underrepresented compared to their college enrollments. They earned 7.6% of associate degrees, 5.3% of bachelor's degrees, 3.7% of master's degrees, and 4.6% of first-professional degrees in 1997, but represented 9% of undergraduate students, 4.5% of graduate students, and 4.7% of professional students that same year. "Why is this phenomenon happening?" is a question that can bring serious discussion as an opening statement of the current study.

The problem for this study emerges from the fact that issues of student retention in higher education have been discussed by several researchers during the past 25 years with particular emphasis on four-year institutions. However, until recently few efforts have been made to investigate the college effect on students attending community colleges.

Retention

Gardner (1995) indicated that 26.9% of new students entering four-year colleges do not return to the same institution the following year. The attrition rate for two-year colleges is considerably higher, about 60% and in some cases as high as 80% (Nora & Rendon, 1998). It is pertinent to that minority students face or experiences such challenges from transition, retention, graduation and transfer from community colleges to four-year institutions as shown earlier through the enrollment and degrees earned statistics for Hispanic students.

The current review is intended to identify previous studies related to Hispanic/Latino(a) students in community colleges, including issues of retention and transfer in general and their experiences in particular. In order to plan an appropriate review of literature, several sources were searched for empirical evidence directly related to Hispanic students in community colleges, i.e., retention and transfer issues in general and student experiences in particular. Initial sources of information included the ERIC system, Dissertation Abstracts, library Indexes, Higher Education Abstracts, and Annual Educational Reports. Further sources were identified from citations in books and journals read, like higher education-related journals, community college journals, and conference (papers) proceedings.

Some limitations of the research procedure should be noted: (a) no systematic study of sources outside the United States, and (b) most studies are from published sources and it is well known that published sources are biased toward those with significant results. However, high and low quality studies were included. High quality studies were defined as those that: (a) provided direct empirical data; and (b) had methodology that was interpretable from the

report or research. In the well known report by the National Institute of Education (1984) “Involvement in Learning,” the authors contend that the quality of undergraduate education could be significantly improved if America’s colleges and universities would apply existing knowledge about three critical conditions of excellence: (1) student involvement; (2) high expectations; and (3) assessment and feedback. The report added that “the fact that more learning occurs when students are actively engaged in the learning process has extensive implications for each faculty member and administrator in every institution” (p. 17). The most important implications of this fact can be stated in two fundamental principals about the conditions of educational excellence everywhere:

1. The amount of student learning and personal development associated with any educational program is directly proportional to the quality and quantity of student involvement in that program.
2. The effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement in learning. (p. 19)

These fundamental principles are part of the study framework as described later in this research, both in the quantitative and qualitative approaches—for Hispanic/Latino(a) students learning and developmental experiences at selected Iowa community colleges. In a comprehensive review carried out by Terenzini and Pascarella (1991) on the influences of college on students, conceptual and methodological recommendations were discussed for enhancing future assessment and college impact studies. Out of the eight lessons drawn from such a review, three of them deserve mentioning for their importance and relationship of the literature review to be discussed later in this section.

First, these authors contend that research on conditional effects will be increasingly important, i.e., a conditional effect suggests that the magnitude of the effect is conditional upon, or varies according to, the specific characteristics of the individuals being considered (e.g., minority vs. nonminority, male vs. female, traditional aged vs. older students). They posed questions like: Are the effects of college the same regardless of the students' sex? Race or ethnicity?

Secondly, due to the current literature on college effects is almost exclusively quantitative, greater use should be made of qualitative research methods. Third, the investigations suggest that some areas of study in need of attention include the impact of the academic program and the teaching-learning process; but more important and worthy of inquiry is the nature and dynamics of the collegiate experience for significant groups of nontraditional students. A case in point will be Hispanic/Latino(a) students attending community colleges. "It will be particularly important to experience students' interpersonal experiences in both formal and informal learning settings" (Terenzini & Pascarella, 1991, p. 90).

Even though recommendations were made on how to improve assessment and college impact studies, there was no reference to community college students specifically. Some years later after Terenzini and Pascarella (1991) published their comprehensive review of the last 25 years of research on the influence of college on students, several scholars have conducted studies on collegiate experiences and their impact on learning. A case in point is the work carried out by Anaya (1996) who examined the impact of learning activities and

college environments on learning. However, most of the participating subjects were from four-year institutions and few were of Hispanic/Latino(a) background.

In one additional study, King and Baxter Magolda (1996) assert that viewing the cognitive and affective dimensions of development as related parts of one process, they argue for an integrated view of learning and personal development. From this integrated perspective, these authors add, “the cognitive and affective dimensions are seen as parts of one process; dimensions as seemingly distinct as knowledge construction, meaning making, and awareness of self are presumed to be integrated within the developing human being” (p. 163). This perspective may be applicable to the current study since it relates the learning and developmental experiences of students.

In a third experience-related scholarly work, Terenzini et al. (1996) conducted a literature review which was intended to examine the effects of students’ out-of-class experiences on academic, intellectual, or cognitive learning outcomes. These authors focused their attention to those aspects over which student affairs professionals have some control through policy or programmatic interventions. Again, most of the research literature was related to four-year institutions, white, traditional-age, full-time students. However, some of their conclusions might be applicable (as references) to community college students in general and Hispanic/Latino(a) students in particular.

The literature mentioned previously is only a partial description of collegiate experiences studies and they were briefly commented to open the next section which will focus on Hispanic/Latino(a) students in community colleges. Despite some critics of the community college, as discussed by Dougherty (1994), community colleges represent a

gateway with opportunity for disadvantaged students, Hispanic/Latino(a) students among them. Dougherty discusses the competing claims of the critics and advocates of the community college regarding its impact on students. He provides different issues, from enrollment profiles to attrition after transfer (to four-year institutions), including at the same time attrition in the freshman and sophomore years as community college entrants, and transfer success to senior institutions. Even though community colleges have some constraints in terms of baccalaureate attainment, they have many advantages in terms of access to higher education.

Having briefly introduced the collegiate experiences related work and the role of community colleges for nontraditional students access opportunity to higher education, the following section reviews the literature that is conceptually related to the topic of Hispanic/Latino(a) students in community colleges. Emphasis is placed research related to the learning and developmental experiences.

During the last 15 years, some authors have started conducting studies related to issues concerning Hispanic/Latino(a) students in community colleges through a different set of perspectives ranging from retention to transfer and degree completion at four-year institutions. It is important to note that, even though the high school completion rate for Hispanics/Latino(a) students has increased during the past 20 years, significant gaps continue to exist in the rate at which these students complete high school compared with their African American and white counterparts. Table 2.1. presents the 1977 and 1997 high school completion rates for those groups.

Table 2.1. High school completion rates in 1977 and 1997 for students 18-24 years of age

Group	Percentage	
	1977	1997
White	82.3	82.7
African American	67.5	74.7
Hispanic/Latino(a)	54.7	62.0

Source: Wilds, 2000, pp. 69-70.

However, the percentage of Hispanics/Latino(a)s and African Americans (age 25 to 29) who completed four years of high school held steady in 1997. As indicated in Table 2.2, the proportion of all adults, ages 25 to 29, who had completed four or more years of high school rose only slightly (less than 2.0%) during the last two decades.

The two types of statistics described previously regarding high school completion rates show that Hispanic/Latino(a) students have the most challenging goals to achieve in terms of their educational attainment at the high school level and beyond. Following the 17th Annual Report on Minorities in Higher Education, Wilds (2000) indicated that there was a rise in college participation rates by racial and ethnic groups, with the largest gains by whites.

Table 2.2. High school completion rates in 1977, 1995 and 1997 for students 25-29 years of age

Group	Percentage		
	1977	1995	1997
White	86.8	87.4	87.6
African American	74.4	86.5	86.2
Hispanic/Latino(a)	58.1	57.1	61.8

Source: Wilds, 2000, p. 75.

Table 2.3 indicates college participation rates for high school graduates (ages 18 to 24). Once again, it can be seen that Hispanic/Latino(a) students fall behind other groups (e.g., whites and African Americans) regarding college participation. When noting the educational attainment progress of Hispanics/Latino(a)s cited earlier, one might wonder what are the implications of such relatively low advancement in the last 20 years?

Table 2.3. College participation rates in 1977 and 1997 for high school graduates 18-24 years of age

Group	Percentage	
	1977	1997
White	32.2	45.3
African American	31.5	39.8
Hispanic/Latino(a)	31.5	36.0

Source: Wilds, 2000, pp. 69-70.

Considering that the main theme of the present study is related to college experiences, Attinasi (1989) suggested that, “the nature of college is influenced profoundly by the experiences that occur much earlier in life” (p. 272). An interpretation of this finding may imply that Hispanics/Latino(a)s going to community colleges are bringing such early experiences from their high school environment, family and community. Therefore, those previous experiences may have an impact on their persistence behavior and educational aspirations.

Much has been said about attrition rates of both minorities and non-minorities in community colleges, where the issue continues to be a serious problem (Nora, 1999). Persistence rate figures of community college students for 10 or even 20 years ago were no

different today than those cited in earlier studies according to Nora. This fact confirms the trend of the early figures shown on Hispanic/Latino(a) students' high school completion rates as well as in their college participation rates in the 20-year-period comparison.

Is there a relationship between college educational attainment, and the indicators of high school completion rate and college participation rates? Figures 2.1 – 2.3 provide the current researcher's perception of the dynamics of the community college experience based on a review of the literature on access, admission, retention, transfer and graduation from high school to community college, four-year institutions, and graduate school. This researcher's experience as a former minority student affairs practitioner was also a source revealing the transition process of minority students from high school or community college to a four-year institution and, in some instances, graduate school. The figures not only provide a general idea of the current process, but they also serve as a basis for the revelation of a model developed by this researcher which is introduced at the conclusion of this research.

Figure 2.1 – 2.3 depict factors that contribute to the community college experience. Figure 2.1 highlights the transition from high school to community college and the relationship of three factors (i.e., classroom learning, experience, and out-of-classroom) and their relationship to the community college environment which comprise the learning and developmental experience. Figure 2.2. adds the domains of those learning and developmental experiences (in-the-classroom, out-of-the-classroom, and out-of-the-college setting [external environment]) with a strong relationship among those factors and the personal lives of the students. Finally, Figure 2.3 emphasizes the dropout, stopout and

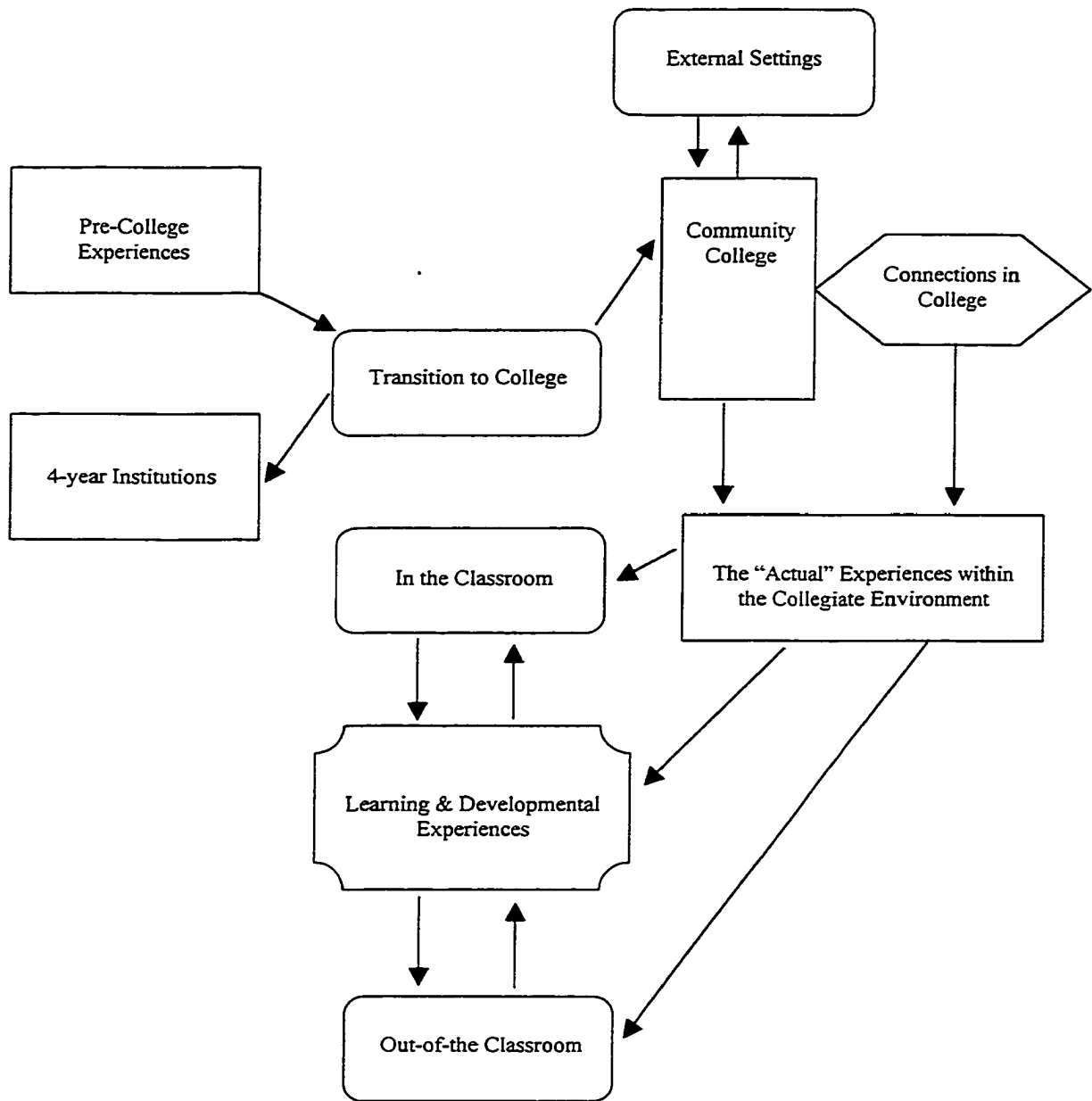


Figure 2.1. The dynamics of the community college experience

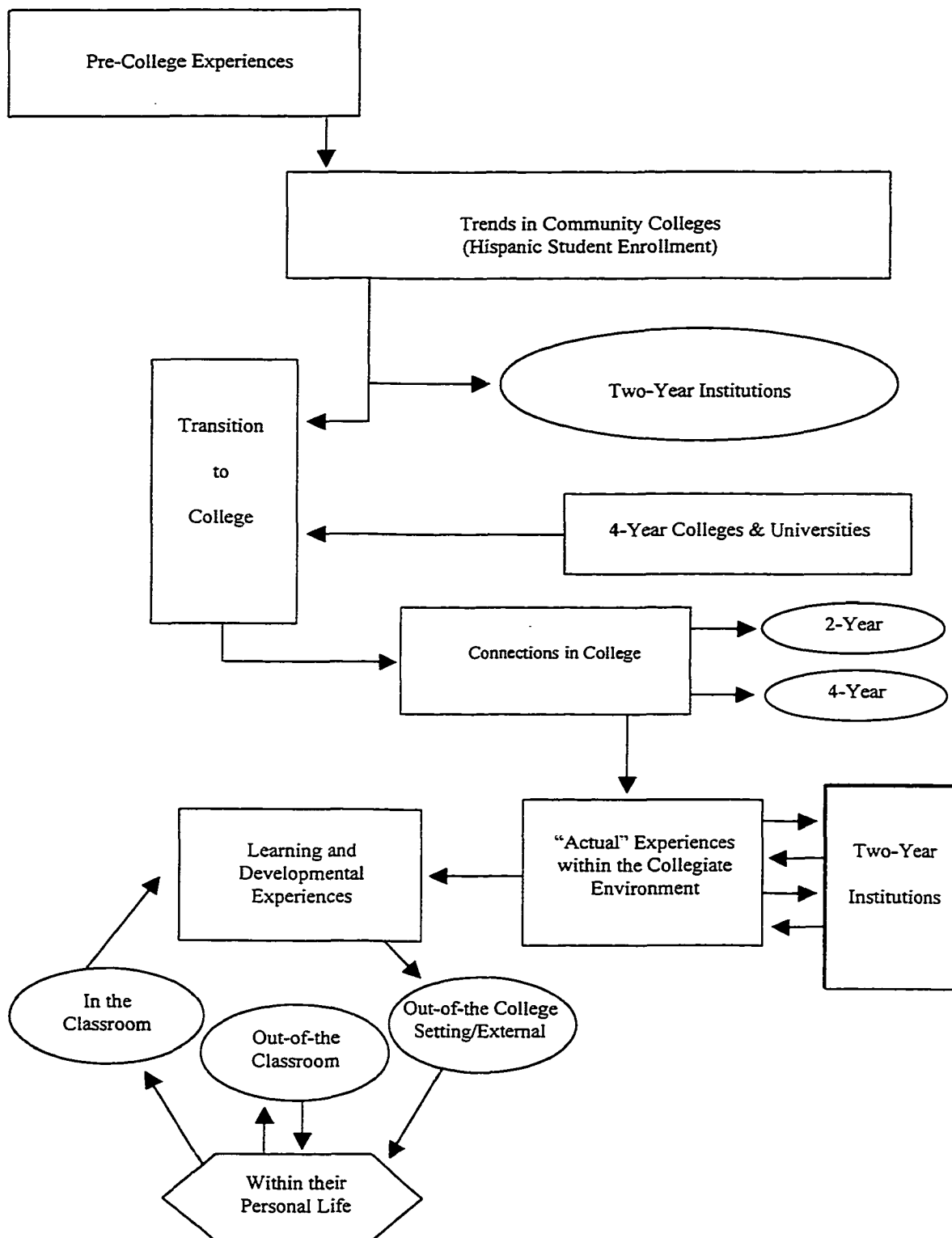


Figure 2.2. The dynamics in the transition from high school to community college and their relationship to learning and developmental experiences

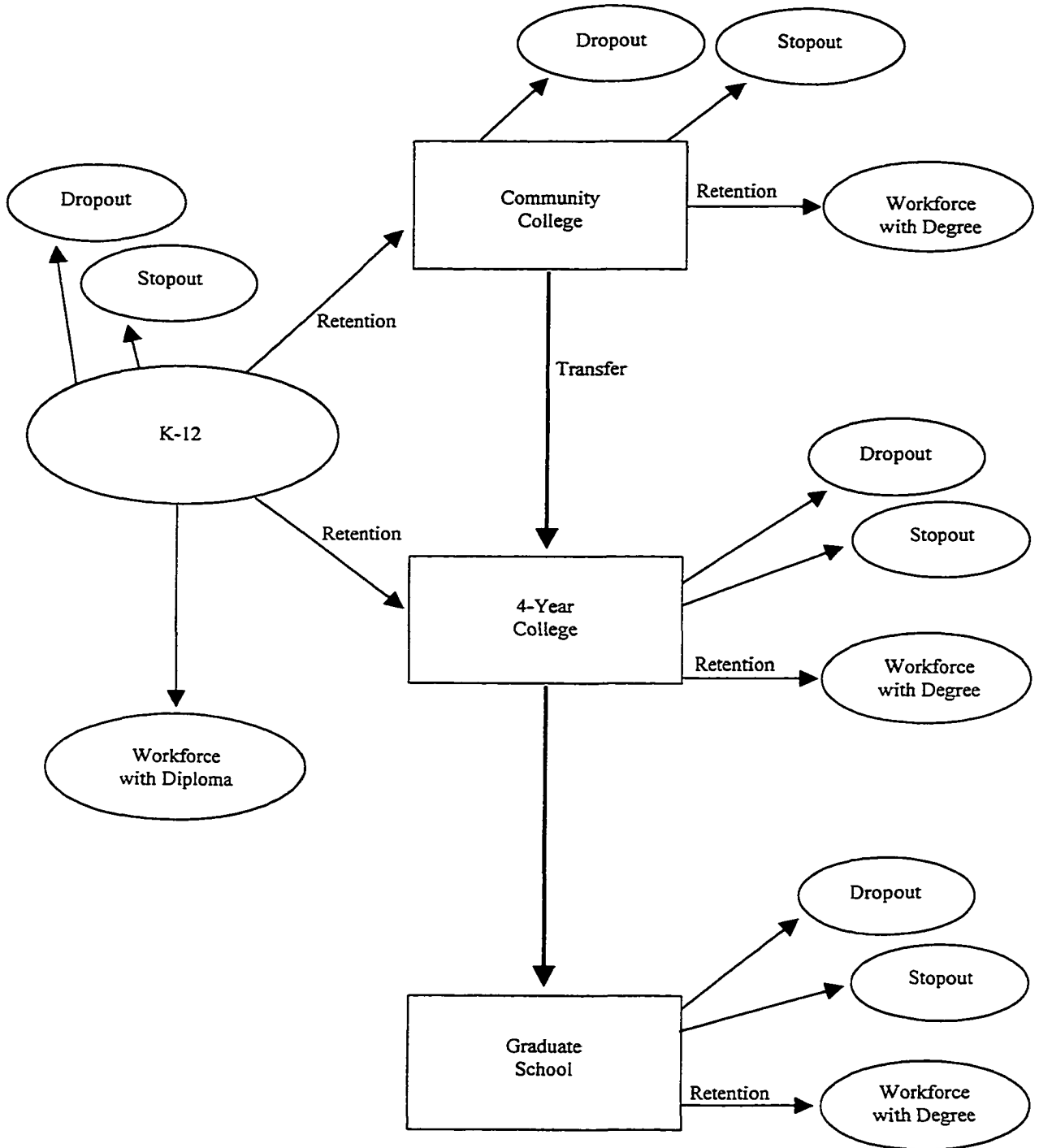


Figure 2.3. The dynamics of dropout, stopout and retention from community college to graduate school

retention of students in community colleges and the similar phenomena when transferring to a four-year college to graduate school. Thus, the three figures show the transition from high school to community college, four-year college/university and graduate school.

As stated previously, the attrition rates of students continue to be a serious problem in most community colleges. From findings of a national study of minority and non-minority student populations in both two-and four-year institutions, Nora and Rendon (1998) concluded that attrition rates for all groups remain high. Moreover, these researchers note that a withdrawal trend at community colleges is still prevalent, specifically with regard to minority student populations (Nora, 1999), including Hispanic/Latino(a) students.

A substantial body of research indicates that students attending community colleges are not as well-situated economically within middle and upper-middle class America, more often are mainly comprised of minorities, with characteristics such as: come less academically prepared from high school, do not possess a high desire to achieve might contribute to the high dropout rates of community college students, among additional factors (Astin, 1977; Tinto, 1987).

However, Astin (1975) found that male and female community college entrants were 10% and 18%, respectively, more likely to drop out of higher education than their four-year counterparts with similar backgrounds, aspirations, and abilities (Dougherty, 1994, p. 86). Nora (1999) noted that Dougherty (1992) had results similar to that of Astin (1975): that even with controls for backgrounds, ability, high school record, and aspirations, community college students are 10 to 18% more likely to drop out of college sometime during their first two years than their four-year counterparts with similar abilities. Nevertheless, Nora (1999)

concluded, student characteristics alone have not explained the high dropout behavior of community college students despite their modest backgrounds and academic strengths.

In agreement with the previous conclusion, a question arises as to the potential factors that influence attrition rates for community college students in general, and Hispanic/Latino(a) students in particular, or determinants that may enhance retention of two-year college students. An institutional factor, stated by Dougherty (1994) and other authors, is that community colleges are less able than four-year institutions to integrate their students into the academic and social life of the institution.

In a study on the persistence of community college students, Bers and Smith (1991) examined the extent to which social and academic integration and student educational objectives, and intentions to re-enroll are predictive of persistence for those students. Bers' and Smith's qualitative design study used an instrument that was previously designed by Terenzini and Pascarella (1991) and largely replicated with the two-year college population to operationalize the concepts of social and academic integration for four-year college students. From the sample size (N=420) and student profile, it was noted that almost 55% were women, with the age group of 16-24 accounting for 67% in comparison with 33% of older students (i.e., 25 or above). Moreover, in terms of ethnicity, minority students accounted for 16% whereas non-minority participants were 83.5%.

In terms of employment outside the home, nearly 36% held a full-time job and 52% worked part-time. The last covariate in the study (i.e., community college program) indicated that about 44% were identified in the transfer program while 56% were pursuing the vocational program.

A factor analysis using the 30 items pertaining to students' academic and social integration to determine if the same factors found earlier by researchers would also emerge with a two-year student population, concluded that the answer was yes. The findings from the study supports but extends what is known of academic and social integration, and students' educational objectives and intent to reenroll, on two-year college student persistence which included the Social and Academic Integration scales by Terenzini and Pascarella (1991). However, two primary methodological differences emerged between this study and earlier studies of student persistence. The study included a sample of all enrolled students rather than first-time, full-time freshmen only. The second difference lies in the alternative definitions of persistence used in this research, i.e., persistence was measured term to term.

Even though this study does not fully concentrate on minority students, or specifically Hispanics/Latino(a)s, it may support future research on both their academic and social integration experiences. In contrast with the previous study (Bers & Smith, 1991), where the sample population included all students already attending a community college and using the definition of persistence as measured term by term, Feldman (1993) conducted a quantitative study to evaluate pre-enrollment variables as predictors of one-year retention of first-time students in community college. The college, located in a rural area of New York State, identified first-time students in Fall 1989 and they were compared to the enrollment of students in Fall 1990. These two sets of students (N=1,140) were compared on factors including: high school grade point average, gender, age, ethnicity, goals, full-time/part-time status, and basic skill need. In addition, to univariate comparisons using chi-square analysis,

logic regression was used to select and order the factors that contribute most to retention (p. 506).

The findings from of Bers and Smith (1991) indicated that the lower the high school GPA, the greater the probability for dropping out. Furthermore, students in the age group 20-24, minorities (excluding Asian), and part-time students each demonstrated higher dropout rates. Participants characteristics in this study indicated that female students accounted for almost 55%, whereas the total minority student percentage was only 5+%, including half of one percent of Hispanics. Full-time students recorded 85.6% of the total sample, and part-time students reached 14.4% of the population. Even though ethnicity was significantly related to retention both on its own and within the logistic regression equation, Hispanic/Latino(a) students were represented by small size and consequently might be misleading when interpreting results. However, minority students (with the exception of Asian-Americans) showed a greater likelihood of dropping out than whites. This conclusion confirms Astin's (1975) assertions regarding minority student attrition. The two studies just reviewed did not include large samples of Hispanic/Latino(a), but they were considered as part of the analysis as a whole.

Regarding Hispanic/Latino(a) student retention research, some scholars (Nora, 1987; Solis, 1995; Rendon & Nora, 1989) have applied statistical models to study factors and/or determinants on retention among Chicano community college students. For instance, Nora (1987) tested a modified version of Tinto's (1975) student attrition model on the Mexican-American student population in three community colleges in southern Texas. Surveys were collected from 227 respondents who were enrolled full-time or part-time in 1977 or 1978.

Nora used structural equation modeling and LISREL to test such a model, and found that his study only minimally supported the relationship between academic integrations and retention but found significantly large direct effects on initial commitment (commitment to goals and to the institution) on retention (Solis, 1995). In other words, two pre-college factors were found to be significant in the retention process reflected in the causal model: high school grades and encouragement by others before entering the community college were determinants of institutional/goal commitments. One important recommendation from Nora's study was a call for further research that looks at Mexican-American student populations from a regional perspective and that helps to identify factors underlying Hispanic/Latino(a) students and their community college experience.

In a second study, Solis (1995) conducted research based on students' perceptions of their probability of success in vocational programs at five community colleges in Texas in addition to the factors that would influence that outcome. Such initial study involved over 1,000 students, including 228 Hispanic students and 225 Hispanic faculties. The main subject of Solis' study was to construct and test possible causal relationships using models of Hispanic student persistence and to compare them with multiple regression models that only examine direct variable relationships.

The models (structural) used personal, financial, family, peer, and institutional factors as causal variables. The effects of these independent variables on the criterion variable (intent to persist) were examined both as direct (through regression analysis) and as indirect (through path analysis). Students completed a mailed questionnaire structured on a Likert-type scale containing questions related to their college experiences, their out-of-college

support systems, financial ability to complete college, and about their intent to persist (p. 7). Solis (1995) concluded that “community college students represent a population that differs from the traditional ones used in earlier persistence models that have used structural equation modeling.” Hispanic and Latino(a) students might be a case in point.

Findings from the study suggest that the assumptions that guide how we counsel Hispanic/Latino(a) students in higher education need to be examined and challenged. What we may consider, Solis adds, as directly influencing Hispanic/Latino(a) students’ decisions to persist in college may function not as direct causes of persistence but rather through other more direct intervening variables. Student retention researchers have suggested that institutions use research specific to their colleges and to their student populations as a basis for designing and implementing student retention programs. However, the findings reported by Solis (1995) suggest that simplistic approaches to institution-specific research might not serve the purpose, but that less obstructive cause-and-effect relationships may exist among the attitudes, perceptions, and experiences of students and their persistence in college.

In reviewing previous research on retention factors that influence Hispanic/Latino(a) community college students, Avalos and Pavel (1993) identified financial aid and academic support as two factors with paramount impact. Studies from Rendon and Nora (1988, 1989) among other educational researchers have indicated similar results. Nora (1990) found that non-campus- and campus-based financial aid awards were more positively related to Hispanic/Latino(a) students’ retention than the students’ high school grades or their cumulative grade point average at the community college. In one study by Fields (1988),

Hispanic/Latino(a) students' low attainment rate was associated with the need to support themselves or their families or with other financial reasons.

In terms of multiple-action programs to enhance retention, Rendon and Taylor (1990) suggest a ten-point action plan for community colleges, for example: to involve the Hispanic/Latino family in the education process, to strengthen the quality of teaching and learning by setting high and reasonable faculty expectations of the students, and continually measuring their learning and growth, to engage students in the academic and social fabric of the college, and to collect student data, among other recommendations.

It is relevant to mention at this point that several researchers have considered Tinto's model of student departure as their framework to study attrition issues on college students in general and community college students in particular. Tinto (1994) contends that, "student departure results not from poor academic skills per se, but from other events which in turn mirror the character of individual goals and commitments, the availability of financial resources, and most importantly, the nature of individual social and academic experiences in college after entry" (p. 2).

In reviewing the literature on ethnic and racial minority enrollments in the two-year college system and the factors that influence retention and transfer, Rendon and Garza (1996) pointed out some of the studies conducted regarding attrition of community college students. Furthermore, these researchers discussed specific issues like surviving the first two years of community college, the transition to college experience, and connections made in college as they impact the retention of students in such settings.

In terms of factors influencing retention, Rendon and Garza (1996) add that “those can be student- and institution-related factors. As several authors have contended, student-related factors include poverty, unemployment, inadequate high school preparation, weak study habits, and lack of clarity in defining academic goals, as well as psychological factors like self-doubt, low self esteem, anxiety, and cultural separation” (pp. 294-295).

As far as institution-related factors are concerned, they are identified by their academic or student services nature. As mentioned earlier in this section, academic factors may include (but they are not limited to) limited class offerings, few minority faculty, a curriculum that omits multicultural perspectives, antiquated teaching styles, a passive learning environment, lax dropping-in and dropping-out policies, and part-time attendance encouragement (Cohen & Brawer, 1982; Rendon, 1994; Rendon & Garza, 1996). Student services factors include among others, diminishing financial aid opportunities, improper counseling and advising, and especially an over-reliance on student-initiated involvement in campus academic and social activities as stated by Terenzini, et al. (1994), Rendon (1994), and others.

Transfer

As discussed earlier in previous sections, enrollment trends and persistence of Hispanic/Latino(a) students in community college play a key role in enhancing the degree completion rates. At the same time, the issue of transfer of community college students to four-year institutions has been the topic of study of educational researchers and practitioners.

In the following section, a review of transfer issue studies literature will take place, with particular emphasis on Hispanic/Latino(a) community college students as it pertains to their intentions, aspirations, and the actual transfer process to four-year institutions. In a study carried out by Nora and Rendon (1990) on student transfer behaviors and attitudes, these researchers aimed their efforts to determine how community college student background characteristics, behaviors, and attitudes exhibited during community college enrollment influenced student predisposition to transfer.

Nora and Rendon (1990) tested a model of student predisposition to transfer on Hispanic and white community college populations by examining the structural relationships among five constructs including: (1) student background factors; (2) initial commitments; (3) social integration; (4) academic integration; and (5) predisposition to transfer. From a total sample of 569 students (422 Hispanics, 74%; and 147 whites, 26%), student background factors were examined to determine their direct and indirect effects on community college students' predisposition to transfer and the direct and indirect effects of initial commitments, social integration, and academic integration on three multiple indicators of the dependent variable predisposition to transfer, i.e., (1) number of four-year institutions students planned to apply for transfer; (2) transfer behavior; and (3) transfer perceptions.

Testing a structural model, Nora and Rendon (1990) supported utilization of factors identified in the retention literature that are based on Tinto's (1987) model to examine transfer attitudes and behaviors among community college students. Findings from this research study indicate that students with high levels of social and academic integration tended to have high levels of predisposition to transfer. An additional interesting finding was

the fact that ethnic background was not significantly related to predisposition to transfer, i.e., being white or Hispanic/Latino(a) has not relationship to high or low predisposition to transfer.

Implications from the findings in this study point to the needs for further research to explain the educational experience of students, as noticed by the authors, as they flow through the community college, not only to understand what is happening to students in such settings but to apply the research outcomes to influence practice and policy (p. 250). Another important aspect related to transfer is the fact that is not so much how many students actually intend to continue their education at four-year institutions but what happens to them after their enrollment in a transfer program of study, i.e., retention and degree completion.

An example of this type of research effort is a study undertaken by Hughes and Graham (1992) on community college transfer students. The objective of such investigation was to examine the relationship between selected characteristics of community college transfer students and their grade-point average obtained during the first semester at a four-year institution. In addition, this research examined individual student performance in relation to the previous background and experience characteristics. For example, this study was designed to evaluate each individual's first semester performance and tie this performance to individual demographic and environmental variables that might be related to making a successful transition from the community college to the senior institution (p. 37).

Utilizing a survey instrument, the variables were organized in three broad categories: demographic or personal characteristics, previous academic experiences and preparation, and items measuring perceptions of the faculty/student interactions and the experiences with

academic advising assistance. The sample size (community college students) was equal to 267 and the analysis approach was based on comparison or contrasting of initial characteristics and experiences with the individual student grade reports at the end of the first semester of coursework at the senior institution.

It is important to mention at this point that from the total number of respondents in the survey, 94% were white students and 52% were male subjects. However, there was no evidence as to the ethnic background of the rest of the participants (i.e., minority students, international students, etc.).

Among some of the findings from the study by Hughes and Graham (1992) include the fact that the initial results portrayed a group of community college transfer students with appropriately diverse experiences and backgrounds. The vast majority, 99%, stated that their families supported their college attendance and almost half indicated that their families were helping financially to support their education. Furthermore, over 60% indicated they studied eight or more hours per week while enrolled at a community college.

The students perceived their previous community college faculty to be interested in students, with one-third stating that the faculty were "very interested" in their students. About the same proportion indicated the faculty was "always" available outside of class. Hughes and Graham (1992) add that the community college transfer students who achieved satisfactory academic progress at four-year institutions did not differ significantly from those who made non-satisfactory academic progress based on family and financial support. Another noteworthy finding was the fact that nearly 42% of the transfer students did not achieve a 2.0 GPA or dropped out prior to the end of the first semester. In spite of the unique

method of assessing performance, the analysis failed, according to Hughes and Graham (1992), to identify academic, environmental or personal characteristics that would distinguish successful academic performance during the first semester after transfer.

“The findings imply that academic performance cannot be accounted for by personal and environmental factors alone” (Hughes & Graham, 1992, p. 42). Their research also suggests that community college transfer students may not have accurate perceptions of the academic expectations of a large research-oriented institution.

While trying to explain some of the results of the study, Hughes and Graham (1992) contended that perhaps students who attended community colleges lack confidence in their ability to succeed at a major university regardless of their abilities or personal backgrounds. Moreover, community college students may find the student culture and related support services so different from their previous experience that they encounter at first.

In terms of further research on this issue, Hughes and Graham (1992) considered future studies to focus on adult students, since traditional-aged students comprised the majority of the sample in this research. In addition, as pointed out by several educational researchers (Rendon & Garza, 1996; Nora & Rendon, 1990; Tinto, 1996; Terenzini, 1991), community colleges provide an important avenue of access for nontraditional student populations, such as minorities (Hispanic/Latino(a) among them) and adult students. Therefore, it is of paramount importance that the variables related to the academic success (and educational achievement) of community college transfer students be identified in order to develop policies, including strategies and programs to enhance their persistence and

graduation from four-year institutions as they continue to strive through the higher education pipeline.

In contrast with the previous research studies cited and regarding to community college transfer students (i.e., Nora & Rendon, 1990; Hughes & Graham, 1992) where the subjects of the studies include Hispanic students and white (male) students, a quantitative approach was used to determine factors affecting Hispanic student transfer behavior. Kraemer (1995) conducted a study to examine the attitudes, cognitive and non-cognitive experiences, and transfer-related behavior of persistence to identify factors associated with successful transfer and college completion. However, this study was a quantitative study and did not include a qualitative framework to extend a rich description of the factors associated with persistence in community college and transfer to a four-year institution.

Applying an undergraduate survey based on Tinto's (1975, 1987) conceptual framework and Cabrera, Nora and Castañeda's (1993) integrated model of student retention, a sample of Hispanic students (N=277) who were mostly female immigrants, provided measures of family concerns, encouragement, social and academic integration, English communication skills, and educational and institutional commitments (p. 303). Using structural equation modeling via LISREL, parameter estimates of causal links (were given) among variable in the hypothesized model. Variables significant for Hispanic transfer students were mathematics ability, academic achievement, and intent to transfer.

As concluded by the author of the study, its results indicated that for this Hispanic student population, graduating from a two-year institution, admissions test scores were a good predictor of college grades (p. 316). In terms of mathematics ability, i.e., a measure of

students' academic potential at entrance was associated with students' academic achievement and indirectly affected both the intent to transfer and actual transfer behavior.

As far as academic achievement is concerned, Kraemer (1995) found it to be highly related to both intent to transfer and actual transfer behavior. In the third variable significant for Hispanic students (intent to transfer) had the strongest impact on transfer behavior in the study. Some of the implications for further research on transfer issues may include, as suggested by Kraemer, testing the transfer model with Hispanic students graduating from other community colleges, (e.g., in Iowa), where they are not a majority, to find out if similar factors have an influence on their intent to transfer and transfer behavior. In addition, a comparative study could be undertaken between Hispanic and non-Hispanic students, to determine if the factors in the model are applicable to both populations. At the same time, the model could also be tested with different student populations (e.g., nontraditional students) to confirm the impact to transfer on transfer behavior.

Other variables might be considered, such as family concerns, had a positive effect on social integration but no relationship to transfer. Since students in the study who transferred may have developed time management skills, these in turn may have enabled them to meet the challenges of transition to another college. Another variable that might be included is work (as another external commitment in the model) since 43% of the graduate in the study indicated that they had worked between 20 and 65 hours a week off-campus (Kraemer, 1995, p. 319).

As mentioned earlier in this part of the project, factors influencing attrition of college students can be classified in two types: student-related factors, and institution-related factors.

As examples of the former we may cite the three previous research studies just reviewed on transfer issues experience by community college students, both white and Hispanic alike, but applying quantitative methods for their analysis.

In a unique approach on Hispanic community college transfer students, Rendon and Valadez (1993) designed a qualitative research study to assess the attitudes of college administrators, faculty, and staff with regard to student achievement and transfer to four-year institutions. By focusing on institution-related factors, those writers were allowed to examine how college culture affects student achievement and progress (p. 29). This study is a component of a larger study by Rendon, Justiz, and Reta (1988) that analyzed several factors influencing student transfer. The main study included data collected from students, faculty, and administrators in six southwestern community colleges. By applying in-depth, focused interviews, data were collected during site visits conducted at the six institutions where participants commented on the policies and practices of their colleges and the impact of institutional culture on hindering or enhancing the flow of Hispanic students from community colleges to four-year college programs of study. From the data analysis, five major themes emerged concerning factors influencing the transfer of Hispanic community college students to four-year institutions. Those factors include: 1) importance of the family; (2) economic considerations; (3) knowledge of the system; (4) cultural understanding; and (5) relationship with feeder schools and senior institutions. From the study's findings, it is pertinent to highlight some of the aspects that identified factors associated with the transfer student experience. First, the study examined the notion that students' home culture and the community college culture, including the incongruence of the two, created barriers to

Hispanic/Latino(a) student progress in higher education. Secondly, the research also suggested that the relationships between high schools, “feeder” two-year schools, and “receiver” four-year institutions were strained and at times uncooperative. Third, it was suggested that white faculty in community colleges are neither prepared for nor informed about cultural differences that affect how Hispanic students set goals and plan their academic careers (p. 35). In a fourth and critical suggestion, the authors contend that community colleges need research-based information to identify factors that both enhance and impede student progress for improving practice and policy. Finally, further research, especially that of a qualitative nature, can probe more deeply into the academic experience of both minority transfer students and all other transfer students as well.

As two of the main concerns/issues facing community college students in general and minority students in particular (i.e., Hispanic/Latino(a) students in this case), retention/persistence, and transfer-related studies have been cited earlier in this section of the literature review. In terms of retention/persistence research, Feldman (1993), and Bers and Smith (1991) conducted quantitative studies on retention and persistence respectively. However, the majority of subjects in the sample were white students, and a small portion of the minority students was identified as respondents for the former (or first) study). In contrast, the profile of students participating in the latter study showed 16.5% of minority students without specific ethnic group breakdown.

Among the earliest studies on Hispanic community college students is the work of Nora (1987) who used a structural modeling approach to test a modified version of Tinto’s (1987) student attrition model on a Chicano (Mexican-American) student population in two-

year colleges. Nora found two pre-college factors to be significant in the retention process reflected in the causal model. “High school grades and encouragement by others before entering a community college were determinants of institutional/goal commitments (p. 54). This study only considered one (even though the largest) of the Hispanic/Latino(a) subgroups. Other student subgroups should be included in future investigations. In suggesting further research in this issue, the investigators pointed out those regional differences among Mexican American student populations (in community colleges in Iowa, for example) should be tested, and sex differences should be explained. Such additional studies should look at Hispanic students and their community college experience as well. In another quantitative study, Solis (1995) developed regression and path analysis models of Hispanic community college students’ intent to persistence; structural equation models were analyzed using confirming factor analysis and path analysis by using the LISREL technique (i.e., SPSS Linear Structural Equation Models). Causal variables included in the models were: personal, financial, peer, and institutional factors. The sample population was equal to 228 Hispanic students who attended one of five community colleges in Texas pursuing a vocational program. It was important to notice that respondents to the mailed questionnaire applied were not identified as Mexican-Americans who might be the majority of those students living in that southern state.

Persistence

The issue of persistence, as a freshman in a four-year institution, was approached next in the current study to determine the relationship between attending college and persistence.

Attinasi (1989) conducted a qualitative study on Mexican-American university students to conceptualize the university-going experience of Chicanos through their perceptions as well as other attending college experiences and attitudes. Using comparable research methods, the college going and persistence of students might follow up findings from this study from other Hispanic subgroups and/or ethnic backgrounds, of other academic levels, and more importantly in other kinds of institutions like community colleges.

As far as the issue of transfer is concerned, previous studies on transfer students have been generally focused on majority (e.g., white) students. For instance, Hugh and Graham (1992) conducted a study of community college transfer students during their first semester at a four-year institution. These educational researchers performed a quantitative analysis in which 94% of the respondents were identified as white students. Participants shared their experiences while attending one community college including interaction with faculty, advisors, counselors, and staff members.

On the other hand, and during the early nineties, researchers have started to investigate the transfer process, its determinants and factors impacting Hispanic/Latino(a) community college students' behaviors, attitudes, and experiences. As mentioned earlier, authors like Nora and Rendon (1990), Kraemer (1995) and Rendon and Valadez (1993) have undertaken studies on Hispanic students by applying quantitative methods (e.g., Structural Equation Modeling) to examine attitudes, cognitive and noncognitive experiences, and transfer behaviors (Kraemer, 1995); testing of a structural model of Hispanic student transfer behaviors and attitudes.

A qualitative study by Rendon and Valadez (1993) found several factors influencing the transfer of Hispanic community college students to four-year senior institutions. Data were collected—via focused interviews—from college officers, staff, and selected faculty. The relevance of this investigation laid on the fact that identify characteristics related to Hispanic/Latino(a) students experiences while in community colleges.

As discussed earlier in this section, retention/persistence and transfer issues on community college students are of paramount importance for educational researchers and practitioners, in particular—those factors or determinants affecting the academic success of nontraditional students including minorities, like the Hispanic/Latino(a) student population at those two-year institutions. There is no doubt that the learning and developmental experiences faced by community college students in general and Hispanic students in particular reflect their academic and personal development while attending those institutions.

In terms of developmental experiences, it is important to note that the different groups of community college students have unique developmental needs and experiences (Ortiz, 1995). Among those groups, one might include the following: underrepresented students (i.e., minority students), transfer-bound students, nontraditional aged students, vocational education students, and female students as members of these particular groups. As far as underrepresented students are concerned—Hispanic/Latino(a) among them, their developmental needs are of particular interest in the present study since their success in college depends not only on their academic endeavors but also on their personal development as individuals.

Chickering and Riesser (1993) stressed the importance of each student achieving autonomy and mastering intellectual, physical, and social competence early in their college career. Some authors, (e.g., Richardson & Skinner, 1992), however, reported that developing intellectual, physical, and social competence may be especially tricky for minority students (p. 64). These students may come to college lacking time management skills and facing economic hardships, in addition to many other disadvantaged situations. For example, they may find it difficult to make friends in a new environment, leading to feelings of isolation in the new setting. Other barriers faced by minority students, Hispanic/Latino(a) among them, include the fact that those students often attend community colleges in nontraditional modes, e.g., part-time and with outside responsibilities. Job duties, family commitments, personal issues, and community connections may leave the student with only enough time and desire to attend class, with little participation opportunities both in courses or activities.

Thus, with limitations or constraints faced by Hispanic students in community colleges, a question arose for further discussion: to what extent are Hispanic students involved in their college experience at two-year institutions in Iowa? To answer this question, previous research and the development of theoretical framework were reviewed.

Minorities and Hispanic/Latino(a) Students in Iowa's Higher Educational System

Few studies have addressed issues pertaining to minorities and Hispanic/Latino(a)s in Iowa. Nevertheless, as the influx, particularly of Hispanics/Latino(a)s into the workforce in Iowa, the enrollment and attendance of this ethnic group in the educational system has risen sharply. According to the U.S. Department of Commerce, Bureau of the Census (1998), the

total number of Hispanic families was 5,318 in 1993. However, as a total population, the number rose sharply to 53,092 in 1997. Between 1990 and 1997, Hispanics have shown the largest increase in both numbers (+20,400) and percentage (+62.6%) of any minority group in the state. According to the Census, this group is expected to be nearly the same in numbers as African Americans, which are traditionally Iowa's largest minority group. This dramatic climb in residency has affected school enrollment. According to the Iowa Department of Education, Hispanics numbered 13,397 in the 1997-1998 academic year, or 31.5% of the total minority enrollment in the state of Iowa. Hispanic students constituted the largest minority group in 43 counties. Figure 2.1 illustrates the number of Hispanics enrolled per county in Iowa's K-12 public schools for the 1997-1998 school year. This enrollment data can provide some indication of the growing trend of enrollment of Hispanic students in higher educational institutions in Iowa. Thus, issues of enrollment, retention, transfer, persistence and graduation of Iowa's Hispanic population are worthy of attention.

Few studies specifically address issues pertaining the Hispanics in Iowa's higher educational institutions. Burke, Goudy and Hansen (1990) of the Department of Sociology at Iowa State University prepared a census of population and housing for the Bureau of the Census, U.S. Department of Commerce. Sample data of educational attainment by race or Hispanic origin indicate that 905 Hispanics, ages 25 and older (i.e., nontraditional students) received associate degrees from community colleges in Iowa by 1990 (see Table 2.4). The total Hispanic population in that age group (i.e., 25 yrs or older) numbered 13,335. This represents almost 7% of persons 25 or older in the state of Iowa.

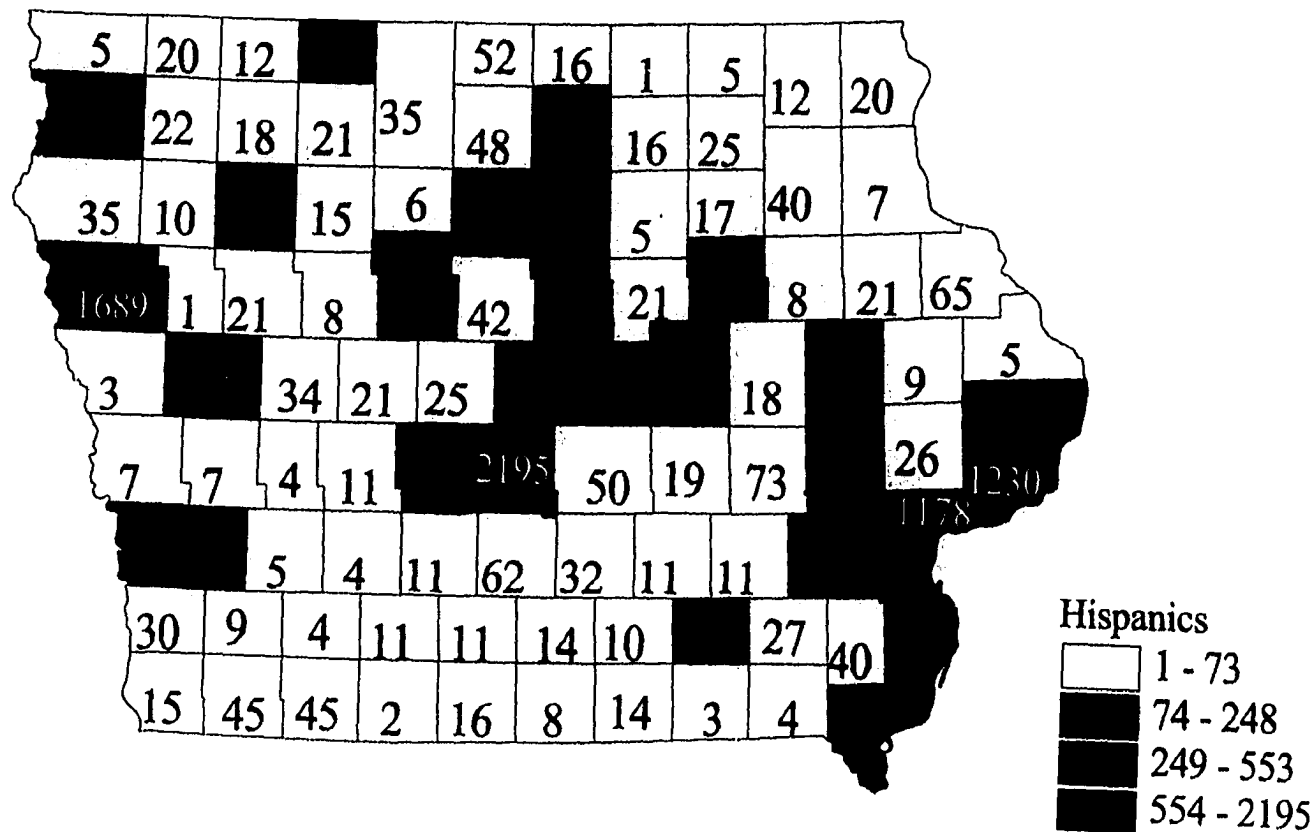


Figure 2.4. Hispanic K-12 enrollment in Iowa's public schools, 1997-1998 school year
 (Iowa Department of Education, mapping data by ArcView 3.0, ESRI, Inc., 1999)

Table 2.4. Educational attainment in 1990 of persons 25 years and over in Iowa by race or Hispanic origin

Category	Total	White	Black	Native American	Asian/ Pacific Islander	Other race	Hispanic origin
Persons 25 and older	1,776,798	1,732,752	23,300	3,911	11,466	5,369	13,335
Less than 9 th grade	163,335	157,596	2,276	454	1,742	1,267	2,513
9 th – 12 th grade, no diploma	190,465	183,122	4,690	812	969	872	2,259
High school graduate or GED	684,368	672,760	7,179	1,236	1,544	1,649	3,784
Some college, no degree	302,600	294,965	4,800	843	1,223	769	2,046
Associate degree	136,638	134,223	1,382	187	566	280	905
Bachelors degree	207,269	202,561	266	266	2,220	281	991
Graduate or professional degree	92,123	87,525	113	113	3,202	251	837

Source: 1990 census data for the state of Iowa (summary tape file 3A), Iowa State University, Department of Sociology, CS92-4, May 1992.

A related study of faculty of minority faculty, of which Hispanics were grouped separately was conducted by the Iowa College Student Aid Commission in 1999. Of a total minority community college faculty (N=88), 39 (44.3%) were African American, 23 (26.1%) were Hispanic, 13 (14.7%) were Native American, and 13 (14.7%) were Asian.

In contrast, the total minority college faculty in all Iowa higher educational institutions in 1999 was 911 (Iowa College Student Aid Commission (1999)). Of this number, 212 (23.27%) were African American, 174 (19.09%) were Hispanic, 43 (4.7%) were Native American, and 482 (53.9%) were Asian. Clearly, the only minority faculty population that increased was Asian (+40%). One of the reasons for this gain in numbers of Asian faculty might be due to large numbers of immigrants of Asian descent joining faculties of higher education, especially in the fields of science and engineering, in Iowa since the relaxed U.S. immigration policies. On the other hand, the numbers declined for other minority faculty. This alarming trend should be investigated, especially since the Hispanic

population has increased dramatically in Iowa. In 1999, the total number of Hispanic/Latino(a) students enrolled in higher educational institutions in Iowa was 3,101, of which 1,078 (greater than one-third) were attending Iowa's community colleges.

Figure 2.5 and 2.6 depict the total community college Hispanic versus total minority student population, respectively, in Iowa's community colleges from 1990 – 1999. The gains in minority and Hispanic enrollment in Iowa's community colleges provide evidence of the need to address issues of enrollment, retention, transfer and persistence, especially due to the mission of community colleges to prepare this total student population (including minorities and nontraditional students for the workforce as well as for transfer to four-year educational institutions and graduate school.

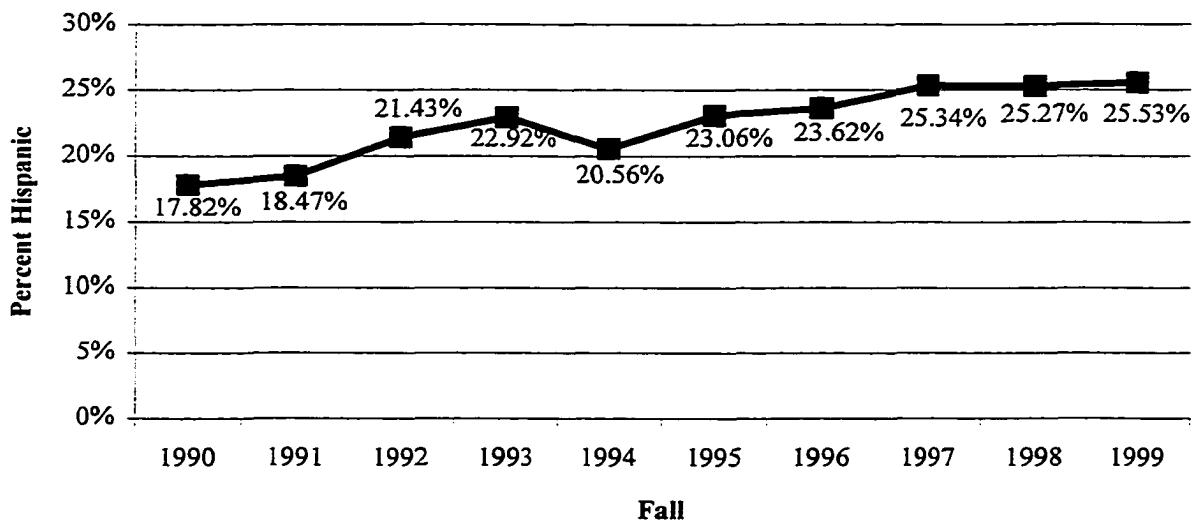


Figure 2.5. Hispanic student enrollment in Iowa community colleges based on the total minority student enrollment, 1990-1999 (Iowa Department of Education, 1999)

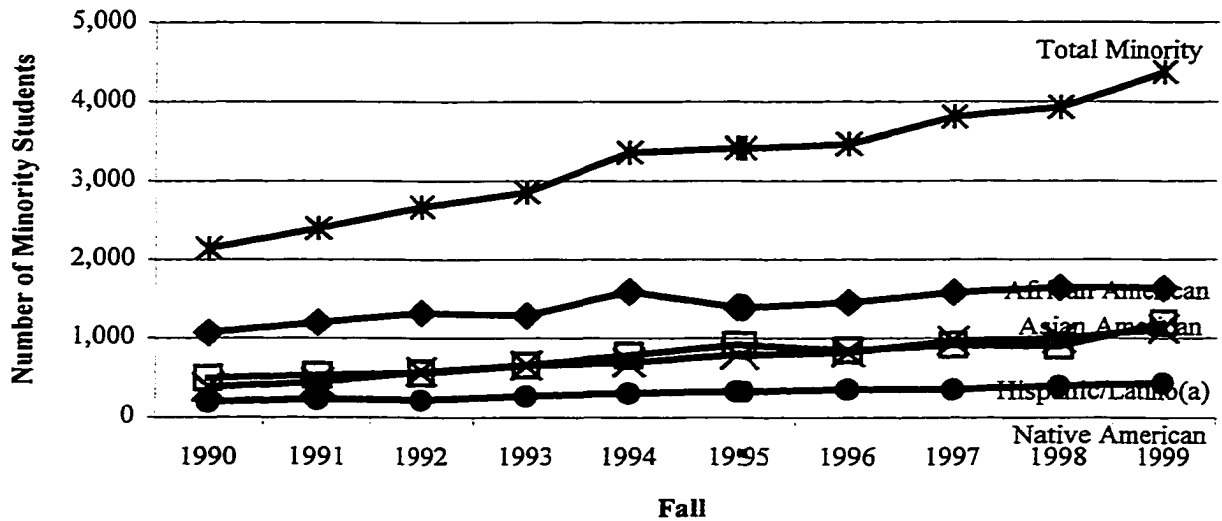


Figure 2.6. Minority student enrollment in Iowa community colleges, 1990-1999 (Iowa Department of Education, 1999).

Theoretical Framework

Even though a substantial body of literature exists on the role of student involvement in their learning experience, particularly on in-class issues such as curriculum, classroom, and faculty, little research has been done on experiences of nontraditional students in community colleges.

As recently as the mid 1990's, some educational scholars, (Terenzini et al., 1994; Rendon, 1994b) have been working on how student learning is affected by student involvement in academic and nonacademic experiences in college. Terenzini et al. (1994) conducted a qualitative study based on Astin's (1995) work on student involvement and on Terenzini's and Pascarella's (1990) review of the last twenty years of research on the effects of college on students. Focus-group interviews were conducted with 132 diverse new

students entering a community college; a liberal arts college; an urban, commuter, comprehensive university; and a large research university. The results of such a study identify the individuals, experiences, and themes in the process through which students did (or did not) become members of the academic and social settings of their campus (p. 57).

Even though only one community college had students as respondents in the study, 15 minority community college students participated in the focus-group interviews (i.e., 60% of the student sample was nontraditional students; overall, more than 42% of the student participants were minority) including those first attending a liberal arts college and two other universities.

Findings from this research indicated that the transitions from high school or work to college are an exceedingly complex phenomenon. Terenzini et al. (1994) contends that the nature of the dynamics of the process vary according to different attributes, such as the purpose and nature of encounters with faculty and staff, and the interactions of all variables involved.

In spite of the process complexity and limitations on the study, a number of potentially important themes emerged which are common across settings and students. Some themes, however, vary within setting or across type of students. In particular, for nontraditional students (primarily first-generation college students) the adaptation to college was far more difficult (e.g., due to their family and educational backgrounds); going to college often constituted a significant and intimidating cultural transition for those students interviewed in the above-mentioned study.

Interestingly enough, for some community college students, the academic and interpersonal activities often overlapped, easing the transition in both spheres (p. 64). Several identified their encounters and interactions as among the most effective learning experiences they had (along with in-class discussions of course material).

Other related themes that emerged in Terenzini et al. (1994) include the role of high school friends and students' family. Another major theme that emerged from the study was what is called "validating" experiences. A case in point is that several nontraditional students from the community college (and from the urban, predominantly African-American, comprehensive state university) experienced serious self-doubts and indicated an array of needs that the investigation came to describe generally as the need for "validation."

According to Rendon (1994b), validation is an enabling, confirming and supportive process initiated by in- and out-of-class agents that foster academic and interpersonal development (p. 44). In other words, validation is a series of in- and out-of-class experiences with family, peers, faculty members, and staff through which students come to feel accepted in their new community (Terenzini et al., 1994, p. 66). Additional findings related to the process of validation were discussed by Rendon (1994b), including active interventions needed for nontraditional students (from significant others) to help them negotiate institutional life, and the fact that involvement in college is not easy for nontraditional students, so validation may be the missing link to involvement, and may be a prerequisite for involvement to occur.

Finally, in terms of the implications of these themes, it is important to recognize the corresponding variations in students' transition experiences. Moreover, and as described

earlier, early validation appears to be a central element in students' successful transition to college. This transition involves both in- and out-of-class experiences, and as contended by Terenzini et al. (1994), "What happens to students outside the classroom shapes in important ways how students respond inside the classroom, and vice versa" (p. 71).

Although the research just reviewed considered first-year students at different types of institutions, learning and developmental experiences of nontraditional students at two-year institutions could be assessed at different points in time during their college years.

In another qualitative study that was part of the research program of the National Center for Postsecondary Teaching, Learning and Assessment, Rendon and Jalomo (1993) conducted such a study of first-year majority and minority community college students. The objective of the research study was to determine the in- and out-of-class influences that impacted students during the first semester in college. This study was further described through two additional (separate) publications by the original authors (Jalomo, 1994; Rendon, 1994a). Three main aspects (or critical dynamics) were considered in assessing the influence of in- and out-of-class experiences:

1. Facilitating the successful transition to college for first-year students;
2. Promoting student involvement with institutional life (i.e., connections on campus);
and
3. Fostering multiple perspectives of how students view themselves as learners.

In terms of college experiences, students went through a wide range of experiences from invalidation to validation that were the result of interacting with in- and out-of-class agents such as faculty, friends and relatives (Rendon, 1994b). Validating experiences were those

when in- and out-of-class agents reached out to students to help them believe that they could be successful college students. Such experiences “were found to be—as contended by Rendon and Jalomo (1993) (cited in Rendon and Garza, 1996, p. 294)—having a significant impact during early stages in the students’ academic career.

At this point, it is appropriate to mention that the two separate papers mentioned earlier have different objectives. For instance, Nora’s (1994, November) work emphasizes the elements, factors and characteristics needed to build validating environments, especially for community college, first-year students. Whereas, Jalomo’s (1994) work looked at four thematic areas: (1) student transitions, (2) student involvement, (3) student perceptions of learning ability; and (4) policy and practice implications.

Even though both reports mentioned the use of the inductive approach to perform their data analyses, the number of community colleges were different since Rendon’s (1994a) reported interviews from focus group sessions at those colleges—in contrast with the four institutions used by Jalomo (1994).

In terms of student participant selection for Rendon’s (1994a) study, a random sample was not selected due to the fact that such a study did not seek to draw inferences to a larger population. Instead, the objective was to describe the first-year experiences of a selected group of students. Jalomo (1994) used the same subject selection criteria because his study’s purpose was not to draw causal connections between his first three first dynamics (i.e., student transitions, student involvement, and students’ perceptions of learning ability) and student retention; rather, it was to comprehend the richness and complexity of these dynamics which have been previously associated with student retention. The intent was also to capture

those dynamics from the students' (own) voices to determine the range of those experiences and to provide insights relative to their experience and perception of these three phenomena.

As a final observation related to the two research reports, community college students were interviewed based on the following criteria: (1) mixed gender; (2) groups of white, African-American, Hispanic/Latino(a) and Asian students; (3) completing their first semester in college; and (4) full-time students. The groups of participants were limited to a single race/ethnic background while conducting the interviews, but were mixed in terms of gender. The design characteristics were used by Rendon (1994a) and Jalomo (1994) to establish the objectives and limitations of their related studies.

Research by Rendon (1994a), Jalomo (1994), and Terenzini et al. (1994) was based on Astin's (1984) theoretical framework for involvement. Their studies focused on student involvement and institutional life (i.e., connections on campus), as well as student perceptions of learning ability and the transition to college for freshman entrants. College students' experiences and perceptions, especially entering students in community colleges, were analyzed to look for meaningful trends and significant attributes. In terms of the concept of "involvement", Pace (1984) used the highly similar term, "quality of effort", rather than "involvement". Pace contended that a student's time (a dimension of frequency) and effort (a quality dimension) are integral to learning and development. Quality of experience and quality of effort are similar concepts, connected with one another in that the likelihood of having high-quality experiences depends on investing high-quality effort" (p. 58). Terenzini et al. (1994) concludes that: "student effort and involvement have been shown to be positively related to gains or changes in a wide array of educational outcomes ...

including various dimensions of verbal, quantitative, and subject matter competence, higher-order cognitive skill development; and psychosocial, attitudinal, and moral development” (p. 58).

In one of the most extensive efforts exerted in operationalizing the concepts of academic and social involvement or integration in the social and academic systems of higher education by college students, Ethington and Polizzi (1995) recognized the contribution of Pace (1984) in developing the College Student Experiences Questionnaire (CSEQ) as a quantitative measurement instrument to assess student experiences at four-year institutions. The development of the CSEQ is based on the concept of “quality of effort”, where the “quality” of that effort arises from the acknowledgement that some kinds of activities require more effort on the part of the student and have greater impact on growth and development than others (Ethington & Polizzi, 1995, p. 1). The instrument contains 14 Quality of Effort scales that, in turn, include different items varying according to the quality effort expended in the activity. The scales in the instrument reflect three domains: academic an intellectual experiences, personal or interpersonal experiences, and group experiences.

Due to a significant difference between four-year institutions and two-year schools, (e.g., community colleges), the Quality of Effort scales were comprised of items reflecting the types of experiences and opportunities provided in four-year institutions, yet they did not necessarily equate to those in two-year colleges. Because of the unique characteristics of two-year community colleges, the CSEQ lacked the ability to assess those students’ experiences of the same level as four-year colleges. Consequently, Friedlander et al. (1990) jointly worked to modify the CSEQ and develop a more suitable measurement instrument

that reflects the opportunities and experiences within two-year institutions. The result was new instrument, the Community College Student Experience Questionnaire (CCSEQ).

The CSEQ and the CCSEQ are both designed to assess the extent of student involvement in desired learning activities in and outside the classroom. However, the CCSEQ focuses on activities most available and related to the quality of effort of community college and two-year students college. The CCSEQ is comprised of eight scales in contrast with the 14 contained in the four-year version (Banta, 1996). These eight scales measure effort experienced in activities closely related to: (1) course and coursework; (2) library usage; (3) interactions with faculty; (4) contacts with student acquaintances; (5) art, music and theater; (6) writing; (7) science and mathematics; and (8) vocational experiences (Ethington & Polizzi, 1995, pp. 2-3). From both the CSEQ and the CCSEQ, one can obtain self-reported measures of the progress students perceive they have made toward achieving specified educational outcomes as a result of their college experiences. Banta (1996) commented that student perceptions of several aspects of the college environment are probed in a third component (i.e., student perceptions of various aspects of the college environment) of the two instruments mentioned above.

As examined by Murrell and Glover (1996), all of the items comprising the Quality of Effort Scales (on the CCSEQ) require incrementally greater effort; items at the end of the list subsume items at the beginning. Scale scores are computed by summing the scores for items in a group. The higher the score on a scale, the greater is the degree of involvement on that scale. On the other hand, the Estimate of Gains section of the CCSEQ measures students' self-reported progress in six areas: (1) Career Preparation; (2) Arts; (3) Communication

Skills; (4) Mathematics, Science, and Technology; (5) Personal and Social Development; and (6) Perspectives of the World.

In terms of students' perceptions about the nature of their college environment, seven questions elicit information about this environment to form the College Environment scale. These items may be applied to develop a satisfaction scale to show how supportive, helpful, and challenging students find the community college environment (Murrell and Glover (1996).

According to Murrell and Glover (1996), data from community college students' experiences can be collected using the CCSEQ to provide community college administrators, faculty, and educational and institutional researchers with a roadmap for operationalizing the theoretical concepts of student involvement and engagement. Examples may include institutional assessment, evaluation and improvement efforts, as well as research on community college students, in general, attending community colleges (Douzenis, 1994; Knight, 1992; Moss & Young, 1995; Preston, 1993); Smith, 1993; Sworder, 1992), and the current study which focuses on students of Hispanic/Latino(a) origin attending Iowa's community colleges. Although the studies mentioned above included small samples of minority students, participation by students of Hispanic/Latino(a) origin was less than 3%. In contrast, the current study focused on this under-represented population.

Since its (first) publication in 1990, the CCSEQ had been administered to students in 56 community colleges by the end of 1994 (Ethington & Polizzi, 1995). Ethington and Polizzi reported the results of a study conducted "to examine the construct validity of the eight Quality of Effort Scales from the CCSEQ for students involved in all administrations of

the instrument from 1990 through 1994. The findings indicated that the measurement of Quality of Effort can be used to make valid and reliable inferences regarding students' effort and involvement, and that the validity of the inferences is not conditional on whether the student is in a vocational or transfer program, attending full-time or part-time, or majority or minority ethnic status."

The previous section related to community college experiences focused on qualitative studies on the transition of first-year community college students including among other sub-groups those of Hispanic/Latino background. Jalomo (1994) and Rendon (1994a) based their initial research on student involvement with institutional life, and later investigated students' perceptions about their learning ability. The approach applied for these studies was the focus group interviewing technique, the same technique used by Terenzini et al. (1994) whose sample population included a community college setting with some minority students participating in an investigation on transition from work or high school to college.

Quantitative measurement of community college students' experiences were conducted based on Pace's (1984) pioneering concept on "quality of effort" to measure the academic and social involvement of students at two-year institutions. The Community College Student Experience Questionnaire (CCSEQ), a standardized self-reporting survey instrument developed by Friedlander et al. (1990), was successfully applied in more than 56 community and two-year colleges across the U.S. for purposes of institutional assessment, evaluation, and improvement efforts as well as research on community college students (Ethington & Polizzi, 1995).

Knight (1992) conducted a comparison study between transfer and technology students at two-year regional campuses of a Midwestern university and a nationwide group of students at 24 community colleges for which CCSEQ results were available. The study sought to provide information about the characteristics, experiences, involvement, gains, and satisfaction of transfer and technology students enrolled in selected regional (Midwestern) campuses.

Other quantitative studies using the CCSEQ instrument include a collaborative effort between a university research center on higher education and an informal consortium developed by the four two-year institutions in West Tennessee (Douzenis, 1994). Data analysis from the CCSEQ respondents (N=478) attending selected community colleges in Tennessee indicated limited involvement of those students in typical college experiences. Another study was conducted by Moss and Young (1995), who used the CCSEQ to collect data on the academic and social integration of under-prepared students at a Midwestern community college. Data were collected from administrators, counselors, faculty, and under-prepared student groups' to ascertain their point of view. The respondents (N=186) were comprised of 104 under-represented students, 21 administrators, 24 counselors, and 37 faculty members. The student sample was comprised mostly of working African American females who were 20 to 39 years old.

Smith (1993) conducted a study on traditional-aged community college students (i.e., those who entered college immediately following high school) to test the impact of various involvement activities of those students based on unit completion (i.e., course credits earned). The effect of quality of effort on persistence (measured through the CCSEQ) used a sample

of 152 respondents from which more than 9% were Hispanic/Latino(a) students and more than 79% were white. In terms of gender, 69% of the total sample was female. Findings indicated that three activities contributed significantly to unit completion by the traditional community college students: (1) higher order library activities; (2) counseling related to transfer; and (3) participation in art, music and theater activities.

Summary

According to the literature review of qualitative and quantitative studies related to influencing college experiences at two-year institutions, no attempts were made to study the learning and developmental experiences of Hispanic/Latino(a) community college students, even though students of this ethnic origin were included in a few of these studies (Jalomo, 1994); Rendon, 1994a; Terenzini et al., 1994). In terms of assessing student effort and involvement using the CCSEQ to determine students' academic and social integration level within their community college setting, no studies were designed to specifically assess the participation of Hispanic/Latino(a) students. One study (Smith, 1993) included nearly 80% white, traditional-aged community college students, however, Hispanic/Latino(a) students comprised less than 3% of the minority sampling. In one study, minority student participants (20%) were identified as African Americans (Douzenis (1994), and, in another study, the minority student participants were primarily working, African American female community-college students. Thus, there is a need to learn specifically about the learning and developmental experiences of Hispanic/Latino(a) community college students experiences. Therefore, present research included a combined quantitative and qualitative research design

incorporating the theoretical framework of Astin (1984) and Pace (1990) to study the learning and developmental experiences of Hispanic/Latino(a) community college students.

CHAPTER 3: METHODOLOGY

Introduction

In order to fully understand the nature and dynamics of Hispanic/Latino(a) students' collegiate experience while enrolled in and attending Iowa community colleges, the present descriptive study was designed to assess their learning and developmental experiences both in the classroom and out of the classroom. During the research design phase, a question arose as to the selection of an approach that would enable the researcher to accurately gain insights from Hispanic/Latino(a) students as to their involvement and integration in the academic and social settings of two-year institutions, as well as the impact of such interactions on their social, academic, and career development.

In terms of assessment studies, certain research designs have a good fit to a certain type of methodology. On the other hand, research can benefit from the selection of multiple methods that include both quantitative and qualitative approaches. As stated by Berkowitz (1996 as cited in Schuh, 1999), "combining qualitative and quantitative approaches in the same study simultaneously benefits from the respect advantage of depth and breath, understanding and generalizability, and closeness to context, as well as standarization across settings" (p. 69). Moreover, Crawford and Christensen (1995, as cited in Drew, Hardman, & Hart, 1996) assert that, "in addition to the situations for which qualitative methods are uniquely suited, researchers can investigate different aspects of the same problem using both qualitative and quantitative methods in mixed methods designs" (p. 165).

According to Jick (1979), "A combined method study (or multiple methods) is one in which the researcher uses multiple methods of data collection and analysis. These methods

might be drawn from “within methods” approaches, such as different types of quantitative data collection strategies (e.g., a survey and an experiment).

Alternatively a research design might involve “between methods”, drawing on qualitative and quantitative data collection procedures (e.g., a survey and in-depth interviews). Due to the nature of the current study on students’ college experience and the type of institution (i.e., community college), a “between methods” approach was preferred to draw on qualitative and quantitative data collection methods: a survey instrument and focus group interviews respectively. In reviewing illustrations of combinations of methods, Grant and Fine (1992, as cited in Creswell, 1994, p.175) identified cases “ranging from observations supplemented with structured, quantitative observations, the mixing of ethnography and experimental research, and the successful combination of survey research and qualitative procedures” (p. 175).

For the quantitative assessment part of this research study, the Community College Student Experience Questionnaire (CCSEQ) was administered to a sample of Hispanic/Latino(a) students who were attending one of the six selected Iowa community college at the time of the actual research work (the 1995-96 academic year). As defined by its developers (Friedlander et al., 1990), the CCSEQ is a standardized self-report survey instrument that provides valuable information about the interactive process between students and the institution. As pointed out by Murrell and Glover (1996), this type of instrument places the responsibility for learning on students and holds them accountable for their utilization of the programs and facilities provided by the institutions (p. 200).

Due to the fact that nontraditional community college students, Hispanic/Latino(a) among them, tend to lack involvement in the academic and social settings of the college

dynamics (Rendon, 1994a), it was decided to select a qualitative method to elaborate and provide a thick, rich description of the initial quantitative results of the current study.

Therefore, for the second component of the mixed-method design, a focus group approach was utilized to conduct interview sessions with groups of Hispanic/Latino(a) students at Iowa's community colleges as it will be described later in this chapter.

There are several advantages for combining qualitative and quantitative methods. For example, Greene, Caracelli and Graham (1989) suggested four purposes for combining methods in a single study:

1. *Triangulation.* Use of multiple sources of information to obtain data, including multiple participants, written documents or records, and other information sources to construct an accurate account for the purpose of building validity into the qualitative research database. This concept is based on the assumption that any bias inherent in particular data sources, investigator, and method would be neutralized when used in conjunction with other data sources, investigators, and methods) in the classic sense of seeking convergence of results (Jick, 1979).
2. *Developmental.* The first method (qualitative) is used sequentially to help inform the second method (quantitative).
3. *Initiation.* Contradictions and fresh perspectives emerge.
4. *Expansion.* The mixed methods add scope and breath to a study.

Methods

This section describes the sources of quantitative and qualitative data collected along with the main characteristics of the measurement instrument used to capture such type of

information. Furthermore, the general procedure carried out during this phase of the project is explained and specific details are discussed as appropriate. The statistical procedure for data analysis is included inasmuch as it affects the results and implications for policy, practice and further research on the issues related to the learning and developmental experiences of Hispanic/Latino(a) community college students in selected Iowa two-year institutions.

As the title of the study implies, Hispanic/Latino(a) students are the subjects selected for the research, and includes those attending one of the Iowa community colleges at the time the data were gathered for this research study. The Hispanic/Latino(a) students who participated in the study were identified through their registration records at the six Iowa community colleges selected. Prior to carrying gathering data for the study, permission was sought and obtained by the community college administration, and the students who signed voluntary participation agreement forms. Rosters were also provided indicating their ethnic background as self-reported by the participants. Copies of these letters are presented in Appendix A.

General characteristics of the subjects

Data concerning the participants in the study were gathered from demographics section of the CCSEQ and from students who participated in the focus groups. Students participating in the study had the following general characteristics:

- Nontraditional students, i.e., adult and returning students;
- Working parent – first (in his/her family) attending college;

- First generation Hispanic/Latino(a)s, i.e., immigrants whose native language was Spanish;
- Second generation Hispanic/Latino(a) Iowans holding a full-time or part-time job; and
- Traditional-aged Hispanic/Latino(a) college students.

The actual profile of the sample population is described later in this subsection under the descriptive statistics discussion.

As indicated previous, this study sought to assess three important college-related types of experiences faced by Hispanic/Latino(a) Iowa community college students:

1. *Involvement*. Extent of social and academic integration);
2. *Learning and developmental experiences*. Includes perceptions, validating environments (at small vs. large Iowa community colleges), and first-time experience contrasting; and
3. *Transfer intentions and aspirations*. Includes factors affecting decision making.

Description

For the first phase of the study (i.e., quantitative approach), the CCSEQ was administered to a sample of Hispanic/Latino(a) students attending one of the six Iowa community college at the time of the data collection (i.e., Fall 1995 and Spring 1996). The sample was drawn by using a “subject pool” approach which, according to Drew, Hardman, and Hart (1996), has certain advantages beyond the economic ones. These authors contend:

A research study is seldom conducted without at least some subject mortality ... when subjects are lost from the sample (as happened in the study herein), the subject pool can then be used as a replacement pool for selecting alternative subjects. The purpose of this procedure is to allow a researcher the

opportunity to replace subjects who are lost or deleted from a study due to procedural errors. (p. 256)

The students were selected randomly from a population of community college enrollees during the 1995-96 academic year when they reached 788 (1.4%) of the total Iowa community colleges student enrollment (Iowa Dept. of Education, 1999). The subject pool was identified through six (representative) community colleges and community college districts (i.e., I. Central Iowa; II. Eastern Iowa; III. Western Iowa; IV. Mideast Iowa; V. North Central Iowa; and VI. Northwestern Iowa) located throughout the state of Iowa, with an emphasis on those with the largest Hispanic population demographics and student enrollment. After mailing, handing out, or administering the 386 questionnaires (CCSEQ), 174 responses were gathered, for a response rate of 45.5%. Thus, the sample of subjects was defined as N=174.

Careful considerations were given while planning the subject selection and sample characteristics to assure that the selection of subjects for this descriptive study took into account the accuracy of the description, i.e., its external validity. It is appropriate at this point to mention that some of the participants in the quantitative phase of the study were involved in the qualitative part (i.e., focus groups) of the investigation to validate their participation in phase II of the research.

In order to provide a fair representation of the student population under study, six regions from those in which the six community colleges are located, were selected by taking into account the students' enrollment and demographics characteristics, in terms of population density, throughout the state of Iowa. The regions included in the study were:

I. Central Iowa; II. Eastern Iowa; III. Western Iowa; IV. Midwest Iowa; V. North Central Iowa; and VI. Northwestern Iowa.

The data collection efforts made through the administration of the CCSEQ included direct mailing, on-site completion of the instrument, and a follow-up procedure by telephone to ensure a reasonable response rate. The actual response rate was 45.5%.

The CCSEQ was used in this study based on the premise that, as suggested by Douzenis (1994), "in order for meaningful data to be collected, it is essential that community colleges student outcomes be measured with an assessment tool that is designed and tested specifically for use with this population" (p. 263). Furthermore, the CCSEQ is based on the assumption that information regarding participation in activities and degree of involvement of students in the institutional environment can be used, as contended by Faith and Murrell (1992) more provide a more accurate assessment of the quality of learning and development provided to the students at a particular institution. Therefore, the CCSEQ is designed to measure the amount of progress students estimate they have made toward a set of important academic goals, as well as their satisfaction with the institution (Douzenis, 1994; Moss & Young, 1995).

The CCSEQ was tested critically and empirically for its reliability and validity. The reliability coefficient was determined by using Chronbach's alpha as a measure of internal consistency, with the coefficient ranging from .82 to .94 (Lehman et al., 1995). The CCSEQ contains eight quality of efforts scales which are used to determine the patterns of academic integration and an additional eight scales used to figure the patterns of social integration (Douzenis, 1994; Moss & Young, 1995).

After a careful review of the responses, a final sample size of 174 students was achieved. It is important to emphasize at this point that the following data are presented as aggregate information, with no interinstitutional comparisons. The latter is considered in the next chapter of this research.

Data Analysis

Quantitative and qualitative analyses were conducted to answer the research questions in this mixed-method design. Quantitative methods were used first, followed by qualitative focus groups to provide a rich, thick description of the results from the former. Approval of the research design was granted by the Iowa State University Committee on Use of Human Subjects in Research prior to gathering and analyzing the data. The qualitative and quantitative data analysis procedures are described in the following subsections.

Quantitative

Quantitative analysis procedures were used to gather descriptive statistics about the sample population, (i.e., Hispanic/Latino(a) students at six Iowa community colleges). The data were gathered from the CCSEQ. A copy of the instrument is exhibited in Appendix B.

The CCSEQ has four main sections. The first is the demographic section that seeks information related on 12 variables:

1. age;
2. gender;
3. ethnicity;
4. English language;
5. time spent working on job;
6. effect of job on school work;
7. effect of family on school work;
8. units taken this term;
9. when classes meet;

10. time spent studying;
11. time on campus not in class (per week); and
12. reason for attending institution.

The second section contains eight scales that measure the quality of effort experienced in activities closely related to:

1. course and coursework;
2. library usage;
3. interactions with faculty;
4. contacts with student acquaintances;
5. art, music and theater;
6. writing;
7. science and mathematics; and
8. vocational experiences.

An additional four groups of activity items measure involvement in:

9. clubs and organizations;
10. athletic activities;
11. counseling and career planning; and
12. learning and study skills.

The third section measures estimate of gains. These gains relate to progress made by the students in 23 important educational goals:

1. Acquiring knowledge and skills applicable to a specific job or type of work.
2. Gaining information about career opportunities.
3. Developing clearer career goals.
4. Becoming acquainted with different fields of knowledge.
5. Developing an understanding and enjoyment of art, music, and theater.
6. Developing an understanding and enjoyment of literature (novels, stories, essays, poetry, etc.).
7. Writing clearly and effectively.
8. Presenting ideas and information effectively in speaking to others.
9. Acquiring the ability to use computers.
10. Becoming aware of different philosophies, cultures, and ways of life.
11. Becoming clearer about my own values and ethical standards.
12. Understanding myself—my abilities and interests.
13. Understanding mathematical concepts such as probabilities, proportions, etc.
14. Understanding the role of science and technology in society.
15. Putting ideas together to see relationships, similarities, and differences between ideas.
16. Developing the ability to speak and understand another language.

17. Developing the ability to speak and understand another language.
18. Interpreting information in graphs and charts I see in newspapers, textbooks, and on TV.
19. Developing an interest in political and economic events.
20. Seeing the importance of history for understanding the present as well as the past.
21. Learning more about other parts of the world and other people (Asia, Africa, South America, etc.).
22. Understanding other people and the ability to get along with different kinds of people.
23. Developing good health habits and physical fitness.

The last (fourth) section solicits information about the college environment. Seven items comprise this section:

1. If you could start over again would you go to this college?
2. How many of the students you know are friendly and supportive of one another?
3. How many of your instructors at this college do you feel are approachable, helpful, and supportive?
4. How many of your courses at this college would you describe as challenging, stimulating, and worthwhile?
5. How many of the college counselors, advisors, and department secretaries you have had contact with would you describe as helpful, considerate, and knowledgeable?
6. Do you feel that this college is a stimulating and often exciting place to be?
7. Are there places on the campus for you to meet and study with other students?

The data from the CCSEQ were processed at the Center for the Study of Higher Education, University of Memphis, Tennessee, where the administration unit of the CCSEQ is located. The raw data produced from the responses on the CCSEQ were analyzed using the Statistical Package for the Social Sciences (SPSS). Samples of the data output are given in Appendix C. It is noteworthy to mention that the data collected through the CCSEQ on Iowa Hispanic/Latino(a) students were added to the national (data) bank on community colleges for future and potential sources for applications of information regarding this research.

Qualitative

The purpose of the second part of the study (i.e., Qualitative Method) was to identify further reasons, factors or circumstances that Hispanic/Latino(a) students experience as community college learners. A focus group questionnaire was designed by this researcher to explore the personal insights and of those minority students attending Iowa community colleges. The instrument was reviewed by the Research Institute for Studies in Education (RISE) at Iowa State University, as well the major advisor and several faculty members whose area of expertise was related to focus groups. Revisions were made prior to its use with the focus groups. A copy of the questionnaire is provided in Appendix B. The focus group questionnaire is based on the following three main inquiry areas, with a total of seven questions asked:

1. Involvement
 - a. Describe your involvement while attending a class, i.e., during lectures, lab sessions, field practice or similar activities at your community college.
 - b. Describe your involvement in activities (out-of-the-classroom) related to your community college education.
 - c. What are the factors that encourage or discourage your involvement in your community college education, both in the classroom and out-of-the classroom?
Elaborate.
2. Teaching Perceptions & Learning Realities
 - a. How do you describe your total learning experience as a community college student?
3. Validating Environments.

- a. Who are the people (at your community college) that have given you encouragement, advising, and support to get enrolled, stay in school and be successful in your community college program?
- b. Could you describe your first experience (or encounter) as a community college student?—if so—compare that one with another experience in your second term (or year) at the College.
- c. Who (in your personal life) were the most influential individuals (e.g., parents, relatives, siblings, “significant others”, counselors, advisors, teachers, mentors, role models, etc.)—in terms of your educational accomplishments so far? If so, elaborate.

Finally, the students were given the opportunity to add anything else about their community college experience that the researcher should have asked but did not.

The focus group interviews were held at five different locations throughout the state, for a period of 90 minutes for each session. The locations were based on demographic concentration as defined previously related to Iowa regions. Selected data sheets from the focus groups are provided in Appendix C.

Table 3.1 presents the demographics of the participants who participated in the focus group sessions. Participants were selected by a letter of invitation for those who completed the quantitative questionnaire (i.e., CCSEQ) earlier in the study. The focus group sessions were conducted at each community college where the participants were attending during the time the research was taking place.

Table 3.1. Demographics of the focus groups held at selected Iowa community colleges

Community college	Gender		Total
	Male	Female	
I	2	1	3
II	1	2	3
III	3	1	4
IV	1	2	3
V	4	6	10
Total	11	12	23

Instructions were given to participants at the start of each focus group session to ensure that everyone was informed about the steps of the process. The questions were read to each group in such a way that comments and opinions started to emerge according to the different topics covered by the instrument.

A transcript-based analysis system was used to analyze the results of the data from the focus group sessions. Data were recorded by audiotape, then transcribed were entered onto computers by editing the different focus group sessions that took place as described previously. Organization of the transcripts was made by location (institution) and the question that were asked.

The analysis was carried out by reviewing each question and response at every institution. Then, in a second revision, the most relevant responses to each question were entered in a table (with divisions for each institution) and for all seven questions. Emerging themes were identified by taking into account the three main areas (i.e., framework) of the focus group design: Involvement, Teaching Perceptions/Learning Realities; and Validating Environments.

The interpretive model was applied for writing purposes. This model or style provides a summary description with illustrative quotations (from the focus group data) followed by interpretations. As stated previously, the focus group was designed study the three main areas of experiences that Hispanic/Latino(a) students faced while attending Iowa community colleges: Involvement, Full Experience; and Validating Environments were the specific topics discussed throughout the different sessions.

In terms of Involvement, key questions were posed relating to in-the-classroom interactions and out-of-the-classroom involvement, as well as factors that encourage involvement in both learning settings. Total Experience as a community college student was investigated through the framework defined as Teaching Perceptions and Learning Realities. In the third area, Validating Environments were discussed by posing three questions regarding: validating agents in the college setting and a contrasting question on first experience versus second experience as a community college student. Personal support and family encouragement were also part of the third question regarding validating agents in students' educational achievements.

CHAPTER 4: RESULTS AND FINDINGS

Results and Findings based on Quantitative Data Analysis

The purpose of this study was to assess the learning and developmental experiences of Hispanic/Latino(a) students attending Iowa community colleges and to seek or learn about institutional factors as well as student-related factors that affect attrition and retention of those Iowa minority students. Seven research questions were used to gather data about the nature and dynamics of Hispanic/Latino(a) students' collegiate experience in and out of the classroom:

1. To what degree are Hispanic/Latino(a) students involved in their Iowa community college experiences?
2. What are Hispanic/Latino(a) students' perceptions of their learning/developmental experiences at two-year institutions?
3. How are Hispanic/Latino(a) students' transfer intentions affected by their academic/social involvement while attending an Iowa community college?
4. To what extent do Hispanic/Latino(a) students experience (or not) a validating environment within college settings and in settings other than college?
5. Are there any differences (in Hispanic/Latino(a) students' experiences) if they attend a "large" community college versus attending a "small" community college in Iowa?
6. What factors significantly affect Hispanic/Latino(a) student's academic achievement success and their transfer aspirations?
7. Are Iowa Hispanic/Latino(a) students' experiences similar or different from their counterparts at other community colleges nation-wide and regionally?

The following are the results from the sample used to obtain background information on students' demographics and related characteristics as community college learners. As shown in Table 4.1, nearly two thirds (63.8%) of the students in the sample were female. This mirrors a similar percentage in several studies that applied the CCSEQ (Douzenis, 1994; Moss & Young, 1995; Smith, 1993). The age cohorts were 20-22 (27%), 23-27 (27%), 28-39 (20.7%), 18-19 or younger (14.9%), and 40-55 (10.3%). In terms of ethnicity, it was evident that participating students were of Hispanic/Latino background as indicated by their self-identification (nearly 99%).

It is important to note that almost 55% of the students in the sample were not non-native English-speaking individuals, or Hispanic/Latino(a) foreign born or immigrants. More than two-thirds of the students (67.8%) reported that they worked from 1 to 40 hours or greater a week whereas nearly one-third (32.2%) reported they had no job. Of the students who worked, slightly more than one-fifth (21.2%) spent from 1-20 hours on-the-job, nearly two-fifths (38.5%) spent from 21-40 hours on-the-job, and less than one-tenth (8%) worked more than 40 hours (Table 4.1).

On the other hand, nearly half of students (47.1%) indicated that they attended school full-time in addition to having a job and family responsibilities. In fact, half of the student sample mentioned that their jobs affected their schoolwork, and more than 44% said that family had affected their schoolwork by taking some or a lot of time for their attention (Table 4.1).

Slightly more than three-fifths of the respondents (61%) mentioned that they typically spent between 1 and 6 hours per week on campus but not in the classroom. Slightly more than two-fifths (42%) of the respondents indicated that the most important reason for

Table 4.1. Student characteristics based on the Iowa Hispanic sample of the CCSEQ

Variable	Percentage (%)
<i>Age</i>	
18-19 or younger	14.9
20-22	27.0
23-27	27.0
28-39	20.7
40-55	10.3
<i>Gender</i>	
Male	36.2
Female	63.8
<i>Ethnicity</i>	
Hispanic/Latino(a)	98.9
<i>English language</i>	
Native	44.8
Non-native	54.6
<i>Time spent working on job</i>	
None, no job	32.2
1-10 hours	6.3
11-20 hours	14.9
21-30 hours	20.7
31-40 hours	17.8
More than 40 hours	8.0
<i>Effect of job on school work</i>	
No job	31.0
Does not interfere	19.0
Takes some time	39.7
Takes a lot of time	10.3
<i>Effect of family on school work</i>	
No family responsibility	28.2
Family does not interfere	27.0
Family takes some time	32.2
Family takes a lot of time	12.1
<i>Units taken this term</i>	
Less than 6	28.2
6 to 8	11.5
9 to 11	13.2
12 to 15	33.9
More than 15	13.2
<i>When classes meet</i>	
Day only	60.9
Evening only	13.8
Some day and evening	25.3

Table 4.1. (Continued)

Variable	Percentage (%)
<i>Time spent studying</i>	
1 to 5 hours	35.1
6 to 10 hours	40.2
11 to 15	14.9
16 to 20	7.5
More than 20 hours	2.3
<i>Time on campus not in class (per week)</i>	
None	20.1
1-3 hours	41.4
4-6 hours	19.5
7-9 hours	10.9
10-12 hours	4.6
More than 12 hours	3.4
<i>Reason for attending institution</i>	
Prepare to transfer	42.5
Skills for new job	38.5
Skills to stay current/advance	11.5
Personal interest	4.0
Improve basic skills	3.4

Note: N=174 (Some items had missing respondents)

attending a community college was for preparation to transfer to a 4-year institution, followed by slightly less than two-fifths (38%) who declared that their primary reason was to acquire skills required for a new job. In general, it appears that these characteristics are representative of the national community college student population as previously pointed (Lehman, 1991).

Table 4.2 – 4.17 contain the results for the remainder of the items on the CCSEQ for the Iowa Hispanic/Latino(a) sample, and an “All Students” sample(N=17,993) collected from 56 colleges across the United States that used the CCSEQ from its initial development through the Fall of 1994 (Lehman et al., 1995, p. 21. The “All Students” sample is included for comparison purposes and is not meant to be norming sample. The sample of institutions

(those authors above add) and students within institutions do not represent a national probability sample, rather a sample of community colleges that chose themselves to administer the above-mentioned questionnaire for a variety of reasons.

Table 4.2 – 4.17 contain the frequencies of responses to items as percentages with the exception of Table 4.17 which shows the means and standard deviations for the Quality of Effort scales. As indicated previously, the CCSEQ is comprised of several sections, namely: background, work, and family; college program; college courses; college activities; estimate of gains; college environment; and additional questions.

Table 4.2 describes the College Courses section, which contains 10 general education areas (i.e., set of courses) taken by the respondents while attending one of the Iowa community colleges. It is worthy to note that the Hispanic/Latino(a) students accounted for a higher percentage (than the “All Students” sample) when taking one or more than one course in English Composition (i.e., nearly 79% vs. 73%), while 64% of “All Students” took one or more than one College Math course in comparison with 58% of the Hispanic/Latino(a) students.

In terms of Foreign Languages courses, nearly 40% of the Hispanic/Latino(a) students took one of these courses versus only 19% of their (“All students”) counterparts. This finding was reasonably expected since nearly 55% of the respondents had their native language as Spanish. It should be noted that some of the student respondents may have taken English as a second language in the ESL (English as a Second Language) Program, but there is no evidence to support this supposition.

Hispanic participants accounted for slightly more than 48% of those students who had taken one or more than one Computer Science course in contrast with 40% of the “All

Table 4.2. Percentage of responses for the College Courses items based on the Iowa Hispanic sample of the CCSEQ

Item	Sample Group	
	All Students*	Iowa Hispanic**
1. Number of courses taken in each general education area		
Sciences		
None	46.0	46.6
One	24.0	28.7
More than one	31.0	24.7
Social Sciences		
None	29.0	26.4
One	25.0	23.6
More than one	46.0	49.4
Fine Arts		
None	65.0	69.0
One	22.0	20.7
More than one	14.0	8.0
College Math		
None	37.0	41.4
One	35.0	40.8
More than one	29.0	17.2
English Composition		
None	27.0	20.1
One	33.0	35.6
More than one	40.0	43.1
Humanities		
None	42.0	46.0
One	25.0	24.7
More than one	33.0	28.7
Foreign Languages		
None	81.0	59.2
One	12.0	24.7
More than one	7.0	14.9
Speech, Communication		
None	55.0	40.8
One	37.0	43.1
More than one	8.0	15.5
Computer Science		
None	61.0	51.7
One	26.0	33.9
More than one	14.0	14.4
Physical or Health Education		
None	52.0	72.4
One	21.0	19.0
More than one	27.0	7.5
2. Working for an AA or AS degree		
Yes	68.0	71.8
No	32.0	27.6

Table 4.2. (Continued)

Item	Sample Group	
	All Students*	Iowa Hispanic Sample**
3. Working for a diploma or certificate		
Yes	60.0	65.5
No	40.0	33.9
4. Plan to transfer to a four year college or university		
Yes	68.0	64.9
No	32.0	35.1
5. Currently enrolled in an occupational/vocational program		
Yes	24.0	39.1
No	76.0	60.9
6. Category of vocational program (of those enrolled)		
Agriculture	1.0	5.7
Business	9.0	7.5
Marketing and Distribution	1.0	5.2
Health	11.0	9.8
Home Economics	1.0	1.7
Technical and Communications	6.0	4.6
Trade and Industrial	7.0	3.4
Other	4.0	4.0

*Source: Lehman, Ethington, & Polizzi (1995). *CCSEQ: Test manual and comparative data* (2nd ed.). Memphis, TN: University of Memphis Center for the Study of Higher Education.

**Present study.

Students” sample. When asked what degree they were pursuing, nearly 72% of Hispanic/Latino(a) students responded that they were working for an Associate of Arts (AA) or Associate of Science (AS) degree, whereas 68% of the “All Students” group indicated the same goal. Sixty-five percent of the Hispanic/Latino(a) subjects stated their plans to transfer to a four year college or university while 68 percent of the “All Students” group declared the same intentions.

In relation to the students’ College Activities, this section of the CCSEQ contains 83 items that are grouped into 12 topics (see Table 4.3 – 4.14). As described by Lehman et al. (1995, p. 7), the first eight groups of items not only produce information concerning

individual activities, but also form eight Quality of Efforts scales which provide an indication of the amount of effort the students put into each of those areas of their college experience. The 12 groups of activity items and the corresponding tables in which they are presented are as follows: (1) Table 4.3 – Course activities; (2) Table 4.4 – Library activities; (3) Table 4.5 – Faculty; (4) Table 4.6 – Student acquaintances; (5) Table 4.7 – Art, music, and theater activities; (6) Table 4.8 – Writing activities; (7) Table 4.9 – Science activities; (8) Table 4.10 – Vocational skills; (9) Table 4.11 – Clubs and organizations; (10) Table 4.12 – Athletic activities; (11) Table 4.13 – Counseling and career planning; and (12) Table 4.14 – Learning and study skills.

As shown in Table 4.3, Hispanic/Latino(a) students accounted for slightly more than 63% in participating (often and very often) in class discussion, whereas the “All Students” sample recorded 53% in the same course activity item. At the same time, respondents from the “All Students” group reached 63% (often and very often) which summarizes major points and information from readings or notes, while the Iowa Hispanic group accounts for more than 71% in the same activity.

When asking questions about points made (often and very often) in class discussions or readings, 51% of the Iowa Hispanic students responded to this course activity in contrast with 44% of the comparative group. On the other hand, studying in a group (i.e., studied course materials with other students), the “All Students” group recorded 36% (on the often and very often scale) while 29% of the Iowa Latino(a) sample performed the same task.

In terms of Library Activities (i.e., items ranging from using the library as a quiet place to preparing bibliographic references), Table 4.4 indicates that Iowa Hispanic/Latino(a)

Table 4.3. Percentage of responses for the Course Activities items based on the Iowa Hispanic sample of the CCSEQ

Item	Sample Group	Response			
		Never	Occasionally	Often	Very Often
1. Participated in class discussions.	All Students	4.0	43.0	33.0	20.0
	Iowa Hispanic	4.0	32.2	37.9	25.3
2. Worked on a paper or project that combined ideas from different sources of information.	All Students	13.0	36.0	35.0	16.0
	Iowa Hispanic	10.3	29.9	37.9	21.8
3. Summarized major points and information from readings or notes.	All Students	7.0	30.0	42.0	21.0
	Iowa Hispanic	7.5	21.3	47.7	23.6
4. Tried to explain the material to another student.	All Students	8.0	47.0	32.0	14.0
	Iowa Hispanic	5.2	50.0	32.2	12.6
5. Did additional readings on topics that were introduced and discussed in class.	All Students	22.0	51.0	20.0	7.0
	Iowa Hispanic	14.9	55.2	17.8	12.1
6. Asked questions about points made in class discussions or readings.	All Students	10.0	46.0	32.0	12.0
	Iowa Hispanic	6.9	42.9	35.6	15.5
7. Studied course materials with other students.	All Students	22.0	42.0	25.0	11.0
	Iowa Hispanic	24.1	46.6	19.5	9.8
8. Applied principles and concepts learned in class to understand other problems or situations.	All Students	7.0	41.0	37.0	14.0
	Iowa Hispanic	4.6	35.1	45.4	14.9
9. Compared and contrasted different points of view presented in a course.	All Students	11.0	47.0	33.0	9.0
	Iowa Hispanic	7.5	46.0	36.8	9.8
10. Considered the accuracy and credibility of information from different sources.	All Students	14.0	47.0	30.0	10.0
	Iowa Hispanic	8.0	44.8	37.4	8.0

Table 4.4. Percentage of responses for the Library Activities items based on the Iowa Hispanic sample of the CCSEQ

Item	Sample Group	Response			
		Never	Occasionally	Often	Very Often
1. <i>Used the library as a quiet place to read or study material you brought with you.</i>	All Students	28.0	38.0	21.0	13.0
	Iowa Hispanic	19.0	42.0	23.0	15.5
2. <i>Read newspapers, magazines, or journals located in the library.</i>	All Students	41.0	38.0	14.0	6.0
	Iowa Hispanic	24.1	42.5	24.1	9.2
3. <i>Checked out books to read at home.</i>	All Students	43.0	38.0	14.0	6.0
	Iowa Hispanic	27.6	45.4	17.8	8.6
4. <i>Used the card catalogue or computer to find books the library had on a topic.</i>	All Students	30.0	38.0	23.0	10.0
	Iowa Hispanic	19.0	36.8	28.2	16.1
5. <i>Prepared a bibliography or set of references for a term paper or report.</i>	All Students	36.0	36.0	20.0	8.0
	Iowa Hispanic	27.6	37.4	20.7	14.4
6. <i>Asked the librarian for help in finding materials on some topic.</i>	All Students	35.0	43.0	16.0	6.0
	Iowa Hispanic	21.8	50.0	18.4	9.8
7. <i>Found some interesting material to read just by browsing the stacks.</i>	All Students	46.0	36.0	13.0	5.0
	Iowa Hispanic	27.0	46.0	21.3	5.7

students made use of the library in higher percentages than their comparison group, particularly in the often and very often scale.

When asked about their interaction with faculty, as indicated in Table 4.5, a smaller percentage (12%) of the Iowa Hispanic respondents indicated that they visited briefly with an instructor after class about course content, which accounted for 30% of the “All Students”

Table 4.5. Percentage of responses for the Faculty Activities items based on the Iowa Hispanic sample of the CCSEQ

Item	Sample Group	Response			
		Never	Occasionally	Often	Very Often
1. <i>Asked an instructor for information about grades, make-up work, assignments, etc.</i>	All Students	9.0	54.0	28.0	9.0
	Iowa Hispanic	12.6	55.7	27.0	4.6
2. <i>Talked briefly with an instructor about course content.</i>	All Students	17.0	54.0	23.0	7.0
	Iowa Hispanic	38.5	49.4	9.8	2.3
3. <i>Made an appointment to met with an instructor in his/her office.</i>	All Students	46.0	42.0	10.0	3.0
	Iowa Hispanic	25.9	46.0	23.6	4.6
4. <i>Discussed ideas for a term paper or other class project with an instructor.</i>	All Students	29.0	50.0	17.0	4.0
	Iowa Hispanic	28.7	48.9	16.7	5.7
5. <i>Discussed your career plans and/or educational plans, interests, and ambitions with an instructor.</i>	All Students	36.0	44.0	15.0	5.0
	Iowa Hispanic	24.7	50.6	20.1	4.6
6. <i>Discussed comments an instructor made on a test or term paper you wrote.</i>	All Students	29.0	51.0	16.0	4.0
	Iowa Hispanic	30.5	40.8	19.5	9.2
7. <i>Talked informally with an instructor about current events, campus activities, or other common interests.</i>	All Students	35.0	44.0	16.0	5.0
	Iowa Hispanic	32.8	47.1	14.9	4.0
8. <i>Discussed your school performance, difficulties, or personal problems with an instructor.</i>	All Students	47.0	39.0	10.0	3.0
	Iowa Hispanic	36.8	36.8	15.5	9.8

group for the often and very often frequency ranking. However, Hispanic/Latino(a) students ranked higher (percentage-wise) when making an appointment to meet with an instructor as well as when discussing comments an instructor made on a test or paper the students wrote. For the item “discussing school performance, difficulties, or personal problems with instructor”, Latino(a) students were more prone to interact with faculty nearly twice as high than their comparative counterpart group (i.e., 13% vs. 25.3% in the often and very often scale).

For the Student Acquaintances Activities responses (Table 4.6), the Iowa sample and the comparative group generally had the same percentage of responses (in the often and very often frequency scale), with exceptions for the item “serious discussions with students who are much older or much younger than themselves” where the “All Students” group accounted for 32% versus 25.3% of the Hispanic subjects.

Discussing and attending Art, Music, and Theater activities is presented in Table 4.7, where the percentages of responses are (for the most part) equivalent or similar for both groups of samples, noting that more than 50% of community college students in both groups never talked about or attended those type of events on campus.

Table 4.8 presents the Writing Activities items that include using a dictionary to spending five hours writing a paper. Some major differences were found (in Writing Activities) between Hispanic/Latino(a) students and their comparative group, for usage of a dictionary (34% vs. 29% of all students sampled in the “very often” frequency scale); preparation of an outline for writing a paper (slightly higher than 40% vs. 34% of all students sampled in the “often” frequency scale); grammar, sentence structure, paragraphs, and word choice when writing (slightly higher than 45% vs. 39% of all students sampled in the “often”

Table 4.6. Percentage of responses for the Student Acquaintances Activities items based on the Iowa Hispanic sample of the CCSEQ

Item	Sample Group	Response			
		Never	Occasionally	Often	Very Often
1. <i>Had serious discussion with students who were much older or much younger than you.</i>	All Students	24.0	45.0	23.0	9.0
	Iowa Hispanic	36.8	36.8	15.5	9.8
2. <i>Had serious discussions with students whose ethnic or cultural background was different from yours.</i>	All Students	32.0	44.0	18.0	6.0
	Iowa Hispanic	35.6	33.9	18.4	12.1
3. <i>Had serious discussions with students whose philosophy of life or personal values were very different from yours.</i>	All Students	30.0	45.0	19.0	7.0
	Iowa Hispanic	39.7	36.2	14.9	9.2
4. <i>Had serious discussions with students whose political opinions were very different from yours.</i>	All Students	42.0	40.0	14.0	5.0
	Iowa Hispanic	50.0	30.5	14.9	4.6
5. <i>Had serious discussions with students whose religious beliefs were very different from yours.</i>	All Students	43.0	39.0	13.0	6.0
	Iowa Hispanic	50.6	32.8	10.3	6.3
6. <i>Had serious discussions with students from a country different from yours.</i>	All Students	49.0	35.0	10.0	5.0
	Iowa Hispanic	49.4	32.8	10.9	6.9

frequency scale); and use of a computer (word processor) to write or type a paper (slightly higher than 56% vs. 35% of all students sampled in the “very often” frequency scale).

Science Activities items ranging from memorizing formulas or terms to explaining the scientific basis for environmental concerns are shown in Table 4.9. The table indicates that more than 50% of community colleges students in both groups never practiced to

Table 4.7. Percentage of responses for the Art, Music, and Theater Activities items based on the Iowa Hispanic sample of the CCSEQ

Item	Sample Group	Response			
		Never	Occasionally	Often	Very Often
1. <i>Talked about art (painting, sculpture, architecture, artists, etc.) with other students at the college.</i>	All Students	60.0	29.0	7.0	4.0
	Iowa Hispanic	56.9	34.5	6.3	2.3
2. <i>Talked about music (classical, popular, musicians, etc.) with other students at the college.</i>	All Students	44.0	37.0	13.0	6.0
	Iowa Hispanic	40.8	38.5	13.2	7.5
3. <i>Talked about theater (plays, musicals, dance, etc.) with other students at the college.</i>	All Students	60.0	30.0	8.0	3.0
	Iowa Hispanic	51.1	36.8	9.8	2.3
4. <i>Attended an art exhibit on the campus.</i>	All Students	73.0	20.0	4.0	2.0
	Iowa Hispanic	70.1	21.8	5.7	2.3
5. <i>Attended a concert or other musical event at the college.</i>	All Students	74.0	20.0	4.0	2.0
	Iowa Hispanic	63.8	28.2	5.7	1.7
6. <i>Attended a play, dance concert, or other theater performance at the college.</i>	All Students	76.0	19.0	4.0	2.0
	Iowa Hispanic	69.0	21.8	6.3	2.9

improve their skills in using laboratory equipment; never showed a classmate how to use a piece of scientific equipment; nor attempted to explain an experimental procedure to a classmate. Moreover, slightly more than 55% of the subjects from both samples never tested their understanding of some scientific principle by seeing if they could explain it to another student; they never completed an experiment/project using scientific methods; and the same percentage above never tried to explain to someone the scientific basis for environmental

Table 4.8. Percentage of responses for the Writing Activities items based on the Iowa Hispanic sample of the CCSEQ

Item	Sample Group	Response			
		Never	Occasionally	Often	Very Often
1. <i>Used a dictionary to look up the proper meaning, definition, and/or spelling of words.</i>	All Students	6.0	30.0	35.0	29.0
	Iowa Hispanic	2.3	25.3	38.5	33.9
2. <i>Prepared an outline to organize the sequence of ideas and points in a paper you were writing.</i>	All Students	14.0	33.0	34.0	19.0
	Iowa Hispanic	5.7	32.8	40.2	21.3
3. <i>Thought about grammar, sentence structure, paragraphs, and word choice as you were writing.</i>	All Students	7.0	20.0	39.0	34.0
	Iowa Hispanic	1.1	18.4	45.4	35.1
4. <i>Wrote a rough draft of a paper or essay and revised it before handing it in.</i>	All Students	11.0	18.0	34.0	38.0
	Iowa Hispanic	5.2	18.4	37.4	39.1
5. <i>Used a computer (word processor) to write or type a paper.</i>	All Students	29.0	18.0	19.0	35.0
	Iowa Hispanic	10.9	12.6	20.1	56.3
6. <i>Asked other people to read something you wrote to see if it was clear to them.</i>	All Students	19.0	33.0	27.0	20.0
	Iowa Hispanic	8.6	29.9	32.2	29.3
7. <i>Spent at least 5 hours or more writing a paper.</i>	All Students	23.0	28.0	25.0	24.0
	Iowa Hispanic	20.7	28.7	25.9	24.7
8. <i>Asked an instructor for advice and help to improve your writing or about a comment he/she made on a paper you wrote.</i>	All Students	30.0	39.0	21.0	11.0
	Iowa Hispanic	16.7	37.9	28.2	17.2

Table 4.9. Percentage of responses for the Science Activities items based on the Iowa Hispanic sample of the CCSEQ

Item	Sample Group	Response			
		Never	Occasionally	Often	Very Often
1. Memorized formulas, definitions, technical terms.					
	All Students	32.0	23.0	26.0	20.0
	Iowa Hispanic	29.3	22.4	33.3	14.9
2. Practiced to improve your skills in using laboratory equipment.					
	All Students	55.0	22.0	15.0	8.0
	Iowa Hispanic	54.0	23.6	16.1	6.3
3. Showed a classmate how to use a piece of scientific equipment.					
	All Students	59.0	25.0	10.0	5.0
	Iowa Hispanic	54.0	31.6	9.2	4.6
4. Attempted to explain an experimental procedure to a classmate.					
	All Students	58.0	27.0	11.0	5.0
	Iowa Hispanic	56.9	29.3	9.8	3.4
5. Tested your understanding of some scientific principle by seeing if you could explain it to another student.					
	All Students	59.0	27.0	10.0	4.0
	Iowa Hispanic	58.0	31.6	5.7	4.6
6. Completed an experiment/project using scientific methods.					
	All Students	58.0	24.0	12.0	6.0
	Iowa Hispanic	55.2	25.3	16.7	2.9
7. Talked about social and ethical issues related to science and technology such as energy, pollution, chemicals, genetics, etc.					
	All Students	47.0	33.0	14.0	6.0
	Iowa Hispanic	48.3	29.9	17.8	4.0
8. Used information you learned in a science class to understand some aspect of the world around you.					
	All Students	45.0	29.0	17.0	9.0
	Iowa Hispanic	43.1	27.0	24.1	5.7
9. Tried to explain to someone the scientific basis for environmental concerns about pollution, recycling, alternative forms of energy, etc.					
	All Students	52.0	30.0	12.0	6.0
	Iowa Hispanic	56.3	27.6	11.5	4.6

concerns such as pollution, recycling, alternative forms of energy, etc. Implications from those findings are discussed later as appropriate in the corresponding subsection.

As shown in Table 4.2 (College Courses) 39% of Iowa Latino(a) students stated that they were currently enrolled in an occupational/vocational program while 24% of the “All Students” sample confirmed their enrollment in such program. These statistics may explain the percentages of responses regarding the Vocational Skills items described, in Table 4.10 where comparative percentages are included for both Hispanic sample and the “All Students” group. It is important at this point to note that the previous eight groups of activities items described also form what are called Quality of Effort scales which, in turn, measure the amount of effort community college students put into each of those areas of their college experience both academic and personal development.

Table 4.11 and 4.12 are items related to extra-curricular activities in which community college students engage. For example, Table 4.11 presents Clubs and Organizations items and provides students’ response percentages. It is important to note the fact that in the category of “never”, 76% of the “All Students” sample versus nearly 63% of the Iowa Hispanic/Latino(a) students) never attended a meeting of a student club or organization. However, nearly 33% of these ethnic minority students often/very often looked for information about campus events and student organizations in contrast with 29% of the comparative group for the same activity.

In terms of Athletic Activity items (Table 4.12), only 10-15% of the two comparative groups were involved (in one way or another) in athletic activities such as a regular schedule of exercise or practice in some sport on campus; seeking instruction to improve their performance in some athletic activity; and/or attending an athletic event on their campus.

Table 4.10. Percentage of responses for the Vocational Skills items based on the Iowa Hispanic sample of the CCSEQ

Item	Sample Group	Response			
		Never	Occasionally	Often	Very Often
1. Read about how to perform a procedure (occupational task, vocational skill).	All Students	28.0	26.0	26.0	21.0
	Iowa Hispanic	13.8	15.5	16.1	12.6
2. Listened to an instructor explain how to do a procedure.	All Students	20.0	16.0	30.0	33.0
	Iowa Hispanic	10.9	8.0	19.5	20.1
3. Watched an instructor demonstrate how to do a procedure.	All Students	22.0	18.0	29.0	30.0
	Iowa Hispanic	12.6	8.6	16.7	20.1
4. Practiced a procedure while being monitored by an instructor or other student.	All Students	31.0	24.0	24.0	21.0
	Iowa Hispanic	16.7	13.2	16.7	11.5
5. Practiced a procedure without supervision.	All Students	30.0	24.0	25.0	21.0
	Iowa Hispanic	21.8	13.8	13.2	9.2
6. Identified that there was a problem and located information from an instructor or other resource about what to do.	All Students	32.0	31.0	23.0	14.0
	Iowa Hispanic	16.7	20.1	14.4	6.9
7. Diagnosed a problem and carried out the appropriate procedure without having to consult any resource.	All Students	35.0	33.0	21.0	11.0
	Iowa Hispanic	23.6	17.8	12.1	4.6

Among the College Activities sections of the CCSEQ, a set of seven counseling and planning activities for which students indicate their participation “during the last year” are shown in Table 4.13. These Counseling and Career Planning items assess the students vocational decision making process in terms of discussing their education plans, vocational

Table 4.11. Percentage of responses for the Clubs and Organizations items based on the Iowa Hispanic sample of the CCSEQ

Item	Sample Group	Response			
		Never	Occasionally	Often	Very Often
1. Looked in the student newspaper or on bulletin boards for notices about campus events and student organizations.					
	All Students	30.0	41.0	19.0	10.0
	Iowa Hispanic	22.4	44.8	20.1	12.6
2. Read or asked about a student club or organization.					
	All Students	54.0	34.0	9.0	4.0
	Iowa Hispanic	46.6	37.4	12.1	4.0
3. Attended a meeting of a student club or organization.					
	All Students	76.0	14.0	5.0	5.0
	Iowa Hispanic	62.6	22.4	5.2	9.8

Table 4.12. Percentage of responses for the Athletic Activities items based on the Iowa Hispanic sample of the CCSEQ

Item	Sample Group	Response			
		Never	Occasionally	Often	Very Often
1. Followed a regular schedule of exercise or practice in some sport on campus.					
	All Students	69.0	14.0	8.0	9.0
	Iowa Hispanic	73.0	13.8	6.9	6.3
2. Sought instruction to improve your performance in some athletic activity.					
	All Students	74.0	14.0	7.0	6.0
	Iowa Hispanic	78.7	12.1	6.3	2.9
3. Attended an athletic event on the campus.					
	All Students	79.0	12.0	4.0	5.0
	Iowa Hispanic	72.4	17.8	4.6	5.2

Table 4.13. Percentage of responses for the Counseling and Career Planning items based on the Iowa Hispanic sample of the CCSEQ

Item	Sample Group	Response	
		Yes	No
1. Talked with a counselor/advisor about courses to take, requirements, education plans.	All Students	79.0	21.0
	Iowa Hispanic	87.4	12.6
2. Discussed your vocational interests, abilities, and ambitions with a counselor/advisor.	All Students	61.0	39.0
	Iowa Hispanic	65.5	33.9
3. Read information about a 4-year college or university that you were interested in attending.	All Students	64.0	37.0
	Iowa Hispanic	62.6	37.4
4. Read materials about career opportunities.	All Students	75.0	25.0
	Iowa Hispanic	80.5	19.5
5. Made an appointment with a counselor or an advisor to discuss your plans for transferring to a 4-year college or university.	All Students	38.0	62.0
	Iowa Hispanic	28.2	71.8
6. Identified courses needed to meet the general education requirements of a 4-year college or university you are interested in attending.	All Students	61.0	39.0
	Iowa Hispanic	55.2	44.8
7. Talked with a counselor/advisor about personal matters related to your college performance.	All Students	34.0	62.0
	Iowa Hispanic	50.0	50.0

interests, abilities, and ambitions. In addition, respondents were asked if they read informational materials about a four-year college or universities that they were interested in attending, as well as career opportunities.

Other aspects of the items responses included discussion of students plans for transferring to a four-year college or university; identifying courses needed to meet the general education requirements of a four-year college or university students were interested in attending; and talking with a counselor/advisor concerning personal matters related to participants college performance. In this last item, Hispanic students accounted for 50% of the sample by responding positive to such interaction, whereas only 34% of the “All Students” sample did talk/discuss personal matters with student affairs staff regarding their academic performance.

Regarding the Learning and Study Skills items (Table 4.14), a set of nine skills (ranging from reading, writing, listening, and time management to problem solving), Hispanic/Latino(a) students reported the amount of instruction they have received as “none”, “some”, or “ a lot” in each of those skills. It is pertinent to mention that Iowa Hispanic students received “a lot” of instruction (i.e., higher percentages) in areas like note taking , listening , speaking, writing, reading, and test taking skills in comparison with their “All Students” counterpart.

In the fifth section of the CCSEQ, the Estimate of Gains items (Table 4.15), Hispanic students were asked to report how much they have gained or made progress toward a series of 23 important educational goals while attending a community college in Iowa. Those goals range from “acquiring knowledge and skills applicable to a specific job or type of work” to “writing clearly and affectively “ to “becoming clearer about their own values and beliefs”

Table 4.14. Percentage of responses for the Learning and Study Skills items based on the Iowa Hispanic sample of the CCSEQ

Item	Sample Group	Response		
		None	Some	A lot
Received instruction in each of the following areas:				
Memory skills	All Students	33.0	51.0	17.0
	Iowa Hispanic	31.0	54.6	14.4
Note taking skills	All Students	33.0	44.0	23.0
	Iowa Hispanic	25.9	47.1	27.0
Listening skills	All Students	29.0	42.0	29.0
	Iowa Hispanic	24.7	41.4	33.9
Speaking skills	All Students	33.0	45.0	23.0
	Iowa Hispanic	27.6	41.4	30.5
Writing skills	All Students	18.0	40.0	42.0
	Iowa Hispanic	12.1	37.4	50.6
Reading skills	All Students	31.0	43.0	26.0
	Iowa Hispanic	22.4	40.8	36.8
Test taking skills	All Students	32.0	46.0	22.0
	Iowa Hispanic	27.0	55.7	17.2
Time management skills	All Students	40.0	43.0	17.0
	Iowa Hispanic	36.2	46.0	17.8
Problem solving skills	All Students	29.0	48.0	23.0
	Iowa Hispanic	24.1	52.9	23.0

Table 4.15. Percentage of responses for the Estimate of Gains items based on the Iowa Hispanic sample of the CCSEQ

Item	Group	Response			
		Very little	Some	Quite a bit	Very much
1. Acquiring knowledge and skills applicable to a specific job or type of work.	All Students	16.0	33.0	28.0	22.0
	Iowa Hispanic	14.9	31.6	28.2	25.3
2. Gaining information about career opportunities.	All Students	18.0	40.0	29.0	13.0
	Iowa Hispanic	12.1	40.8	33.9	13.2
3. Developing clearer career goals.	All Students	16.0	32.0	32.0	20.0
	Iowa Hispanic	16.7	33.3	29.9	20.1
4. Becoming acquainted with different fields of knowledge.	All Students	12.0	35.0	36.0	17.0
	Iowa Hispanic	11.5	36.2	35.6	16.1
5. Developing an understanding and enjoyment of art, music, and theater.	All Students	50.0	27.0	14.0	10.0
	Iowa Hispanic	54.6	26.4	10.3	8.0
6. Developing an understanding and enjoyment of literature (novels, stories, essays, poetry, etc.).	All Students	37.0	33.0	19.0	11.0
	Iowa Hispanic	32.8	33.3	20.7	12.6
7. Writing clearly and effectively.	All Students	15.0	33.0	35.0	17.0
	Iowa Hispanic	5.7	40.2	31.6	21.8
8. Presenting ideas and information effectively in speaking to others.	All Students	20.0	37.0	31.0	13.0
	Iowa Hispanic	12.6	33.9	35.6	17.8
9. Acquiring the ability to use computers.	All Students	35.0	26.0	21.0	18.0
	Iowa Hispanic	19.0	31.6	23.6	15.9
10. Becoming aware of different philosophies, cultures, and ways of life.	All Students	25.0	37.0	26.0	13.0
	Iowa Hispanic	13.2	40.2	24.7	21.8

Table 4.15. (Continued)

Item	Sample Group	Response			
		Very little	Some	Quite a bit	Very much
11. <i>Becoming clearer about my own values and ethical standards.</i>	All Students	19.0	33.0	31.0	17.0
	Iowa Hispanic	15.5	22.4	35.6	26.4
12. <i>Understanding myself—my abilities and interests.</i>	All Students	11.0	29.0	36.0	24.0
	Iowa Hispanic	9.8	20.7	30.5	39.1
13. <i>Understanding mathematical concepts such as probabilities, proportions, etc.</i>	All Students	29.0	33.0	25.0	13.0
	Iowa Hispanic	27.6	31.6	28.7	12.1
14. <i>Understanding the role of science and technology in society.</i>	All Students	31.0	33.0	24.0	12.0
	Iowa Hispanic	28.7	33.3	22.4	15.5
15. <i>Putting ideas together to see relationships, similarities, and differences between ideas.</i>	All Students	16.0	38.0	32.0	14.0
	Iowa Hispanic	8.6	35.6	39.1	16.1
16. <i>Developing the ability to learn on my own, pursue ideas, and find information I need.</i>	All Students	10.0	29.0	37.0	24.0
	Iowa Hispanic	4.0	27.0	40.8	28.2
17. <i>Developing the ability to speak and understand another language.</i>	All Students	68.0	16.0	10.0	7.0
	Iowa Hispanic	46.6	15.5	15.5	21.8
18. <i>Interpreting information in graphs and charts I see in newspapers, textbooks, and on TV.</i>	All Students	32.0	36.0	22.0	9.0
	Iowa Hispanic	21.3	35.6	28.2	14.9
19. <i>Developing an interest in political and economic events.</i>	All Students	40.0	33.0	19.0	9.0
	Iowa Hispanic	44.8	27.6	17.2	10.3
20. <i>Seeing the importance of history for understanding the present as well as the past.</i>	All Students	31.0	33.0	23.0	13.0
	Iowa Hispanic	29.9	29.9	21.3	18.4

Table 4.15. (Continued)

Item	Sample Group	Response			
		Very little	Some	Quite a bit	Very much
21. Learning more about other parts of the world and other people (Asia, Africa, South America, etc.).	All Students	43.0	31.0	17.0	10.0
	Iowa Hispanic	33.9	23.6	25.9	16.7
22. Understanding other people and the ability to get along with different kinds of people.	All Students	17.0	33.0	32.0	19.0
	Iowa Hispanic	9.8	28.7	33.3	28.2
23. Developing good health habits and physical fitness.	All Students	33.0	31.0	21.0	15.0
	Iowa Hispanic	31.6	27.0	24.7	16.1

(Lehman et al., 1995, p. 9). Respondents indicated their progress toward each goal by selecting a degree of accomplishment-in a scale from (1) none to (5) very much. Further analysis of the Estimated of Gains responses could provide more details regarding students learning and developmental experiences. Discussion on those findings are described in the corresponding subsection of the present writing efforts.

Table 4.16 indicates items eliciting information about students' perceptions about the nature of their college environment, forming a College Environment scale. These items, in turn, may be used to form a satisfaction scale to indicate how supportive, helpful, and challenging students find the college environment. (Murrell & Glover, 1996; p. 200). The College Environment (Table 4.16) provides an interesting finding indicating that both community college groups reported that if they could start over again they would attend the same college (73%). Sixty-one percent of the "All Students" sample stated that the students they knew were friendly and supportive of one another, while Iowa Hispanic students

Table 4.16. Percentage of responses for the College Environment items based on the Iowa Hispanic sample of the CCSEQ

Item	Sample Group	
	All Students*	Iowa Hispanic**
1. If you could start over again would you go to this college?		
Yes	73.0	73.6
Maybe	21.0	21.8
No	7.0	4.6
2. How many of the students you know are friendly and supportive of one another?		
All	14.0	10.3
Most	61.0	57.5
Some	21.0	27.0
Few or none	4.0	5.2
3. How many of your instructors at his college do you feel are approachable, helpful, and supportive?		
All	25.0	21.8
Most	52.0	45.4
Some	19.0	29.3
Few or none	4.0	3.4
4. How many of your courses at this college would you describe as challenging, stimulating, and worthwhile?		
All	22.0	22.4
Most	54.0	46.6
Some	22.0	26.4
Few or none	3.0	4.6
5. How many of the college counselors, advisors, and departmental secretaries you have had contact with would you describe as helpful, considerate, and knowledgeable?		
All	21.0	21.8
Most	43.0	36.8
Some	25.0	27.0
Few or none	12.0	14.4
6. Do you feel that this college is a stimulating and often exciting place to be?		
All of the time	10.0	12.1
Most of the time	43.0	42.5
Some of the time	37.0	30.5
Rarely or never	9.0	14.9
7. Are there places on campus for you to meet and study with other students?		
Yes, ample places	38.0	50.0
Yes, a few places	50.0	45.4
No	12.0	4.6

accounted for 57.5% on the same perception. Respondents felt that most instructors were more helpful, approachable, and supportive than their counterparts in Students Affairs (e.g., counselors and advisors), somewhat higher (45% vs. 37%) for Hispanics/Latino(a) students. More than 22% of the Iowa sample declared that *all* of their courses at their community college were challenging, stimulating, and worthwhile versus 22% of the comparative group.

When responding to the question regarding if they felt that their college was a stimulating and often exciting place to be, more than 42% of both groups perceived such an environment “most of the time”. Finally, yet importantly, half of the Iowa Hispanic/Latino(a) students felt that there were ample places on their campus for them to meet and study with other fellow students, while 38% of the “All Students” sample perceived the same space availability.

Quality of Effort Scales

Table 4.17 presents the Quality of Effort Scales which contain the means and standard deviations (and possible range of scores) for the “All Students” group and the Iowa (Hispanic) sample. According to Pace (1984), Quality or Effort is defined as “the amount, scope, and quality of effort students put into taking advantage of the opportunities offered to them by the college.”

Quality of Effort is measured in the CCSEQ by determining how often (during the current school year) students engage in a variety of activities related to the use of campus facilities such as classrooms, libraries, science labs, art exhibits, and other opportunities to enhance their academic and personal development (Lehman et al., 1995). In other words, the Quality of Effort is measured by the College Activities items which in turn are grouped

Table 4.17. Means and standard deviations on the Quality of Effort (QE) Scales based on the Iowa Hispanic sample of the CCSEQ and the "All Students" sample

Scale	Possible range	Sample Group	Mean	Standard deviation
QE Course Learning	10-40	All Students*	24.70	5.60
		Iowa Hispanic**	25.70	5.20
QE Library	7-28	All Students*	13.70	4.70
		Iowa Hispanic**	15.44	4.69
QE Faculty	8-32	All Students*	15.70	4.60
		Iowa Hispanic**	16.07	4.27
QE Student Acquaintances	6-24	All Students*	11.50	4.20
		Iowa Hispanic**	11.23	4.54
QE Art, Music, and Theater	6-24	All Students*	8.90	3.20
		Iowa Hispanic**	9.34	3.20
QE Writing	8-32	All Students*	21.20	5.90
		Iowa Hispanic**	23.10	5.05
QE Science	9-36	All Students*	16.00	6.70
		Iowa Hispanic**	15.93	5.99
QE Vocational Skills	7-28	All Students*	16.90	6.60
		Iowa Hispanic**	16.76	6.42

Source: *Lehman et al. (1995). CCSEQ: Test manual and comparative data (2nd ed.). Memphis, TN: University of Memphis Center for the Study of Higher Education.

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according to topic, and the first eight groups of items make up the eight Quality of Effort scales. The scale scores-which represent the Quality of Effort students put into specific areas of their college experiences-can be added together and means computed which in this case represent the Quality of Effort of the Iowa Hispanic/Latino (a) students group.

An indication of the Quality of Effort can be interpreted in such a way that the higher the score on a scale, the greater the degree of involvement on that scale. In other words, a large scale score indicates a high degree of involvement at the institution whereas a low score represents a lack of participation in college activities (Douzenis, C., 1994).

As noted in Table 4.17, the Iowa Hispanic sample had higher means than the “All Students” group on five scales, including Course Learning; Library; Faculty; Art, Music, and Theater; and Writing Activities. Involvement was at a higher level for course and writing activities, items that are associated primarily with the classroom and course assignments. On the other hand, the means for the rest of the items (Student Acquaintances, Science, and Vocational Skills) were nearly the same for both student samples. These outcomes confirm that the Iowa Hispanic/Latino(a) students were more prone to interact with fellow classmates and friends on campus and at the same time were moderately involved in science learning experiences as well as developing vocational skills like their comparative counterpart. Future research on those experiences could provide valuable insights on the Quality of Effort measurements and their implications for Hispanic/Latino(a) community college students academic and social integration at two-year Iowa institutions.

T-tests for significant differences were conducted for quality of effort scales' means to compare the Iowa Hispanic sample and the all-students sample which was used as a national comparison group. Using the data from Table 4.17, a paired-difference t-test was performed to test the hypothesis for significant differences between the means of both groups (Agresi & Finlay, 1997). Following calculations, the test statistic $t = 1.9$, with $df = 7$. The t-distribution table was used to determine the 2-tailed p-value as 0.10, which indicates there is considerable evidence of significant differences between the means of those samples which were compared regarding the eight quality of effort scales (i.e., Course Learning; Library; Faculty; Student Acquaintances; Art, Music and Theater; Writing; Science; and Vocational). Of the values that were calculated, the sample mean of the difference scores was 0.62125. This could be used to determine the confidence interval for the population mean difference as

well as the sample standard deviation (S_D) of the difference scores. However, only the t-test statistic was used in this study. It is important to note that the two groups have additional differences; the all-students sample was very large, including all ethnic groups and White students whereas the Iowa Hispanic sample was much smaller, having only one ethnic group.

The Quality of Effort scales for the Iowa Hispanic sample were compared with the means of other community college student groups (Table 4.18), where a national norm group was used by Douzenis (1994). A notable observation is appropriate at this point since the Iowa Hispanic/Latino(a) sample had higher means than the national norm group in six of the eight Quality of Effort scales namely: course, library, faculty; arts, music, and theater; writing; and vocational skills. The differences in the Quality of Effort Scales means are significant when comparing those two groups, the national norm group and the Iowa Hispanic/Latino(a) student sample, since there is no additional information as to the composition of student participants in the comparative samples, i.e., the national norm group and the "All Students" sample.

Table 4.18. Means and standard deviations on the CCSEQ Quality of Effort (QE) Scales based on the Iowa Hispanic sample of the CCSEQ and the national norm group

Scale	Possible range	National norm group*		Iowa Hispanic sample**	
		Mean	SD	Mean	SD
QECLASS	10-40	24.47	5.53	25.70	5.20
QELIB	7-28	13.48	4.72	15.44	4.69
QEFAC	8-32	15.31	4.49	16.07	4.27
QESTACQ	6-24	11.36	4.21	11.23	4.54
QEAMT	6-24	9.25	3.45	9.34	3.20
QEWRITE	8-32	20.85	5.80	23.10	5.05
QESCI	9-36	16.22	6.82	15.93	5.99
QEVOC	7-28	16.65	6.63	16.76	6.42

Source: *Douzenis, C. (1994), p. 266.

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Results and Findings based on Qualitative Data Analysis

Qualitative analysis was employed to identify further reasons, factors or circumstances that Hispanic/Latino(a) students experience as community college learners. A focus group design was introduced to explore personal insights and experiences from those minority students attending Iowa community colleges. A focus group questionnaire was designed based on the following three main inquiry areas: (1) Involvement; (2) Teaching Perceptions & Learning Realities; and (3) Validating Environments.

Questions on *Involvement* were related to the degree of participation in class activities (i.e., in the classroom); a central question on *Teaching Perceptions & Learning Realities* focused on the students' whole learning experience as community college students; and regarding *Validating Environments*, a set of questions were related to supporting agents, both within the students' institutions as well as in their personal life.

As discussed in the preceding chapter, the focus group interviews were held at five different locations throughout the state. Site selection was based on concentration of demographics as defined at the start of the investigation. Participants were selected through a letter of invitation sent to those who completed the quantitative questionnaire (i.e., CCSEQ) earlier in the study. The focus group sessions were conducted at each community college the participants were attending during the time the data gathering was taking place. In each session instructions were given to participants to ensure that everyone was informed about the steps of the process. Questions were read to each group in such a way that comments and opinions started to emerge according to the different topics covered by the instrument.

Analysis

Once the qualitative data were collected, a transcript-based analysis was chosen to identify emerging themes. Transcripts were entered into the computer for the different focus group sessions that took place as described previously. The transcript data were organized by location (institution) and question. The analysis was carried out by reviewing each question and response at each institution, then in a second revision, the more relevant responses were entered in a table (for each institution) and each of the seven questions. Last, emerging themes were identified, taking into account the three main areas (i.e., framework) of the focus group design: Involvement, Teaching Perceptions/Learning Realities; and Validating Environments.

This section of the analysis includes utilizes the interpretive model which is applied for writing report purposes. The model or style is comprised of a summary description with illustrative quotes (from the focus group data), followed by an interpretation. As stated previously, the focus group was designed to research three main areas of experiences that Hispanic/Latino(a) students have faced while attending Iowa community colleges: Involvement, Teaching Perceptions/Learning Realities; and Validating Environments.

In terms of Involvement, key questions were posed relating to in-the-classroom interactions and out-of-the-classroom involvement, as well as factors that encourage involvement in both learning settings. Total Experience as a community college student was investigated through the framework defined as Teaching Perceptions & Learning Realities. In the third area, Validating Environments were discussed by posing three questions: (1) validating agents in the college setting; (2) a contrasting question on first experience versus second experience as a community college student; and (3) personal support and family

encouragement as part of the third question regarding validating agents in the students' educational achievements.

Table 4.19 provides a description of the data-gathering procedure for categorizing responses based on the question: *What are the characteristics of learning experiences in community colleges: Iowa Hispanic/Latino(a) student case?* A sample of the focus group participants' responses is presented according to the three areas of inquiry: (1) involvement; (2) teaching perceptions and learning realities; and (3) validating environments).

Table 4.19. Data-gathering guidelines used to analyze the responses of the focus group participants

Areas of inquiry	Identifying attributes
I. Involvement	
A. In-the-classroom	• degree of involvement
B. Out-of-the-classroom	• (implications/further comments)
C. Factors	• experiences/limitations
D. "Tie-all" discussions and Interpretations	• Impacting factors/other influences
II. Holistic: Total Experience	
A. Teaching perceptions	• "Intangible" experiences: in and out
B. Learning realities	• "Tangible" experiences
C. "Tie-all" discussions and Interpretations	• Further experiences/college environment
III. Validating Environments	
A. College setting	• Validating agents/factors
B. First experience vs. second experience	• Contrasting Experiences
C. Personal support/family encouragement	• Further experience and trends
D. "Tie-all" discussions and Interpretations	• Role models' impact

Involvement

The degree of involvement of Hispanic/Latino(a) students in community college, in particular, based on their in-class learning engagement was characterized based on the following experiences shared during the focus group sessions. Students at one of the institutions wherein a bilingual session took place made several important comments. For

example, a male Mexican-American student stated that he was very involved as far as in-the-classroom involvement is concerned:

I especially enjoy the opportunities...ah...for current issues discussions...ah...for example...in a rhetoric class...or an English class...ah...discussing issues...like...ah...multicultural education, or...ah...racism, ...sexism...ah...heterosexism...ah...immigration...guns control...just current issues..as are...you know..that are important to everyone.

A female nontraditional student described her involvement in a lab session from which she pointed out that:

In chemistry...as far as that...we have...a lab class...and we're a team with a lab partner...so...we do...as far as the lab...we do...our actual experiments and have to do with scientific...ah...report on what we've done and what we...learned...on what did learn...what went right...what went wrong...in our experiment.

In another participating institution (College I), a Central-American (female, first-generation, Hispanic) student shared her involvement (in-class) perspective by saying that:

There are times when I seem to know a little more than younger students, I like to help them and share what I know if I feel they are open to it...not as I know it all..., also I like to learn from students who know more than me...

She elaborated by communicating that her experience had been a:

...good learning experience because teacher made it relevant and helped with self-discovery. Feels comfortable when you have a lot of communication with the teacher. Sometimes felt afraid of teacher who wasn't open and friendly with me. Helps to learn more when connection with teacher.

Yet, in another focus group session (College IV) an arts major (a Mexican-American participant) provided his perspectives on his class participation:

Not really...I'm not talking about my art work...and I guess I'm pretty outgoing to people...stand up beside...say something I like, something I dislike about my...art work...and...and... comment about other people's art work...that's especially my involvement in my class. There is not much involvement.

In another focus group session where bilingual and sign language communication were used, a young Latina commented on her class involvement as follows:

“....ah...I’ll speak through my interpreter [sign language]. I’ve been here for two years and I’ve been in reading and accounting. ...I...I...I have problems in reading because of the vocabulary is very hard and my family speaks Spanish and I don’t! [speak it]...and then...I got into reading and...I got so embarrassed and shy! Because the teacher would ask me to answer and I didn’t understand the vocabulary words at all...and...so...now...it is not much of a problem anymore...but...finally! I joined the ESL [English as a Second Language] class after I took the Reading class...I’m learning a lot from people in the class a great deal too.

Interpretations/Implications. According to some of the opinions/comments made by participants, involvement in the classroom has been positive and rewarding. Students felt that connection and interaction with faculty were the key for an enhanced learning experience. In specific cases, bilingual communications were extremely helpful, from the point of view of the facilitator, since those students involved provided a multicultural experience in their in-class participation.

However, there were some instances when students did not actively participate, as stated by the following comment:

...I don’t...I don’t...put much input in...I usually sit there...and write the notes and listen to the lecture...and...don’t talk...unless I’m called upon...they’ll add something but...usually...I just....

Involvement, or lack of, in the classroom presents implications that need to be analyzed to develop a framework for the learning experience.

In terms of out-of-the-classroom involvement, a question was posed to participants related to their community college education. During a bilingual focus session, a Latino female student pointed out (in Spanish) that:

...ah...como trabajo en ESL, mi trabajo es trabajar con..., Latin people...with....ah...ESL students...and I try to (get) involved as much as I can... I try to get information as much as I can...and I...ah...but...outside (of campus) my life is totally different... (one) hundred percent change...my family...my husband...my homework.... I don't have much time to visit with (too) many people... which is...my life is just (one) hundred percent my...my family.

At another institution, a male Hispanic student provided some insights regarding his out-of-classroom involvement by commenting the following:

My activities are...mostly all...out of school...ah...I try to do what I can when I'm here for the teacher gets his time...ah...but I've worked two jobs...and I have a couple of days...you know...on the weekend...usually Sunday or a Friday or something...do my homework and...I try to take advantage of the days I'm on campus...it's minimum...very minimum time...that I...that I have to...actually doing things so...I think...you know...I can do a lot better...if I had more...more time...

Moreover, a female student added her comments:

I really don't have...you know...requirements for that...ah...I'm a full-time student with a full-time job and I have two kids at home...so it's really hard for me to get involved in...in...in other activities within the school.

In contrast with earlier experiences, a male Hispanic expressed his point of view through the following statements:

...and...I rather...you know...I'd like to be in as...full-time student...opposed to being a part-time night student because it doesn't seem like there is ah...half hours in the day...you know...after you're putting...forty hours or more at a...at a regular job and you go to a part-time job...trying to read...by the time I get home at night...I just want to go to bed...ah...I don't even want to...and then...I was thinking about getting up early...and try to read...and a lot of time it doesn't happen and I just squeeze it in my lunch hour...or...or you know...skipped the book and try to pick it up when I can...and...and...and...and read which makes it a lot more hard to comprehend because...it's just...

Another participant commented:

...with a lot of interruptions...yeah...yeah...you get into it and you start reading and then...you know...your phone rings or something...if you do it at

home...because...a lot of times I just...I try to come out here...and instead of being at home.

Ian, a young fellow from Community College III pointed out his involvement in the following statement:

Some of the things I do are listening to National Public Radio station, not just watching TV. This helped (me) get my focus toward environmental and political issues. (I) talk to other students to see what they are doing or what class they are taking. So as much as possible and still feel comfortable doing.

For Marcia, involvement is limited since she stated that she is:

...not as involved in school activities because I work. However, when I was in high school, I liked to be involved; it helps to open your mind by being involved; get more information about things you don't know about. Getting involved increases education in general. [She added that she] volunteered at a clinic with my physical therapy...helped me to learn what type of exercise to do with what types of limitations. Opened up my perspective. I'm better at hands-on, practical application; but testing is hard for me. Throughout school I've learned that. A lab is very helpful; some people are good at listening and recalling information, but I do better in labs. I have difficulty going to the library and sitting and reading. I've learned more about myself, and weaknesses and strengths.

Yet, in another institution (i.e., College IV), a young high school Latina (female) participant who was enrolled as a community college student, provided the session with comments, saying,

I don't know...I don't have any...outside...requirements for...we'll have an internship next semester...we'll have life...CPB classes and stuff. With my homework, I spend about twice as much time on my homework outside the class per year than they do in my high school.

In the same session, a male Hispanic participant mentioned:

Oh, I guess...I don't go to art shows or anything. I guess it's boring...for me. I just like to do the art...not to...not to go to some art. [He went on by adding] ...let me see...homework? I did hardly ever study...ever hardly...and...my roommates looked at me about this because I don't believe in study in the class. I mean...I...my grades are B-...average and...I...I don't

like to study, I do my homework once in a while. I'm not involved much in my...in my field, I don't go out and (I) don't go to shows or anything.

During a bilingual session (English/Spanish), a Hispanic/Latina student described her out-of-class experience with the following comments.

Cuando...cuando no estamos ... en un "classroom!! ..y...y... necesitamos... este...ayuda...ah... tenemos un lugar que se llama "Academic Foundation ...en donde hay una señora de...muy buena voluntad...que se llama Kerry! Y ella está...con mucha voluntad para ayudar." Sobre todo si es de... accounting or math. Bueno...sinceramente? ...hay algunas classes que si yo no tuviera la ayuda de esa señora...no...no la haria. Sinceramente "no la haria.

In the last part of the Involvement section, factors that encourage or discourage involvement of students were discussed through a specific question. For example, in one of the institutions selected for the study, a Mexican-American (male) student provided some of his perspectives in terms of those factors impacting involvement.

Factors that encourage...ah...ah...people like...ah...Mike Granata...ah...he told me about programs that are available for me which I wasn't aware of...ah...and...from that...yeah...and actually he's probably...you know...the only one ever told me about these opportunities... That's one example...ah... People look out for your best interest, people that are out there who really...are looking out for you...ah...ah...the inclusiveness here...the diversity of this campus makes it really encouraged. Ah...things that discourage me...ah...a lack...minority staff in particular...ah... because I don't really feel I can go other there...I know I can...and...seek the help but I feel more comfortable with someone really new...who...who...may understand where I come from and where I stand on things...

In College II, participants commented on their involvement motivations as described in the following statements.

...what encourages me...is the reason why I went to college. I never went to college out of high school and...I was out of school for about ten...years before I decided to come...back to...to school...and the reason being...I...you know...I had a fine job in the...opticals...as far as being an optician and I make good money for me and my son.... ...but what encouraged me to come back to...to school...is that...is to better myself, not only to better myself but to

make my home life better ...with the...the more education that I get...the higher up I go up in my position...the better I'm going to help...ah...the community that I decided to work in...it's that...it's going to help me out...it's going to help my family out financially...so that they are able to get the care and the help they need...

Another female student (nontraditional) said,

Oh...my encouragement is that...since I graduated from high school I've been working on my degree...and then I've been working full-time...and I took time off...being at home and raising my kids...which I was fortunate enough...because I don't have to work...my (husband)...has...you know...i...it's been...nice to do it...in my pace! But I just prefer going to school because that's my goal...and I might be eighty till I get my degree but I'm going to go ahead and do it...but discourages me...I...I guess I can't do it faster.

In one of the focus group sessions at College III, a student expressed his point of view

by saying:

You see some things out in the world that you don't want to do; helps you determine what you like. Some things that discourage are teachers who are not involved with you, differences in personality, etc. You have to learn to get around that; learn how to deal with them. I try to be forward so there's no question; helps break the ice. The less you know, the more you must listen, unless you get totally lost; the more you know, the ore you can participate. Sometimes you just have to sit back and listen, then sometimes you are ignored and people don't pay attention to you.

Continuing with the group interview, a nontraditional female student from College IV

pointed out that:

Some discouragements rather ...type of the class size. That's like the main...main reason for me, I'm not motivated to seat in the class I like...they are like a...and I like... I can't talk on something I like...but there is a downfall...about college ...I guess...because you are nobody...you start...you start from scratch...all over again... it's like...different from high school...way different.

That is my basic (motivation) too ...it's because my parents never graduated from high school and I was the first in my family that graduated and that's one of my motivation ...I was...like the top from high school, my parents were so happy and then...the...the second step is graduating from college...that's like my motivation right now.

In one of the trilingual (i.e., English, Spanish, and Sign Language) sessions at College V, yet another female student (married with children) stated her opinions in the following manner:

...I want to be a good role model for my children...I have three children... and...and then it's discouraging because I can never study...because they won't let me study...I get to study late at night time because they won't let me study...so I get discouraged by that...but I want to...ah...to be a good role model for my people too...those are my top priorities.

In another interaction at the same session, a trilingual communication took place when a young Latina student expressed her opinions as follows:

I'd like to say something...you know...the things that discourage me...is...my family speaks Spanish...I don't! [speak it]...and I try to ask questions and I say: 'What are you saying in Spanish?' and nobody can't explain it to me...I also have a son...he's a little over a year old and...he's going to speak Spanish, English and sign language...and I want him to be able to talk Spanish too...so he can speak to his grandma...so that language problem...is a real problem!

Teaching perceptions/Learning realities

In the second part of the focus group session, the following question was posted to participants regarding their experience: "How do you describe your total learning experience as a community college student?" Such experiences might be related to quality of instruction, facilities, faculty/advisors, counselors, administrators, relationship with other students, support services, environment, learning perceptions, etc.

A Central-American Latina expressed her opinions through comments like this:

These people (i.e., student support service) are nice...they're nice...to me...they're nice...ah...really...they're really supportive...and...and they really help me to...to keep [me] going because they know I am really interested to study...I really need to...this is my last opportunity in my life to study, if I don't get this opportunity...that's it! This is my last opportunity to study...this is my...I'm in debt...in the line! I have to pass that line...I have to

go...and to pass that line...I have...this is...if I don't get this opportunity now. I...I'll lose and I go backwards.

Jesse, a Mexican-American (Iowan) student, stated that his experiences were as described:

I was always...basically...I was...I was programmed through high school through my counselor...from staff and other people there...that I may be intelligent enough to go but I didn't have the grades...it wasn't going to be possible for me to go to a four-year school...I think it won't be impossible...I've could done it, but I was discouraged...ah... being here (at the community college) I feel like...I feel like...ah...a consolation prize!...like a second rate for me...I feel like...this is like...ah...this is the prize for me. How do I feel? ...ah...ah...overall, the experience at the College [I] had been very good because...it's...I feel like...ah...things happen at the wrong pace...and...for a reason...a lot of things in life in this time that I've been here at the College (I)...and so...it's kind a correlated with my studies and tings on particular pace...and...I think...come on time in the last three semesters that I've been here...a full time...my...my...my grade point average has gone from a 'C' to an 'A'...and...ah...ah...so I think it's more a growing process for me, but I think it's wrong that I had to be programmed to believe that I wasn't as good...therefore...not putting much effort in and therefore...it wasn't as important and that is why I...I started from negative...I feel like...instead of zero. I feel like to climb upward to get...to get to the same level as someone else...and...ah...things have been great about the environment as far as the College (I) (is concerned)...ah. I think the primary thing that has been good for me...is then...some of the professors...that have been helpful that went out of their way, that they care, they've been passionate toward my needs, that understood where I came from...where...you know...what kind of obstacles I have... coming from high school...those are the kind of experiences that have made it a very good experience here at the College [I].

Christine, a student at Community College (II), replied during the session with several comments relating to her total experience:

...as far as my...it's been...it's been great...I mean...like I said...I haven't been in school for such a long time and then.... starting out with the community college...ah...you don't have the big pressure...like [a] big university...where you get...you know...I don't know...like sixty people in one class and then the ratio teachers-students isn't that great...but here at this College [II]...the student ratio is...is fair...I'll say...all...better than fair...I'll say is...good...because mine is...averaging now about...thirty people...twenty-five...right in there... as far as my experiences in

class...ah...ah...I...I try to...ah...fit in with the group...I don't try to go out of my way and...and...and...go against what I believe or...how I am...but...I try to stay as young as I...would like to be...but...you know...I can't go back to be an eighteen...nineteen-year-old like some of my classmates are...but some of them are always amazed...you know...when I tell them how old I am...and...there's like...Oh! I can't believe that!

As far as...I don't have any problem with any...ah...racial...racial experience or anything...I mean...I'm just in the...in the group...just like everybody else...ah...you know...ah...I...I'm required to do the same...I don't get any special attention because I'm the mi...minority in class...but...ah...I think my experiences have been great here at the College [II]...you know...if I need anything...there's always somebody there to help...ah...ah...as far as the instructors...you know...those are always good ones and there are some of the bad ones...so...you know...ah...all...overall... you know...it's...it's pretty good experience around here...right.

Mark, a student at the Community College (II) mentioned that his experiences have been as described as:

...ah...my whole experience has been pretty well...I think...ah...I'm surprised that...the actual lack of Latinos that are...in...in...in College.

In one of the Community Colleges (III), students talked about their experiences, mentioning different aspects of their perceptions as indicated in the comments below. For example, Ian said:

It seems my perceptions of the teachers are that a lot of them are really young and getting their degrees at the same time. Some of them know what they're doing and some of them don't; they are honest and say that they are just trying things out and learning too. The quality is generally good, but you can tell there is always room for improvement. The reality is that it is probably going to be that way no matter where you go. The teachers make a point to say they're always there when you need them. The financial aspect was not explained to me very well; how your schooling works. I don't think I've ever talked to my counselor. The services are out there, but I haven't really connected with them, out of choice—it's my fault. I'm not used to going out and asking for help. Overall experience has been good; I dismiss what I don't need to know. Some others might have problems—it's up to the student to seek it out.

Yet, another student (Dan) stated that:

Some of the newer teachers are actually easier to get along with; veterans say, "...this is how I've always done it and nobody has complained yet." I've actually had more problems with some of the more experienced teachers. Some of the newer students have difficulty coming right out of high school. No one is there to hold your hand. If you don't figure out what you're going to do in the community college, you go to the university and spend a lot more money. I meet new students with each class.

One of the problems I found with the tutoring is that the hours they offer it doesn't meet with my schedule; I have class or work. I just don't fit. I find people in my class who might understand it better, but sometimes they don't understand any better. But overall it's a pretty good education that I'm receiving here.

Jesus (a first-generation Hispanic/Latino student) elaborated with his opinions:

At first I thought it would be like high school; if you don't do your homework—you just fail—you are on your own to do the work. I am quiet in class and listen; wait until the class is over to ask questions. I get along with other students. Overall experience has been pretty good; now I learned I that I have to do it on my own—my future is in my hands.

Marcia added her point of view by sharing several experiences

I do know my counselor. It's good to know your counselor—mine helped me a lot and referred me to other places to get help to improve my grades, get help with a class, etc. It is hard to prioritize between getting help with homework and going to work. Work was more important. I think it's good when it's a young teacher; they're more connections. What you're learning is not only new to the student, but may be new to the teacher as well. It is good when the teacher tries to do something different. Having friends in class, asking about other teachers, etc., helps. You'll feel good about the teacher if you know others have enjoyed them. Overall experience has been good; I've have learned a lot about support, teachers—who to go to (counselors), etc. My counselor helped (me) when I had a lot of stress working full-time and going to school full-time. It's all your responsibility and you must be mature about it. You learn by your experience and mistakes. Some students are so immature. It helps you to be more responsible than those who are not working their own way.

Yet, in Community College (IV), a Latina (high school) student participated in the focus group by saying:

I think...the teaching is pretty.... good...I think is pretty good...ah...teachers are pretty friendly and...helpful...what I've experienced...ah...the facilities

are nice...ah...I don't have any to compare to...but...ah...my relationship with other students...I...I was kind of nervous at first about coming (to the college) and be in a high school...you know...

As stated by Joe (a Mexican-American student), his experiences were:

I guess...for being almost...for two years here...I...I'm still doubtful here...I mean...they can make it better because the counselors here...(about their art)...I mean...don't know about their art because I asked our (teachers)...where to go after (College IV)...and...I'm at lost sometimes...ah...I...I kind...ask teachers instead of counselors about places where art schools are good to go to...to follow my education, to (further) my art education...that is one of...the...the...downfalls that I don't like it when I'm up here...because they don't have a specific counselor for arts. The education...is just good...yeah...teaching wise...overall.

During a fifth location session (College V), students expressed their experiences in different ways. For example, Tina said:

I did better now...at college than I did in high school...my grades are (much) better now...than they were when I was in high school." She continued by saying, "Well...it's hard being a minority...it's hard to...and in all my classes I'm...I'm the only one...the only one (Latina)...in the classroom...and...so it's hard because I feel I have to...set an example...and...ta...ra...ra...ra. ...What?...I'm like...and...I feel...I don't...feel like I have to work twice as hard. I...I enjoy it...I mean...I...every day that I walk into the building...I enjoy being there...even though I'm here from 7:30 in the morning until 9 o'clock at night...I go home tired...but I still want to come back the next day.

In another student's comment, Sandra spoke through a trilingual interaction saying:

Time!...time!... I would like to say something...you know...I had a teacher with a...an experience with a bad teacher in business now...I went in there...we sat in the class and the teacher explained...nothing!...he didn't do any teaching at all...and I didn't understand the book and I went to the "CLC" (learning center) for some help...a woman there helped me...but I ended up quitting the class...because...I got not explanation for anything that they wanted to happen...and I was going to get an 'F' or a 'D' and I didn't want that in my GPA and...I asked the teacher...and...he was (of) no help at all!

Well...generally...I think it is (a) pretty good College [V]...I don't have any big problems...I...I...I'm deaf...and...at first...I didn't have an interpreter and the teachers wanted just to write me notes and...that wasn't great but...since I have an interpreter there hasn't been any big problem.

In the second part of the focus group session, the following question was posted to participants regarding their experience: “How do you describe your total learning experience as a community college student?” Such experiences might be related to quality of instruction, facilities, faculty/advisors, counselors, administration, relationship with other students, support services, environment, learning perceptions, etc.

Interpretations/Implications. According to the participants, the quality of instruction, facilities, faculty/advisors, counselors, administrators, relationship with other students, support services, environment, learning perceptions, has varied. In terms of their perceptions on teaching, participants felt that instructors, even though they may not have much experience in some cases, are committed to their students and made the teaching-learning process a two-way interaction where learners are the main focus of such experiences. At the same time, advisors and counselors seemed to be sensitive to the students’ needs and goals. Interacting with other students was a positive experience for Hispanics to be integrated to the social and academic settings of the college. Furthermore, support services were perceived to be effective and valuable, especially for first time students.

In contrast, some students had negative perceptions of proactive efforts to reach them and make them feel they are part of the academic institution. Some students mentioned they needed more timely counseling and advising for their curriculum sequence. If student affairs professionals can make an impact on Hispanics’ educational success in community college, they should be proactive, but not overly so, in identifying the root cause of students’ concerns.

Validating environments

In the last part of the focus groups (validating environments), three main questions were posed for participants to provide their inputs regarding validating agents that enhanced their community college education goals and motivation.

During the session at College I, students gave their opinions as shown by the following statements in response to the question: *“Who are the people (at your community college) that have given you encouragement, advising, and support to get enrolled, stay in school and be successful in your community college program? What experiences could you share?”*

Specifically...ah...I guess what I was thinking...it was...it hasn't been the people who are hired to do that...ah...support staff, counselors...for me it has been that way...it's been the people who don't get credit for that or...well!...the pay challenges me...it's...it's (the) professors...but it's been the professors and there has been a couple in particular... they've been telling me...I mean...they've been giving me...give me more slack, give me little more cushion...ah...appreciate my ideas...most...most importantly...appreciate my ideas...and...ah...ah...like I said...in...the things stick out to me are my...my social science courses, my rhetoric courses, my humanities...because those are the ones where you're expressing...your...your...your...your most important feelings and thoughts and...ah...when those are cultivated, encouraged in those settings...things like...speech class...

Dora (from College I) pointed out her experiences with validating environments:

What encourage me?...the professors! the...the...the ESL (English as a second language program) encouraged me more...ah...some of the professors now...they...they are really good people...they are positive people...ah...ah...sometimes you feel like a...thirty-one-year-old...

Yet, in the next college session (College II), Mark pointed out that:

...ah...I don't...see...you know...they...I don't really have any teacher or anything that are...like...taking me by the hand and saying...you know... 'this is what you need to do and this is...this is...' ...you know...I have a lot of problems with that...with that...with the...with the...administrators and...and

the people that are your counselors...you know...ah...they are in a lot of times when you go in...and...and...that's what I did initially to...

Christine, a Latina student in College II stated that:

...ah...actually...ah...like I said...goes back to my pregnancy and then my fiancé...he's totally blind...he had a...ah...you know...I told him when I need to do something...he said... "OK...you've been doing your..." I've been an optician for seven years prior to coming to college and he says, "Why don't...if you enjoy that...why don't you go to school...and see if they get..." ...and he was basically the one that...told me to get back into school...

College (III) students made several comments regarding the issue(s) of validating environments. As a female student pointed out:

For me, it was the counselor. She not only helped me with school but she helped me with personal problems. She encouraged me to do things that would better the situation, take some other classes (like more...hands-on. etc.). She even said, "I could take this class with you; I will learn with you." I don't see her as a counselor; I see her as a friend, too. We've learned about each other.

Ian discussed the topic with comments like:

Teachers in specific fields are interested in what you're doing; they ask and encourage, and seem supportive. Your fellow classmates don't know where they are going either, so they don't help much.

As a first generation Hispanic, Jesus responded to the question:

I did not get advice from anyone. When I see older students, I think there must be a reason why they come back to college—that encourages me to continue. My ESL teacher was a good help to me. She talked to me about how to get financial aid and get more help if I need to....

Dan participated in this particular inquiry with the following statements:

Some of the people I work with have negative attitudes. They got four-year degrees in a field in which there are no jobs, and try to discourage me from going to college. A lot of the teachers ask why you're doing it and what type of job I'm interested in pursuing and offer suggestions. Some core teachers don't really add much support. My advisor has been real helpful. I talk to him once very two weeks or so. He sends me information he thinks I might be interested in, scholarship opportunities, etc.

Participants at College IV discussed different issues related to validating environments, as described:

I guess...some of the...my teachers from our school...high school...kind a...forced me to follow my...what I was looking for...they have perceived my art...my...art education...he pushed me since I was in high school then...I keep going to have very...I talk to him once a month at least and show my art work to him and he gives me positive...and negative...I take the negative...and I'm working in my negatives...more...so...I guess...I think negatives are always good...to make people better...stronger.

In the same focus session, a high school (female) Latino student pointed out that:

I have a counselor that...does the interaction between the high school and here (College IV)...and she talks...and she helps a lot with...deciding what classes to take...and what you are going to do afterwards...and...you know...I have...like...missed a lot of classes...like the beginning of the...of the semester...she...you know...will talk to me about.

Mayra, a nursing student, shared her point of view:

*...and I always...wrote my mom when I was younger...she knows it...you know...and they wonder (what) to do when I get older...and she said, "You should be a nurse..."...and I don't want to be a nurse!...but then I went ahead and (I) did it...now...I wish (I've) would listen to her earlier because I might be little further than I am now...but. It's like a...I learned from my mistakes...it's just that...I wish I've would done it right after high school instead of waiting until I was older...but...you can accomplish it...so... Responses by participants were given in terms of the sixth question: *Could you**

describe your first experience (or encounter) as a community college student? If so, compare that one with another experience in your second term (or year) at the college.

Following are some (brief) statements from participants as they share their experiences from their first encounter and their second (relevant) experience, respectively.

A male student described his experience through the following comments:

I graduated from high school in 1990, my first semester at College [I] was in fall '90 so...my second semester would be in 1991...I had a class...ah...film course...and...you know...I acted the same way as I did...and

the same expectations that I had in high school...I...I was expected to be treated the same way, therefore, my behavior was defensive...therefore, created a tension between myself and the professor...and...and that's the kind of thing it will happen...I would...I would dig a hole for myself...because of my environment, because the way people set up my environment...and so...I acted the same way...

...ah...the same professor I had last semester at College [I] for two courses in the same semester...I have...ah...for rhetoric and for speech...and...those were two...probably...that is my most enjoyable semester by far, I have...ah...I appreciated the work, the openness, the creativity of this professor...ah...I really respected what she said and...ah...I thought the same for her; I thought she really respected my opinions and what I had to say and infused me and encouraged me and....

A female Latino student pointed out that while attending College II:

In my first one...in my first experience when I came to college I was kind of scared that...you know...and I thought I will be the...like really old...in compare to the other children...but...it really wasn't...you know...I benefited them...you know...from my knowledge...and...you know...the kids helped me out but...they're really...ah...some of them were really bright and they can answer the question where I have to work...two or three times harder to...get where they're at...but...ah...but...ah...

It...it was easy to...fit in...at first...you know...you're...like...don't know what to expect...what is gonna go on but then...I came back and I feel more at home and...know where things are at...and...you know...or what you can do or you can't do...

A Hispanic male student from College III stressed the fact that:

My first impression was (that) I wasn't sure what to expect; like high school or really hard? It is as easy as you want it to be; you can make it easy, or you can make it hard. Some courses aren't transferable, but easy; you have to look at what you are looking for. It's up to you to figure out which classes you're going to need. I thought it would be easier to figure out.

In the College IV focus group session, participants also shared their first experience as community college students. Joe stated it by saying:

My first year...I was...like...totally lost...at least half an hour late (first day) in the class because...I didn't...a man!...you know...a man...doesn't ask for directions!...never ask for directions...but actually I got the courage to ask for directions to find a class. ...ah...this year...I'm more confident...I was like...way up there because they know where (my) class (is) and I know...I have...I met more people...and I know...at least I have a person I know in

every class since last year...and I'm not shy...I was the first Joe...shy...shyest...it's like the first thing.

During the group interview session at College V, Trina, a Mexican-American female student mentioned the following:

Coming back...is...is hard...because with all these young kids...and...it's just...I don't know...it's hard to...it's hard to compete with them...because they are so smart...they're right out of their high school...and they know...they...they know everything and there is me...who...has been out of school for six years...it's...it's hard to...I was scared!...I was nervous.

It was easier...it was easier [coming back the second semester]...because I was...adjusted...and it's even easier now...because I know people now...I grasped study skills.

For the last question (7) of the focus group session and the final one of the section on *Validating Environments*, participants were asked: “*Who (in your personal life) were the most influential individuals—in terms of your educational accomplishments so far? If so, elaborate.*”

A summary of their responses is contained in the following paragraphs. For example, in her comments, a female student stated (in Spanish) that:

Bueno...otra vez...los professors...professors...some of them...some of them...very important...some of them! Porque son muy profesionales...con...a ellos les interesa...les interesa enseñar...se sienten bien que el alumno aprenda!...se sienten bien que el alumno sea...eh...eh...tenga un buen grado de...de aprendizaje. Se interesan de verdad, se...les da...ellos tienen su recompensa al saber que ellos...los alumnos estan aprendiendo y...y...y tienen...ah...ellos mismos se recompensan al enseñar!...son muy profesionales en ese aspecto! Mi mamá...mi mamá...es la que...siempre nos dio!...eh...mucho...eh...apoyo! y motivación! de seguir estudiando...seguir estudiando.

Christine participated in College II, expressing her opinions in the following manner:

...Oh yeah!...I would say...it goes back to my dad and kind of...like what Mark said...you know...ah...your parents worked hard to have all these

kids...they're...they're really trying to get...the kids to go into their...and so...that's why I...I...I love my dad to death but I don't want to be...my dad is seventy-five now...and...he's still working a full-time job...and I don't want to be there...I want to be able to...to...to retire at sixty-five or sooner...you know...and...and be able to sit back and relax ...and enjoy life instead of having to...still do the same job...and still working...so...I'll say...my dad inspired me...you know...pretty much...

In another location (College III), Marcia pointed out that:

I'd say...my parents (also)...they didn't have the opportunity to...and...ah...well...you know...well...my parents didn't really graduate so...they...they...they don't have a college degree...

Following the session's protocol, Mayra, from College (IV), made the following statements to answer the question.

I have to say...still...my parents...I mean...you know...I had a friend that...you know...said 'you should go to school...you know...and be a nurse'...but my parents...even though...I was married and I have my own family...they still stood by me and helped me whatever way they could financially and my mom offered to pay for my classes so that I can be in the program...you see... It's important to her because like I said...my other sisters didn't go to school...they...right out of high school...pum!...married and had families...you know...when they were eighteen...but there are...you know...almost ten years between me and one of my sisters...the other one is two years older...and then...you know...as soon as they got out (of) high school...they were married...they didn't think about going to school or anything...you know...and then...so...you know...here I'm...even though I'm older and I have (a) family...there... are...there are...you know...I said...I'm older and I have my family there and still very supportive and they help (in) any way they can to further my education.

Finally, Lili, a community college student at institution V, described her experiences concerning individuals who were most influential in her pursuing further education:

For me...maybe...four people...very important...that...my best friend...Marla...we've been friends for...like...seventeen years...she was the one that encouraged me to come to school...she did...and then...I just followed...ah...whatever she said...that I needed to do...that was number one...that...; number two: my boyfriend...he...ah...he asked me to quit my job at IBP...and said... 'I'll support you...you go to school...and I'll take care of everything...all the bills of the house...'...and the (third) person that

discouraged me...my daughter!...she says...that...I'm too old to be in school...ah...and my mom...she always wants me to go back to Chile...and she says that I need to learn...how to do something before I go back.

A concluding question in all focus group sessions was posed for participants to add further insights of their experiences: *“Is there anything else about your community college experience that we should have asked but we didn't?”*

Some questions/responses the students included at the end of the focus group sessions:

1. What are your biggest obstacles to your learning?
2. Is there any orientation program for bilingual students?
3. Is it harder...being Spanish-speaking student to communicate in English for college education?
4. We need to know about the university.
5. What are the requirements to attend a university?

Interpretations/Implications. The participants inputs regarding validating agents that enhanced their community college education goals and motivation were related to the people who supported them by giving them encouragement, advising, and counseling to stay in school and be successful. As another example of the Hispanic cultural trait/value, participants strongly voiced the role of their family support to pursue their college education, especially parents and immediate family members. Furthermore, respect was a means to perceive a validating environment through their teachers, professors, counselors, and advisors, since those individuals willingly supported the students' educational goals and personal endeavors. A third aspect the students mentioned was the

role of their community in pursuing a college education and acting as role models for those community college students.

Summary

The results and findings presented in this Chapter covered the quantitative data analysis for the items included in the CCSE Questionnaire that was administered to the Iowa Hispanic students who participated in the study. Richness was added by the qualitative data provided by the responses students gave during the focus group sessions. Students generally shared the importance of their acquiring a college education and the strong cultural ties and support their immediate family members had in influencing their educational success. They also held great value for the positive experiences and guidance provided by their community college teachers, advisors, counselors, and administrators. The next chapter presents the conclusion and discussion based on the quantitative and qualitative results, and provides recommendations for practice and further research.

CHAPTER 5: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Despite enrollment gains, Hispanic/Latino(a) students at Iowa community colleges are still underrepresented in terms of retention, graduation, and especially transfer rates. In order to fully understand the nature and dynamics of Hispanic/Latino(a) students' collegiate experience while enrolled in and attending Iowa community colleges, the present descriptive study was designed to assess their learning and developmental experiences both in the classroom and out of the classroom by examining (1) what Hispanic/Latino(a) students experience in their education; (2) the extent they are involved in their learning and developmental pursuits; (3) if there are validating environments fostering their academic and social integration; and (4) how their transfer motivations are enhanced.

The present findings indicate that enrollment of Iowa Hispanic/Latino(a) students is increasing and the students are having positive learning and developmental experiences as indicated by their estimate of gains scores (in the quantitative analysis) and quality of effort scales. Several insightful findings emerged from the qualitative phase of the study in the areas of validating environments, family support, college counselors' engagement, and educational aspirations.

This study, along with the research conducted by Nora (1999), Rendon (1994a), Jalomo (1994), and Terenzini et al. (1994), on Hispanic/Latino(a) students in community colleges have been based on empirical evidence and conceptual critiques substantiate that Tinto's college student retention theory needs to be taken to an even higher level of

theoretical development (cited in Rendon et al., 1999). Finally, the present study demonstrates the need for researchers to utilize both quantitative and qualitative approaches simultaneously to provide insightful and meaningful interpretation of research results.

Conclusions

The results of the present study suggest that a combination of quantitative and qualitative methods provided a deep breadth of the learning experiences of Hispanic students' experiences at community colleges. A case in point is the fact that the CCSEQ instrument outcomes confirmed the findings of Lehman (1994) about how students use their time in college as defined by the concept of quality of effort developed by Pace (1984) as indicated in the literature review.

As far as the qualitative approach is concerned, the literature review reflects the work of Nora (1993, 1998), Jalomo (1994), and Rendon (1994a, b) regarding experiences and validating environments. The findings in this study relative to these areas indicate that Hispanic/Latino(a) students are becoming more actively involved in their college education, but further research is needed to integrate them through the transfer process to four-year institutions. Focus group research confirms that validating environments in community college are critical to transform students into successful if validating agents are developed.

Due to the nature of qualitative research, as discussed in the literature review, the main themes emerging from the present study can be summarized as follows:

1. Iowa Hispanic/Latino(a) students attending community college are eager to pursue a college with the support, commitment, and encouragement of their parents and families, and due to a high cultural value placed on education.
2. As shown in the demographic data from the study, nearly 64% of the participants were female students who will, in turn, need to have a supporting environment as a validating agent to empower their aspirations.

The study used a research design that employs a mix method of combining results of quantitative and qualitative analysis. Additional conclusions are discussed based on the findings of quantitative and qualitative analyses.

Quantitative

Data were gathered through administration of the CCSEQ instrument and analyzed using descriptive statistics. Three main areas emerged:

1. *Estimate of Gains*: Iowa Hispanic/Latino(a) students were highly involved in written and oral communications, both for educational purposes and for interacting with other people. This finding has significance in understanding that student achievement is measured to identify the most commonly stated objective of undergraduate education, such as knowledge and understanding in science, literature and the arts; effective writing and speaking; intellectual skills such as logic, critical thinking and independent inquiry; awareness of different philosophies and cultures; self understanding; understanding and appreciating different kinds of people; and career development. Thus, one would expect that Iowa Hispanic/Latino(a) students are

likely to be successful in transitioning from high school to community college, and from community college to a four-year college/university, with some seeking graduate studies.

2. *Learning and Study Skills*: Iowa Hispanic/Latino(a) students received instruction in three particular areas – speaking, writing and reading skills in higher percentages than their counterparts in the “All Students” sample group. This signifies that the students were motivated to communicate in their classroom experiences orally and by writing, and especially by exercising their reading skills in English for those whose native language is Spanish. Thus, one would expect that Iowa Hispanic/Latino(a) students are likely to be successful in transitioning from high school to community college, and from community college to a four-year college/university, with some seeking graduate studies.
3. *Quality of Effort Scales*: Iowa Hispanic/Latino(a) students scored higher means than their counterparts on six scales: (1) class involvement; (2) library activities; (3) faculty interaction; (4) art, music and theater activities; (5) writing activities; and (6) vocational and career planning. The item responses go from 1 – 4, with 1=never; 2=occasional; 3=often; and 4=very often. Therefore, a higher scale indicates a high degree of involvement at the institution, with the lowest score representing a lack of participation in college activities. Thus, one would expect that Iowa Hispanic/Latino(a) students are likely to be successful in transitioning from high school to community college, and from community college to a four-year college/university, with some seeking graduate studies.

Qualitative

Focus groups were used to elicit affective data about the students' perceptions on: involvement; learning and developmental experience; and validating environments. These rich, thick descriptions added meaning to the quantitative results of the study, and served to validate those analyses. The perceptions of the Iowa Hispanic/Latino(a) students' experiences not only served to reinforce the findings of this study, but it also added value to the students' own awareness of their growth and maturity through discussion of the different themes/topics that emerged. Thus, one would expect that Iowa Hispanic/Latino(a) students are likely to be successful in transitioning from high school to community college, and from community college to a four-year college/university, with some seeking graduate studies. The use of qualitative data, therefore, highly benefited the students as they learned about their peer's attitudes and views about the relationship between learning and self-development.

Limitations

Even though the response rate from the CCSEQ instrument administered during the quantitative phase of the study was slightly higher than 45%, it is important to note that some limitations exist due to the fact that the Hispanic/Latino(a) students who responded and completed the CCSEQ instrument may have differences or similarities with the non-respondents (i.e., those who did not complete the CCSEQ instrument). The following limitations should be taken into consideration when drawing conclusions from findings in this study as well as for future research on the same topic of the study conducted on Hispanic/Latino(a) students attending Iowa's community colleges. Although specific

demographics were not available for the non-respondents, a further review of the general characteristics of those who did not respond or complete the questionnaire revealed the following profile. That is, out of the initial sample population (N=350+), the Iowa Hispanic/Latino(a) students showed characteristics such as:

1. The majority were female students who had family responsibilities, a full-time job, and attended a community college on a part-time basis;
2. Some students were not interested in completing the instrument, while others were lacking educational goals as stated during a follow-up conversation with the present researcher;
3. Some invited participants were pursuing vocational education certificate programs, whereas others were enrolled to enhance their work skills and were not interested in transferring (to a 4-year college/university);
4. The subjects who did not respond included a few who had already graduated at the time of the data collection process or had withdrawn from their community college program;
5. A few of the non-respondents were not sure how to complete the CCSEQ for different reasons, such as they had no plans for further education, no time available, or lacked information relevant to the study; and
6. In some unique cases, students were not willing to identify themselves as Hispanic/Latino(a) individuals or they were unaware of their ethnic background.

Recommendations

The following recommendations are made based on the conclusions of the study:

1. The study should be replicated to include the entire population of community colleges in Iowa. This would provide a more accurate representation of Hispanic/Latino(a) students attending Iowa community colleges and four-year institutions.
2. Because the findings represent the perceptions of Hispanic/Latino(a) students within small population regions, an improved qualitative instrument should be designed to capture additional emerging themes from students of other ethnic groups for comparison purposes. Such an instrument should include other attributes/traits that represent a careful literature search of those groups.
3. The transfer function was not fully exploited in this study, therefore, future research could delve into how the students build their aspirations and goals to transfer, with the likelihood of success in their college pursuits.
4. The factors should be examined more fully by administrative personnel in grade schools, high schools, community colleges and beyond. Some of the findings have clear implications for teachers, faculty and administrators regarding their involvement with students and the relationship between the academic and social integration of students and the likelihood of success. Learning is a lifelong process.
5. Colleges and universities should look at increasing the diversity of faculty and support staff, particularly by employing those who are sensitive to issues that enhance and nurture student development of social and academic integration of all students regardless of ethnicity.

6. Student affairs practitioners need to be aware and better understand the Hispanic culture and how Hispanic students integrate themselves into the academic and social settings in community colleges. Therefore, these practitioners must work very closely with academic affairs' personnel, especially faculty, to collaboratively enhance Hispanic students' college attainment.
7. Community college enrollment by Hispanic/Latino males significantly lags behind female enrollment in Iowa and nationally as well. Future research should investigate factors that could result in a change from this trend. Some males who took the CCSEQ and participated in the focus group sessions indicated that there were few organized extracurricular sports activities available to them at Iowa's community college. It is suspected that providing some of these extracurricular activities, especially in traditional American sports, would help reverse this trend.
8. To enhance the quality of students' learning experiences, Iowa Community Colleges should consider introducing proactive strategies, such as learning communities within the institution, as well as improving minority ethnic organizations to reach nontraditional students through socially and academically-related activities.

Hispanic-X

To further study the learning and developmental experiences of Hispanic/Latino(a) students in community colleges in general, and Iowa in particular, a new model developed by the researcher can be used by researchers, practitioners, and student affairs professionals to better understand the experiences necessary to develop proactive practices to enhance retention, persistence and transfer of Hispanic/Latino(a) students in community colleges. As

shown in Figure 5.1, Hispanic-X is based on three fundamentals: (1) pre-college experiences; (2) transition to post-secondary education; and (3) experiences in community college. Each additional phase of these fundamentals serve to provide a deeper understanding of the educational-learning and development experiences of Hispanic/Latino(a) students in community colleges as their first step toward attainment of the baccalaureate degree.

The Hispanic-X model depicts the different phases of the educational experience of students and considers their earlier pre-college encounters. The complexity of the college transition is emphasized through connections in college (i.e., community college) as highlighted in the present study. The model was developed to assist further research to identify the many variables, traits, and attributes, involved in the actual college experiences of Hispanic/Latino(a) students, particularly their learning and developmental outcomes. Further analysis would be beneficial to assess such experiences, both in the classroom as well as out-of-the classroom and beyond. The model has potential for design improvement if other elements are considered as opportunities or constraints.

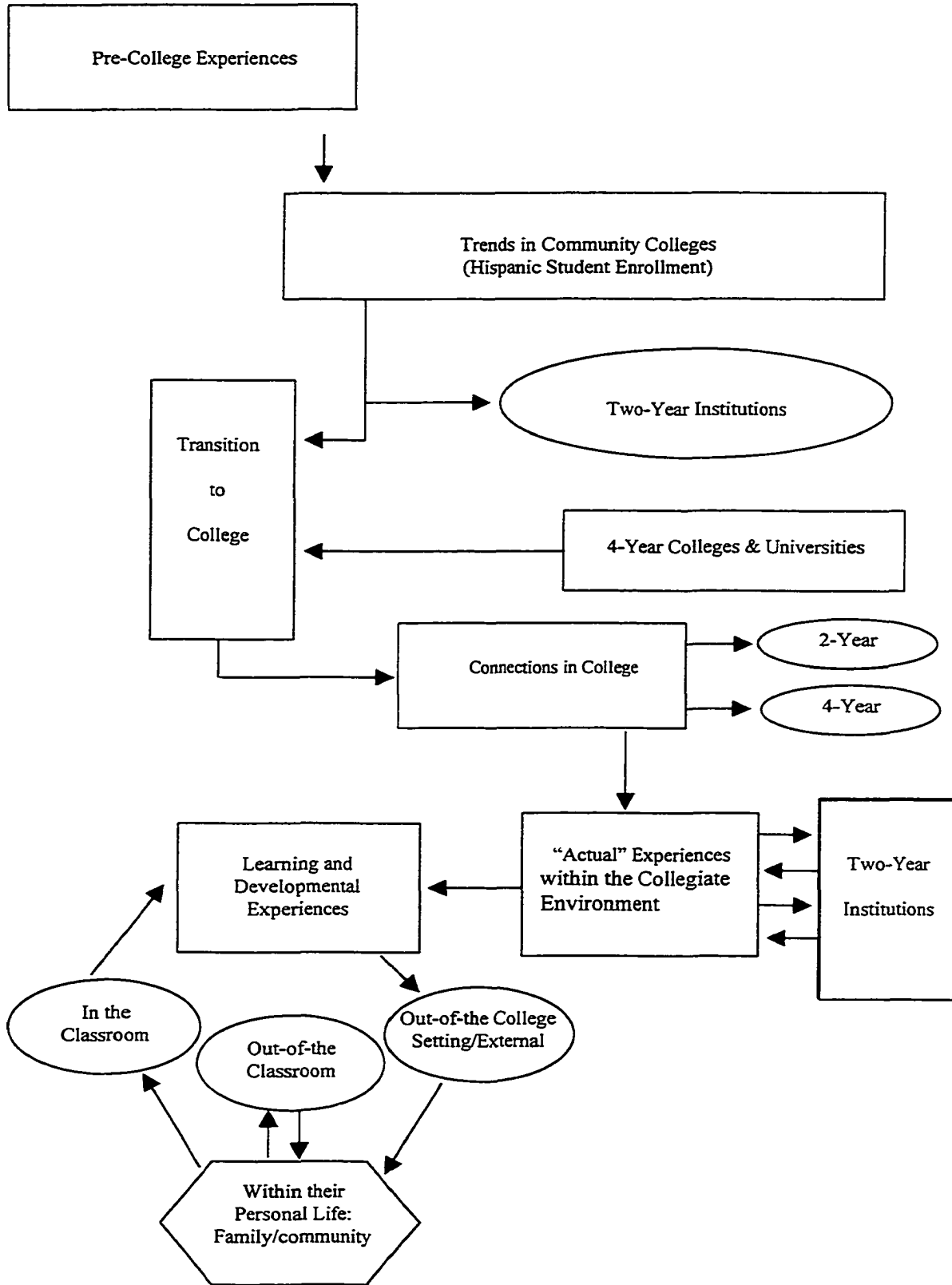


Figure 5.1. Hispanic-X model of community college interaction

APPENDIX A: COMMUNICATION



TERRY E. BRANSTAD, GOVERNOR

DEPARTMENT OF EDUCATION
AL RAMIREZ, Ed.D., DIRECTORDIVISION OF COMMUNITY COLLEGES AND WORKFORCE PREPARATION
BUREAU OF COMMUNITY COLLEGES

M E M O

TO: DR. GILBERT SANCHEZ, ASSOC. V.P., ENROLL. MGMT.--WESTERN IOWA TECH

DR. JEAN GOODNOW, VICE PRESIDENT--NORTH IOWA AREA
COMMUNITY COLLEGE

MR. NEIL MANDSAGER, DEAN OF STUDENT SERVICES--EASTERN
IOWA COMMUNITY COLLEGE..DAVENPORT

MR. STEVE NORTON, DEAN OF STUDENT DEVELOPMENT--EASTERN
IOWA COMMUNITY COLLEGE..BETTENDORF

MR. NEIL MANDSAGER, DEAN OF STUDENT DEVELOPMENT--EASTERN
IOWA COMMUNITY COLLEGE..CLINTON

MR. PHIL WAINWRIGHT, DEAN OF STUDENT DEVELOPMENT--
EASTERN IOWA COMMUNITY COLLEGE..MUSCATINE

MR. BOB BURNS, ASSOCIATE DEAN OF STUDENT DEVELOPMENT--
KIRKWOOD COMMUNITY COLLEGE..CEDAR RAPIDS

MR. LYNN ALBRECHT, DEAN, STUDENT RECORDS & SERVICES--
DES MOINES AREA COMMUNITY COLLEGE, DES MOINES

DR. BONNIE MILEY, DEAN, STUDENT SERVICES--IOWA
WESTERN COMMUNITY COLLEGE, COUNCIL BLUFFS

FROM: DR. CHARLES B. ULLOM, CHIEF

DATE: SEPTEMBER 13, 1995

RE: ASSESSMENT OF HISPANIC STUDENTS IN SELECTED IOWA
COMMUNITY COLLEGES
DOCTORAL STUDY OF JAMIE HERNANDEZ
IOWA STATE UNIVERSITY

The Department of Education is seeking your cooperation and assistance to have your institution/campus actively assist Jamie Hernandez who is in the Doctoral program at Iowa State University gather information and data concerning Hispanic students enrolled in Iowa's community colleges. Your assistance would be to facilitate a meeting of Mr. Hernandez and selected students at your specific campus so the questionnaire could be explained and administered. Mr. Hernandez would administer the assessment device.

We, in the Bureau of Community Colleges, feel this is an excellent opportunity to acquire information via Mr. Hernandez's study. With this information, hopefully, we could position our

Page 2

institutions to better serve these students.

The attached information, Mr. Hernandez's proposal, questionnaire and a graph demonstrating the enrollment of Iowa's minority students in the community colleges. We hope this information will provide a base of understanding when Mr. Hernandez contacts you and further explains the study.

We appreciate your cooperation and assistance. If you have questions please give me a call.

Attachments

- c Dr. Ramirez
- Dr. Custer
- ✓ Mr. Jamie Hernandez

IOWA STATE UNIVERSITY

College of Education
 Professional Studies
 N243 Lagomarcino Hall
 Ames, Iowa 50011-3190
 515 294-4443

June 21, 1996

**HISPANIC/LATINO(A) STUDENTS AT
 Western Iowa Tech Community College**

RE: Hispanic/Latino(a) Student Research

Dear Community College Student:

this letter is to introduce myself as a doctoral student at Iowa State University College of Education, where I am conducting a study - as part of my dissertation requirement - concerning the experience of Hispanic/Latino(a) students currently attending one of several selected Iowa Community Colleges such as **Western Iowa Tech** in Sioux City.

Therefore, I am cordially inviting you to participate in such a study which will consist of two phases, namely:

- I.- Completing of a questionnaire; and
- II.- A group discussion with Hispanic/Latino(a) students.
 (about 12 individuals) from each participating Institution

At this time, I would like your involvement in this study by filling out a questionnaire known as the **Community College Student Experience Questionnaire (CCSEQ)**, which will take you about 25 minutes to complete.

I want to assure you that your responses will be kept confidential and your name/identity will not be appearing in any written report.

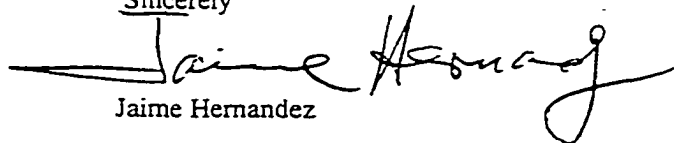
At the same time, I want to stress the fact that your participation is voluntary, therefore non participation will not affect (any) evaluation of yourself.

If you have any questions regarding this study, feel free to call me at (515) 296-8419 (home), (515) 294-9550 (University/message) or you might want to use my E-mail address: **jhernand@iastate.edu**

I really appreciate your time and willingness to be part of this exciting research project about Hispanic/Latino(a) students at Iowa Community Colleges.

Thank you in advance for your invaluable input!. I am looking forward to hearing from you at your earliest convenience.

Sincerely



Jaime Hernandez

Higher Education Program

IOWA STATE UNIVERSITY

RESEARCH PROJECT: **Group Discussion Session**

College of Education
Professional Studies
N243 Lagomarcino Hall
Ames, Iowa 50011-3190
515 294-4143

Thursday, November 21, 1996

10:30 a.m. – 12:00 noon

**The Green Room (Off the Cafeteria): Lee De Forest Building /Ground F.
Iowa Western Community College Campus
Council Bluffs, Iowa**

Hispanic / Latino(a) Student Research

REGISTRATION FORM

Name: _____ Male: ___ Female: ___

Address: _____

City, State: _____ Zip Code: _____

Telephone: () _____ (home)

() _____ (work)

E-mail: _____ (if applicable)

Community College: _____

Year: Freshman () Sophomore () Other () _____

Program / Major: _____ Full Time ()
Part-Time ()

YES, I will be attending ! () **NO, unable to attend ()**

Comments / Remarks / Suggestions / Questions:

Date: _____



The University of Memphis

Memphis, Tennessee 38152

Center for the Study of Higher Education

 901/678-2775
 FAX 901/678-4257

January 21, 1997

 Jaime Hernandez
 Doctoral candidate
 3A Schilleter Village
 Ames, IA 50010

Dear Mr. Hernandez:

Enclosed are your data and results from the administration of the Community College Student Experiences Questionnaire (CCSEQ). The enclosed results of the CCSEQ for your students contain frequency distributions and summary statistics for all items on the instrument and the eight Quality of Effort scales. The results are presented in the same order as in the CCSEQ, with information regarding the eight Quality of Effort scale scores at the end. The extra analyses which you requested are also included. These analyses were carried out by selecting on the variable "ace" which is an institution identification number.

The data are contained on the enclosed disk which has four files. One file, HRNDF96P.POR, is a SPSS portable system file that is readable by either mainframe or personal computers and an SPSS program for reading this file is contained in HRNDF96P.SPS. This portable file contains the data and directory information including a data list and variable and value labels. A second datafile, HRNDF96R.DAT, contains raw data written in the format given in the accompanying documentation and the file, HRNDF96R.SPS, contains an SPSS program for reading these raw data. The variable names and labels used in each file are in the accompanying documentation.

We are pleased to have been of service and hope you find the information to be useful in your deliberations. Do not hesitate to contact us should you have difficulty interpreting the results or using the files on the enclosed disk. Thank you again for using the CCSEQ and let us know if we may be of further assistance.

Corinna A. Ethington 1/21/97

 Corinna A. Ethington, Professor
 and CCSEQ Research Coordinator

Enclosures

NOTE TO USERS

Copyrighted materials in this document have not been filmed at the request of the author. They are available for consultation in the author's university library.

Appendix B, pages 145 - 153

This reproduction is the best copy available.

UMI[®]

APPENDIX C: OUTPUT FROM SELECTED DATA ANALYSES

```
17-Jan-97  SPSS RELEASE 4.1 FOR VAX/VMS
14:43:03  SPSS VAX/VMS MSUVX2          on MSUVX2::          VMS V6.2

VAX          SPSS VAX/VMS MSUVX2          License Number 21010
This software is functional through June 30, 1997.
```

Try the new SPSS Release 4.1/4.0 features:

- * LOGISTIC REGRESSION procedure
- * EXAMINE procedure to explore data
- * FLIP to transpose data files
- * MATRIX Transformations Language
- * ALL-IN-1 Interface To SPSS
- * CATEGORIES Option:
 - * conjoint analysis
 - * correspondence analysis
 - * GRAPH interface to SPSS Graph
 - * LISREL7/PRELIS procedure

See the new SPSS documentation for more information on these new features.

```
1 0 set length=59 Jaime
2 0 title report for JAMIE HERNANDEZ -- FALL '96 -- DES MOINES AREA
3 0 import file=HRNDF96P

      Portable file:  M510A:[CSHEGRADLIB]HRNDF96P.PORT;
      File format:    Communications
      Date and time:  1997/01/17  13:58:42
      Originating software:  SPSS RELEASE 4.1 FOR VAX/VMS
Originating installation:  SPSS VAX/VMS MSUVX2
      Precision:      10 base-30 digits - roughly 14 base-10 digits
      Variables:      169
      Weighting variable:  -NONE-
```

```
Number of cases read:  174
Input file size:  906 records (72.480 bytes)
```

Preceding task required .71 seconds CPU time; 3.83 seconds elapsed.

```
4 0 select if (ace eq 7120)
5 0 frequencies variables=age to add16,qecourse to qevoc/statistics=defaults
```

There are 21,547,264 bytes of memory available.

Memory allows a total of 32,767 values accumulated across all variables.
There may be up to 8,192 value labels for each variable.

17-Jan-97 report for JAMIE HERNANDEZ -- FALL '96 -- DES MOINES AREA
 14:43:11 SPSS VAX/VMS MSUVX2 on MSUVX2:: VMS V6.2

AGE AGE OF STUDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
18-19 OR YOUNGER	1	4	9.3	9.3	9.3
20-22	2	6	14.0	14.0	23.3
23-27	3	11	25.6	25.6	48.8
28-39	4	13	30.2	30.2	79.1
40-55	5	9	20.9	20.9	100.0
		-----	-----	-----	
	Total	43	100.0	100.0	
Mean	3.395	Std dev	1.237	Minimum	1.000
Maximum	5.000				

Valid cases 43 Missing cases 0

SEX GENDER OF STUDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MALE	1	11	25.6	25.6	25.6
FEMALE	2	32	74.4	74.4	100.0
		-----	-----	-----	
	Total	43	100.0	100.0	
Mean	1.744	Std dev	.441	Minimum	1.000
Maximum	2.000				

Valid cases 43 Missing cases 0

17-Jan-97 report for JAMIE HERNANDEZ -- FALL '96 -- DES MOINES AREA
 14:43:11 SPSS VAX/VMS MSUVX2 on MSUVX2:: VMS V6.2

RACE ETHNICITY

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
HISPANIC, LATINO	4	42	97.7	97.7	97.7
WHITE	5	1	2.3	2.3	100.0
	Total	43	100.0	100.0	
Mean	4.023	Std dev	.152	Minimum	4.000
Maximum	5.000				

Valid cases 43 Missing cases 0

LANG NATIVE LANGUAGE IS ENGLISH

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
YES	1	19	44.2	44.2	44.2
NO	2	24	55.8	55.8	100.0
	Total	43	100.0	100.0	
Mean	1.558	Std dev	.502	Minimum	1.000
Maximum	2.000				

Valid cases 43 Missing cases 0

17-Jan-97 report for JAMIE HERNANDEZ -- FALL '96 -- DES MOINES AREA
 14:43:11 SPSS VAX/VMS MSUVX2 on MSUVX2:: VMS V6.2

TIMEWORK TIME SPENT WORKING ON JOB

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NONE, NO JOB	1	10	23.3	23.3	23.3
1-10 HOURS	2	2	4.7	4.7	27.9
11-20 HOURS	3	4	9.3	9.3	37.2
21-30 HOURS	4	10	23.3	23.3	60.5
31-40 HOURS	5	13	30.2	30.2	90.7
MORE THAN 40 HOURS	6	4	9.3	9.3	100.0
	Total	43	100.0	100.0	
Mean	3.605	Std dev	1.720	Minimum	1.000
Maximum	6.000				

Valid cases 43 Missing cases 0

JOB AFFECT OF JOB ON SCHOOL WORK

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NO JOB	1	10	23.3	23.3	23.3
DOES NOT INTERFERE	2	11	25.6	25.6	48.8
TAKES SOME TIME	3	17	39.5	39.5	88.4
TAKES A LOT OF TIME	4	5	11.6	11.6	100.0
	Total	43	100.0	100.0	
Mean	2.395	Std dev	.979	Minimum	1.000
Maximum	4.000				

Valid cases 43 Missing cases 0

17-Jan-97 report for JAMIE HERNANDEZ -- FALL '96 -- DES MOINES AREA
 14:43:11 SPSS VAX/VMS MSUVX2 on MSUVX2:: VMS V6.2

FAMILY AFFECT OF FAMILY ON SCHOOL WORK

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NO FAMILY RESPONSIBI	1	10	23.3	23.3	23.3
DOES NOT INTERFERE	2	7	16.3	16.3	39.5
TAKES SOME TIME	3	17	39.5	39.5	79.1
TAKES A LOT OF TIME	4	9	20.9	20.9	100.0
	Total	43	100.0	100.0	
Mean	2.581	Std dev	1.074	Minimum	1.000
Maximum	4.000				
Valid cases	43	Missing cases	0		

UNITSNOW UNITS TAKEN THIS TERM

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
LESS THAN 6	1	23	53.5	53.5	53.5
6 TO 8	2	7	16.3	16.3	69.8
9 TO 11	3	1	2.3	2.3	72.1
12 TO 15	4	10	23.3	23.3	95.3
MORE THAN 15	5	2	4.7	4.7	100.0
	Total	43	100.0	100.0	
Mean	2.093	Std dev	1.394	Minimum	1.000
Maximum	5.000				
Valid cases	43	Missing cases	0		

17-Jan-97 SPSS RELEASE 4.1 FOR VAX/VMS
 14:49:10 SPSS VAX/VMS MSUVX2 on MSUVX2:: VMS V6.2

VAX SPSS VAX/VMS MSUVX2 License Number 21010
 This software is functional through June 30, 1997.

Try the new SPSS Release 4.1/4.0 features:

- LOGISTIC REGRESSION procedure
- EXAMINE procedure to explore data
- FLIP to transpose data files
- MATRIX Transformations Language
- ALL-IN-1 Interface To SPSS
- CATEGORIES Option:
 • conjoint analysis
- correspondence analysis
- GRAPH interface to SPSS Graph
- LISREL7/PRELIS procedure

See the new SPSS documentation for more information on these new features.

```
1 0 set length=59 Jamie
2 0 title report for JAMIE HERNANDEZ -- FALL '96 -- EASTERN IOWA DISTRICT
```

>Warning # 2003 on line 2. Command name: TITLE
 >The title given exceeds 60 characters in length. The first 60 characters will
 >be used.

```
3 0 import file=HRNDF96P
```

```
Portable file: M510A:[CSHEGRADLIB]HRNDF96P.PORT:
File format: Communications
Date and time: 1997/01/17 13:58:42
Originating software: SPSS RELEASE 4.1 FOR VAX/VMS
Originating installation: SPSS VAX/VMS MSUVX2
Precision: 10 base-30 digits - roughly 14 base-10 digits
Variables: 169
Weighting variable: -NONE-
```

Number of cases read: 174
 Input file size: 906 records (72,480 bytes)

Preceding task required .91 seconds CPU time: 3.45 seconds elapsed.

```
4 0 select if (ace eq 1853 or ace eq 1882 or ace eq 1885)
5 0 frequencies variables=age to add16.qecourse to qevoc/statistics=defaults
```

There are 21,547,200 bytes of memory available.

Memory allows a total of 32,767 values accumulated across all variables.
 There may be up to 8,192 value labels for each variable.

17-Jan-97 report for JAMIE HERNANDEZ -- FALL '96 -- EASTERN IOWA DISTR
 14:49:17 SPSS VAX/VMS MSUVX2 on MSUVX2:: VMS V6.2

AGE AGE OF STUDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
18-19 OR YOUNGER	1	9	18.8	18.8	18.8
20-22	2	13	27.1	27.1	45.8
23-27	3	10	20.8	20.8	66.7
28-39	4	12	25.0	25.0	91.7
40-55	5	4	8.3	8.3	100.0
Total		48	100.0	100.0	
Mean	2.771	Std dev	1.259	Minimum	1.000
Maximum	5.000				

Valid cases 48 Missing cases 0

SEX GENDER OF STUDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MALE	1	20	41.7	41.7	41.7
FEMALE	2	28	58.3	58.3	100.0
Total		48	100.0	100.0	
Mean	1.583	Std dev	.498	Minimum	1.000
Maximum	2.000				

Valid cases 48 Missing cases 0

17-Jan-97 report for JAMIE HERNANDEZ -- FALL '96 -- EASTERN IOWA DISTR
 14:49:17 SPSS VAX/VMS MSUVX2 on MSUVX2:: VMS V6.2

RACE ETHNICITY

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
HISPANIC, LATINO	4	48	100.0	100.0	100.0
	Total	48	100.0	100.0	
Mean	4.000	Std dev	.000	Minimum	4.000
Maximum	4.000				
Valid cases	48	Missing cases	0		

LANG NATIVE LANGUAGE IS ENGLISH

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
YES	1	27	56.3	56.3	56.3
NO	2	21	43.8	43.8	100.0
	Total	48	100.0	100.0	
Mean	1.438	Std dev	.501	Minimum	1.000
Maximum	2.000				
Valid cases	48	Missing cases	0		

17-Jan-97 report for JAMIE HERNANDEZ -- FALL '96 -- EASTERN IOWA DISTR
 14:49:17 SPSS VAX/VMS MSUVX2 on MSUVX2:: VMS V6.2

TIMEWORK TIME SPENT WORKING ON JOB

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NONE, NO JOB	1	7	14.6	14.6	14.6
1-10 HOURS	2	5	10.4	10.4	25.0
11-20 HOURS	3	8	16.7	16.7	41.7
21-30 HOURS	4	13	27.1	27.1	68.8
31-40 HOURS	5	9	18.8	18.8	87.5
MORE THAN 40 HOURS	6	6	12.5	12.5	100.0
	Total	48	100.0	100.0	
Mean	3.625	Std dev	1.579	Minimum	1.000
Maximum	6.000				

Valid cases 48 Missing cases 0

JOB AFFECT OF JOB ON SCHOOL WORK

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NO JOB	1	7	14.6	14.6	14.6
DOES NOT INTERFERE	2	9	18.8	18.8	33.3
TAKES SOME TIME	3	25	52.1	52.1	85.4
TAKES A LOT OF TIME	4	7	14.6	14.6	100.0
	Total	48	100.0	100.0	
Mean	2.667	Std dev	.907	Minimum	1.000
Maximum	4.000				

Valid cases 48 Missing cases 0

17-Jan-97 report for JAMIE HERNANDEZ -- FALL '96 -- EASTERN IOWA DISTR
 14:49:17 SPSS VAX/VMS MSUVX2 on MSUVX2:: VMS V6.2

FAMILY AFFECT OF FAMILY ON SCHOOL WORK

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NO FAMILY RESPONSIBI	1	7	14.6	14.9	14.9
DOES NOT INTERFERE	2	17	35.4	36.2	51.1
TAKES SOME TIME	3	18	37.5	38.3	89.4
TAKES A LOT OF TIME	4	5	10.4	10.6	100.0
.	.	1	2.1	Missing	
	Total	48	100.0	100.0	
Mean	2.447	Std dev	.880	Minimum	1.000
Maximum	4.000				

Valid cases 47 Missing cases 1

UNITSNOW UNITS TAKEN THIS TERM

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
LESS THAN 6	1	10	20.8	20.8	20.8
6 TO 8	2	6	12.5	12.5	33.3
9 TO 11	3	10	20.8	20.8	54.2
12 TO 15	4	20	41.7	41.7	95.8
MORE THAN 15	5	2	4.2	4.2	100.0
	Total	48	100.0	100.0	
Mean	2.958	Std dev	1.254	Minimum	1.000
Maximum	5.000				

Valid cases 48 Missing cases 0

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