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Signed Language Interpreter Education: A Comparison of First-Generation and Non-First-Generation Bachelor's Students

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Abstract

Studies have shown that first-generation college students (FGCS), those who are the first in their families to earn a bachelor's degree, have unique experiences, perceptions, and needs when compared to non-first-generation college students (NFGCS) whose parents have graduated from college. A recent survey of 201 signed language interpreting bachelor's degree students found that FGCS and NFGCS differ in their academic lives. The results of this study support previous research that indicates that FGCS often face obstacles that can impede their academic success. By recognizing the challenges that FGCS may encounter, interpreter educators can create learning environments that better support these underrepresented students and foster impactful academic experiences. It's important to note that FGCS bring not only challenges, but also a sense of determination and perseverance that can enhance collaborative learning, engender trust with faculty, inspire confidence in others, and contribute to a positive learning atmosphere.

Keywords: interpreter education programs, first-generation college student, non-first-generation college student, academic awareness, academic confidence

Introduction

The profession of signed language interpreting in the United States is less than 60 years old and yet, in its brief history, it has developed a national member-run organization, quality assurance certifications, professional standards, both state and federal legislation, and higher education programs offering associate, bachelor, master, and doctoral degrees. In an effort to maintain quality standards, the Registry of Interpreters for the Deaf (RID) determined that individuals should be required to hold a bachelor's degree to take the National Interpreter Certification examination (RID, 2003).

Completing a bachelor's degree is required for various professional jobs but may prove more challenging for some. One's level of college preparedness, financial constraints, family obligations, ethnicity, and cultural differences all impact the college experience for each individual. First-generation college students (FGCS)—students who are the first in their families to earn a college degree—are likely impacted by the lack of guidance from informed, experienced parents, which may make their progression through higher education even more challenging. From the task of completing college and financial aid applications to the navigation of a minimum of four years of coursework, housing, and financial aid, non-first-generation college students (NFGCS) typically have a family member with experience to answer questions, while first-generation students are often taking the lead in figuring out the myriad college processes.

When a college degree serves as a gatekeeping condition to enter a particular profession, the concept of equity in accessing education must be considered. The equitability of degree attainment has been questioned from several lenses: (1) the use of standardized testing as entrance requirements has been found to benefit some students more than others (Fleming & Garcia, 1998); (2) the impact of students' backgrounds provide a direct impact on their ability to complete a degree in higher education (Tinto, 1975); (3) students' race has been found to impact their college experience (Arcidiacono & Koedel, 2014); and (4) evidence suggests that students who are the first in their families to receive a college degree are disadvantaged based on the mismatch of cultural norms and the cultural expectations of higher education institutions (Stephens et al., 2012).

Studies outside of signed language interpreter education have shown that first-generation college students undertake a unique journey in higher education. Students who are among the first in their families to earn a college degree experience the anxieties and challenges that other college students face, but they also experience distinctive social, cultural, and academic changes (Ishitani, 2006; Pascarella et al., 2004). First-generation students are a distinctive sub-group in higher education. With an average of 25% of first-generation students enrolled in higher education in the United States, they represent an important minority to be considered (PNPI, 2016).

It is essential to acknowledge the vulnerability of first-generation students when developing and implementing teaching and learning strategies for interpreter education. First-generation college students do not always self-identify, and since they do not have distinguishing features, they may not be easily identified by educators. Once student needs are better understood, teachers can better adapt to promote academic success. To examine the issues first-generation signed language interpreting students face, survey responses were gathered from students enrolled in four-year, bachelor's-level signed language interpreting programs in the United States. Survey questions elicited responses regarding student's experiences, perceptions, and needs related to higher education. With 201 participants, the results showed that 44% (n=88) of the respondents self-identified as being first-generation college students. In contrast, the national average of first-generation students enrolled in college is 25% (PNPI, 2016), which is almost 20% less than the interpreting students participating in this study. Such a high percentage of first-generation students responding to the survey calls attention to a population that may be overlooked within the realm of interpreter education. The data from this study further indicates that first-generation college students often arrive at college with pre-existent barriers to their academic success. Similar to other diverse populations such as veterans, students with learning disabilities, ethnic minority students, and low-income students, first-generation college students are marginalized within the setting of higher education (Jehangir, 2010).

Based on the data gathered within this study, recommendations are made for interpreter educators regarding improved pedagogical strategies and, perhaps, a new perspective for the many first-generation students in the interpreter education classrooms.

Problem Statement

In the United States, national certification is considered a quality standard for signed language interpreters and verifies an interpreter's knowledge and abilities (CCIE 2014; Pöchhacker, 1999; RID, 2015). Currently, the certifying body of signed language interpretation in the United States, the Center for the Assessment of Sign Language Interpretation (CASLI)—a subsidiary of the RID—requires individuals to have a bachelor's degree to take the National Interpreter Certification exam. Requiring a degree as entrance to the profession of signed language interpreting may present more significant challenges to first-generation college students for multiple reasons. Researchers have shown the uphill battle experienced by FGCS to be unique regarding social, academic, financial, and administrative aspects of college. FGCS are, essentially, an invisible minority who often quietly struggle in the higher education setting (Stuber, 2011). This research aims to bring attention to this sub-group of students.

Literature Review

First-Generation College Students

When examining a particular group, it is essential to have a shared understanding of group membership. The term *first-generation college student* has been widely used, but definitions vary slightly among researchers and government entities. FGCS is generally used to describe students enrolled in college who come from a family where no parent has earned a baccalaureate degree (Billson & Terry, 1982; Choy, 2001). Federal regulations honed the scope of its usage of FGCS and defined it as:

> An individual both of whose parents did not complete a baccalaureate degree; in the case of any individual who regularly resided with and received support from only one parent, an individual whose only such parent did not complete a baccalaureate degree. (Higher Education Act of 1965, Sec.402B[6]gl[a]).

FGCS in this paper refers to students enrolled in college who do not have a parent who has earned a baccalaureate degree. Researchers have shown FGCS's experiences to be unique in the social, academic, financial, and administrative aspects of college.

To develop a foundation of knowledge related to their unique experiences, researchers have investigated students who are the first in their families to complete a college degree. In many ways, FGCS face an uphill battle: they receive less support from their parents and have heavier job loads, making them vulnerable to attrition (Billison & Terry, 1982). The likelihood of a successful transition to the college environment is lower for FGCS than for their non-first-generation college student (NFGCS) counterparts (Terenzini et al., 1994). FGCS are more likely than their NFGCS counterparts to come from low-income families, have lower degree aspirations, take longer to complete their degree programs, and receive limited encouragement from their families to enroll in college (Terenzini et al., 1996). Richardson and Skinner (1992) reviewed FGCS needs and developed institutional and academic strategies such as forming peer support groups, shared class assignments, and student-faculty connections, to provide optimal environments for FGCS to achieve degree success. While there is considerable research

outlining the challenges faced by FGCS, research also shows the positive attributes brought to college campuses by FGCS. According to a study by Garrison and Gardner (2012), there are 13 distinguishable assets that FGCS, through lived experiences, bring to higher education: resourcefulness, strategic thinking, self-reliance, practical realism, flexibility, persistence, positivity, hopefulness, self-confidence, insightfulness, compassion, gratitude, and balance. While the research focused on the challenges faced by FGCS supersedes the attention paid to FGCS assets, it is essential to focus on the spirit and grit that FGCS bring to the classroom.

Academic Aspects of Higher Education

Since the 1980s, FGCS educational attainment and persistence behaviors have interested researchers, especially in drop-out rates. Attrition of college students has been linked to the educational attainment of their parents (Chapman & Pascarella, 1983; Pascarella & Terenzini, 1980, 1983; Stage, 1988). Specifically, FGCS tend to have lower persistence rates than their NFGCS counterparts (Horn, 1998; Ishitani, 2003; Riehl, 1994). Further, FGCS have been found to complete fewer first-year credit hours, study fewer hours, and work more hours per week (Terenzini et al., 1996).

Educational expectations can affect student outcomes, and lower expectations have been found to impact student success negatively (Chickering & Gamson, 1987; Pascarella & Terenzini, 1980). FGCS tend to have lower high school grade point averages, SAT scores, and educational aspirations than their NFGCS counterparts (Nunez, 1998). Lower expectations also seem to come with a set trajectory for lower achievement; FGCS's degree attainment rates are much lower than those of NFGCS, and it typically takes more time to complete the degree. Statistics vary, but notably, one study (Hoffman, 2003) stated that FGCS were twice as likely than NFGCS to drop out of a four-year institution, while another study (Saenz et al., 2007) found that nearly 90% of FGCS enrolled in U.S. colleges did not graduate within six years of enrollment.

A traditional expectation of colleges and universities is that students are expected to work independently (Covarrubias et al., 2019). The independent expectations of colleges and universities are paradoxical to the interdependent cultural nature of FGCS due to their membership in working-class families that tend to rely on one another in an interdependent manner; their interdependent norms disadvantage FGCS because they are a mismatch with the independent expectations prevalent at universities (Stephens et al., 2012).

Financial, Family, and Administrative Aspects

A crucial part of higher education is the financial and administrative processes. Several studies indicate FGCS being at a distinct disadvantage regarding basic knowledge including costs, application processes, course expectations, and degree expectations (Horn & Nunez, 2000; Hossler et al., 1999; Martinez et al., 2009; Pratt & Skaggs, 1989; Ting, 2003; Warburton et al., 2001; York-Anderson & Bowman, 1991). Further, due to the lack of academically knowledgeable family support systems, FGCS can experience difficulty gaining access to and remaining enrolled in higher education (Horn & Nunez, 2000). National financial aid statistics also show FGCS being much more likely to come from families with lower incomes (NCES, 2018) and having dependents themselves (PNPI, 2016), both of which have economic impacts. The barriers to FGCS experience are an essential consideration given that the baccalaureate degree is an avenue of upward social mobility and economic benefits (Pascarella & Terenzini, 1991), as well as a prerequisite to signed language interpreting certification.

Social and Emotional Integration in Higher Education

College campuses are social environments that require new students to adjust to integrate successfully. Social aspects of college include creating and managing a social life, forming support networks, and

managing new social freedoms (Gerdes & Mallinckrodt, 1994). FGCS may be unaware of the different social aspects of college or may be nescient of the importance of gaining information only available within social bearings, making them more vulnerable to failure. Social environments contain explicit and implicit rules; social integration and socially acceptable behavior have been linked to academic retention. Students who integrate and behave in socially acceptable ways have an advantage over students who do not (Braxton & McClendon, 2001). Tinto's (1975) work on the effects of social integration in academic settings established a foundation for further investigation into the effects of socialization on academic achievement. One way to learn the social mores of higher education is to participate in academic and social activities. A study examining college activities found a positive correlation between student participation in academic activities and learning (Astin, 1993). In similar studies investigating student success, students who participated in meaningful academic activities were more likely to persist in their learning environments (Pascarella & Terenzini, 1991), and having a sense of belonging may positively influence academic achievement (Hausmann et al., 2007). Last, positive relationships between students and faculty have been found to improve retention (Tinto, 1990) and persistence for FGCS (Longwell-Grice & Longwell-Grice, 2008).

Agliata and Renk (2008) reported that parents significantly influence their children's adjustment to the college environment. Parents who have not attended college may not be aware of or understand the social expectations of college students and therefore may not impart the importance of these social expectations to their children. Two studies indicate that parents without college experience may disadvantage their FGCS children through unfamiliarity with college expectations (Bui, 2002; Warburton et al., 2001). Furthermore, in a two-year project that included 13 focus group discussions with 79 participants, Orbe (2004) investigated student identity among FGCS as a potential challenge to full integration into the college atmosphere and found they appeared to lack significant communal identity. FGCS can arrive on campus with a burden of unfamiliarity yet are often expected to make up for it on their own, which can affect attrition.

Signed Language Interpreter Education

Signed language interpreting, as a profession, is relatively new. Prior to 1964, interpreters were primarily volunteers who helped their deaf families, friends, and neighbors. No training programs, regulations, oversight, or professional service payment existed. The first formal meeting in the United States to discuss organizing signed language interpreter services occurred in 1964. As a result, the Registry of Interpreters for the Deaf (RID) was established (RID, 2015). In under 60 years, with the support of RID and legislative amendments, the profession of signed language interpreting now offers certification and upholds specific educational requirements for professional signed language interpreters. Current eligibility to take the National Interpreter Certification (NIC) exam requires a bachelor's degree in any major, among other criteria. The degree requirement for entry to the signed language interpreting profession is meant to provide a liberal arts foundation, offer a broad knowledge base, and prepare individuals to deal with a range of professionally related matters (RID, 2015). Signed language interpreters often work in a variety of settings ranging from education to legal, which requires foundational knowledge and skills.

As of 2023, 47 bachelor-level programs in signed language interpreting are available nationwide (Muroski, 2023). Support for continued education of interpreters and translators has been widely published (Fitzmaurice, 2010; Hale, 2007; Mackintosh, 1999; Napier, 2004; Roy, 2006; Sawyer, 2004). The 47 bachelor's degree signed language interpreting programs all promote a commitment to accessible education for job readiness. However, they often do not offer a level playing field between FGCS and NFGCS. To date, the development of an academic plan to assist FGCS with completing their bachelor's degrees in signed language interpretation has not yet been devised. Signed language interpreter education is still evolving: the first signed language interpreter education programs were established in the 1960s and 1970s and initially were only a few weeks long (Ball, 2013); today, many of these programs are now associate, bachelor's,

master's, and doctoral programs. Standards for interpreter education programs were only approved by the Commission on Collegiate Interpreter Education (CCIE) in 2006 (CCIE, 2022).

When comparing the resources related to various professions, a World Cat search for books shows the different number of books available to signed language interpreting educators (91 books) compared with other professions such as nursing (4,268,039 books), physical therapy (64,997 books), or computer science (1,297,738 books) (WorldCat, 2023). Signed language interpreting educators often face the daunting task of creating their own curriculum content. This challenge is further complicated by the specific needs of FGCS, which educators may not fully understand. This study aims to bridge the gap between student needs and educator awareness by addressing this disparity.

Methodology

Participants

Recruitment for participation in this research study was directed at undergraduate students enrolled in four-year, bachelor-level signed language interpretation programs. Invitations to participate were disseminated via social media postings, emails to RID student members, an email notification through the Conference of Interpreter Trainers (CIT), and emails sent directly to program professors at colleges and universities offering four-year degrees in signed language interpreting in the United States. The online survey was active for one week, and 201 students participated in the study. Respondents were not compensated for their participation.

Instrument

Data was collected with an online survey questionnaire available during a weeklong period in April 2018 (see questionnaire excerpt in appendix). The survey opened with a question confirming that participants were currently enrolled in an undergraduate bachelor's degree program in signed language interpreting. Participant names were not collected, and to further provide anonymity to participants, they were not asked to include the names or locations of their educational institutions. The survey consisted of multiple-choice questions eliciting demographic and academic awareness information, while academic perceptions were reported via responses to Likert scales of agreement and frequency. Additional questions were included in the survey but are not reported in this paper. Responses to all multiple-choice questions were required, and the survey took approximately 10 minutes to complete.

Data Collection and Analysis

Survey responses were separated into two groups based on the demographic question of parental educational level. Participants who reported that neither of their parents received a bachelor's degree were placed into the first group and labeled as FGCS. Participants who reported that at least one of their parents received a bachelor's degree were placed into the second group and labeled as NFGCS. Comparative analyses were run between the two groups (FGCS & NFGCS) and between this study and national reporting of similar contexts found in other published works.

Results

FGCS Enrolled in Signed Language Interpreting Programs

The participant demographics of the survey respondents for this study were primarily homogeneous between FGCS and NFGCS. Overwhelmingly, the participants were white (81.1%), female (88.6%), hearing (97.5%), and native English speakers (92%). These demographics aligned with the demographic reports for the profession of signed language interpreters in the United States (RID Annual Report, 2017). Responses

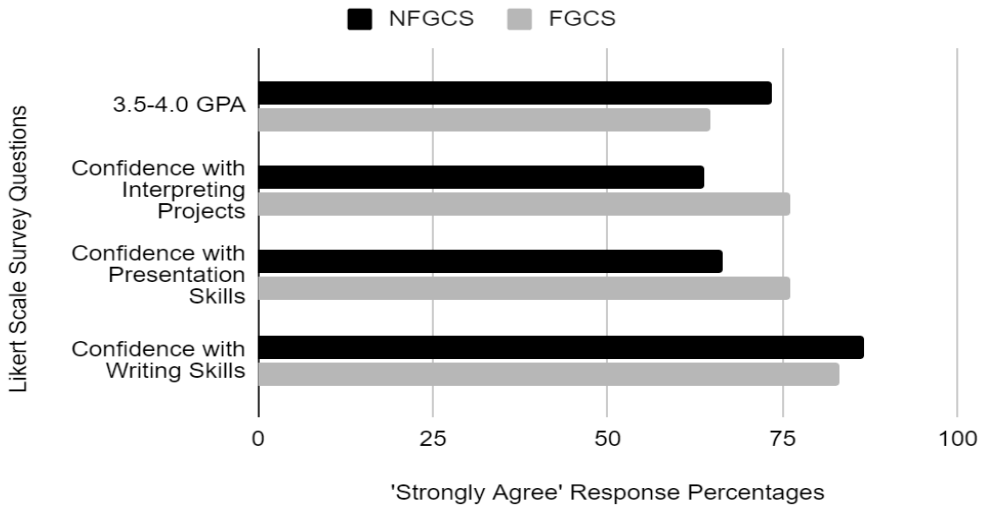
indicated that FGCS were enrolled in college full-time (12–17 credits per semester) at a higher percentage (87.5%) compared to NFGCS (75.2%). Conversely, NFGCS reported being enrolled part-time in greater numbers (12.4%) than their FGCS counterparts (6.8%). These numbers did not align with national trends of FGCS being more likely to attend college part-time than their peers (PNPI, 2016).

Academic Aspects of Interpreter Education

Although FGCS reported having overall lower grade point averages (GPA) than their NFGCS counterparts, they exhibited greater confidence in their projects and presentations. NFGCS in this study had higher academic achievement, resulting in a 3.5 to 4.0 GPA (73.5%) compared to their FGCS counterparts (64.8%). While this gap was present with regard to GPA, the reports of academic confidence varied between the groups. Reporting on confidence, FGCS *agreed* or *strongly agreed* that they were more confident with interpreting-related projects (76.1%) than NFGCS (63.7%). FGCS also reported higher confidence by *agreeing* or *strongly agreeing* to feeling confident in their presentation skills (76.1%) than NFGCS (66.4%). Conversely, when questioned about writing, the NFGCS indicated more confidence by *agreeing* or *strongly agreeing* to being confident about their writing (86.7%), with FGCS trailing slightly (83%).

Figure 1

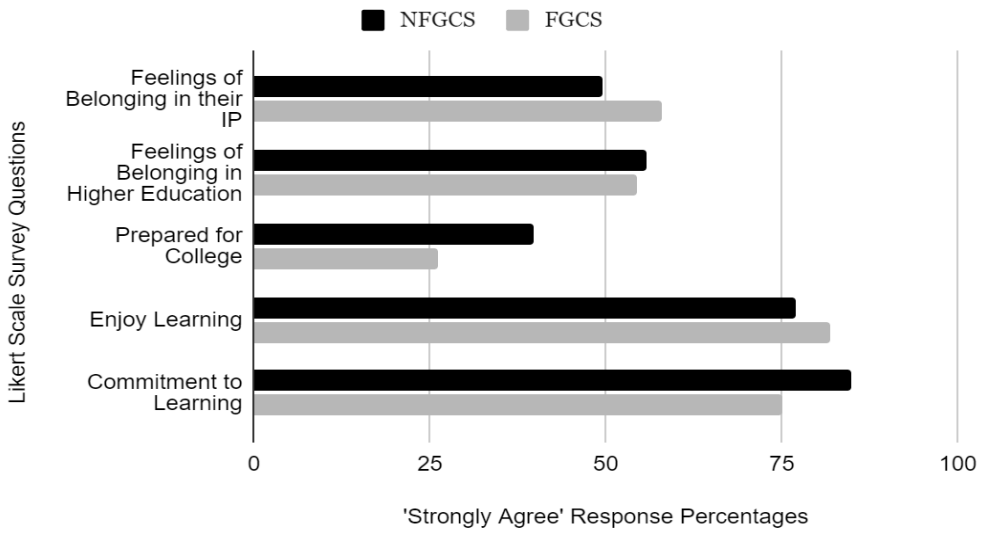
Academic Achievement and Confidence



NFGCS indicated a higher academic commitment (85%) by strongly agreeing that they were committed to learning when compared to FGCS (75%). While most students strongly agreed to enjoy learning, FGCS' responses were slightly higher (81.8%) than NFGCS' (77%). Regarding personal opinions of college preparedness, more NFGCS strongly agreed that they were well prepared for college (39.8%) than FGCS (26.1%). Although there were not high numbers of participants who felt they were prepared for college, most participants felt that they belonged in higher education. There were almost equal levels of strong agreement for participants feeling that they belong in higher education, with FGCS trailing slightly behind (54.5%) their NFGCS counterparts (55.8%). Interestingly, when asked if students feel as though they belong in their interpreting program (IP), FGCS strongly agreed (58%) at a higher rate than NFGCS (49.6%).

Figure 2

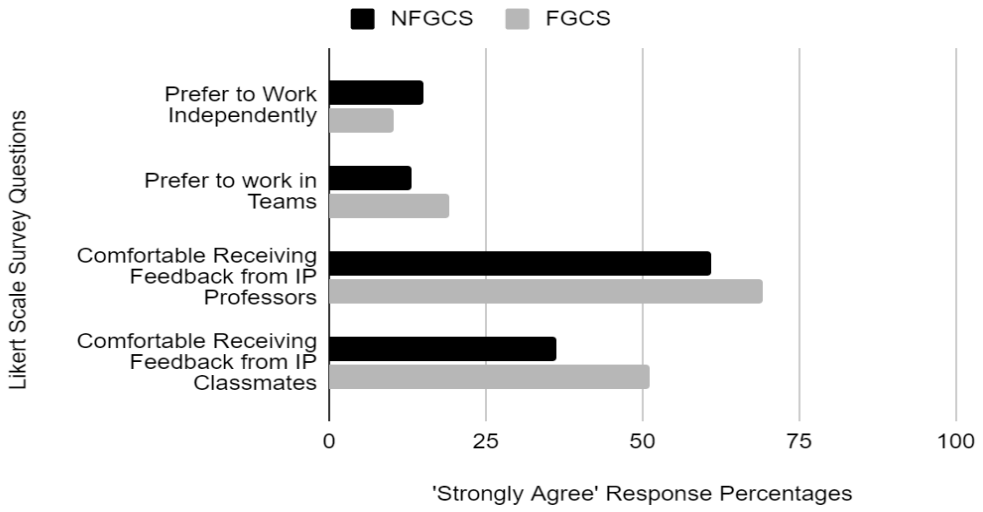
Academic Commitment and Perception of Belonging



When asked about their learning preferences, FGCS reported being more comfortable receiving feedback from their classmates (51.1%) compared with NFGCS (36.3%). Similarly, FGCS were more comfortable than NFGCS when receiving feedback from their interpreter educators. FGCS *strongly agreed* that they were comfortable receiving feedback from their professors (69.3%), which was higher than their NFGCS counterparts (61.1%). FGCS were more likely to prefer group-style work (19.3%) than NFGCS (13.3%). NFGCS preferred working independently (15%) over FGCS (10.2%).

Figure 3

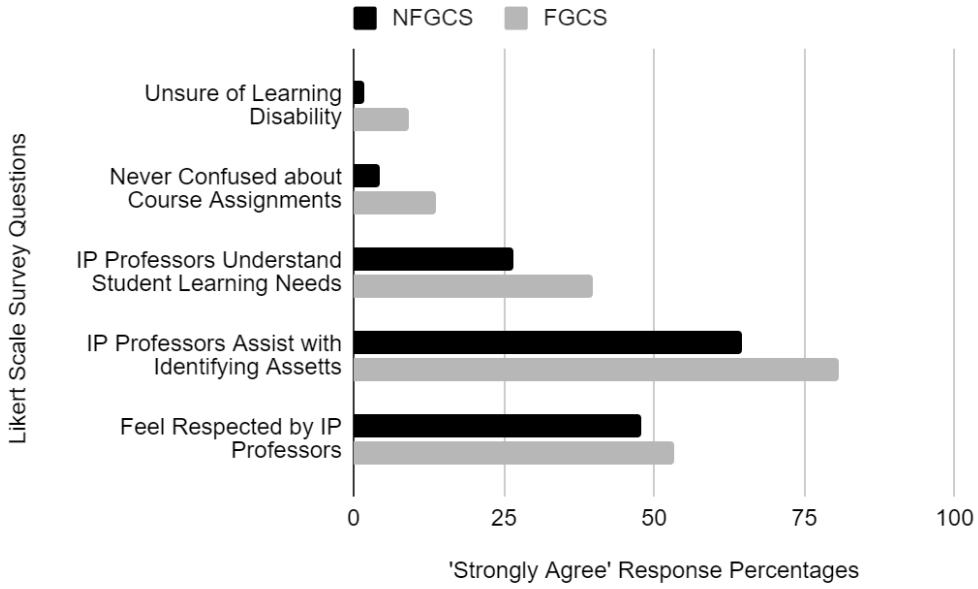
Learning Preferences



Regarding how students perceived learning, FGCS reported that they agreed or strongly agreed (80.7%) that their interpreting professors assisted them with identifying their assets. In comparison, their NFGCS counterparts reported a much lower agreement (64.6%). This aligned with the responses for agreement as to whether professors understand students' individual learning needs: FGCS again scored higher in strongly agreeing (39.8%) versus NFGCS counterparts (26.5%). Interestingly, FGCS reported that they never felt confused about course assignments at triple the rate (13.6%) of NFGCS (4.4%). However, more FGCS reported being unsure whether or not they had a learning disability (9.1%) compared with their NFGCS counterparts (1.8%). Last, when asked whether they felt respected by their IP professors, FGCS indicated feeling more respected (53.4%) than NFGCS (47.8%).

Figure 4

Learning Perceptions

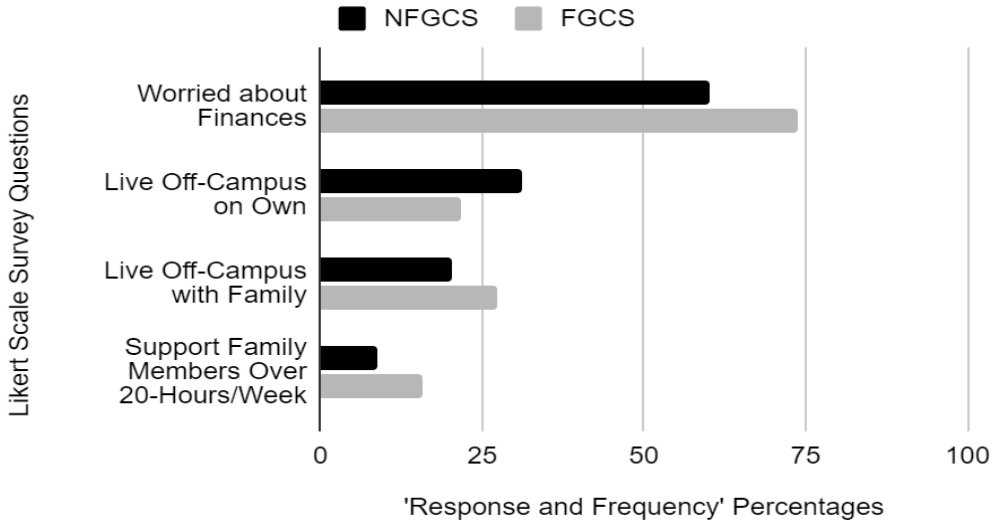


Financial, Family, and Administrative Aspects

To better understand students' commitment to family obligations, the survey asked about the time students spent supporting their family members. The responses showed that FGCS were almost twice as likely to spend time supporting their family members at more than 20 hours a week (15.9%) compared to NFGCS (8.8%). Housing varied between the groups: more FGCS (27.3%) reported living off-campus with family compared to NFGCS (20.4%). In fact, more of NFGCS (31.0%) reported living off-campus on their own more than FGCS (21.6%). While the survey did not ask specific socioeconomic questions regarding personal wealth, the statement "I worry about finances" was included in the survey. Most FGCS (73.9%) responded that they were always or frequently worried about finances compared with fewer (60.2%) of their NFGCS counterparts.

Figure 5

Financial and Family Commitments

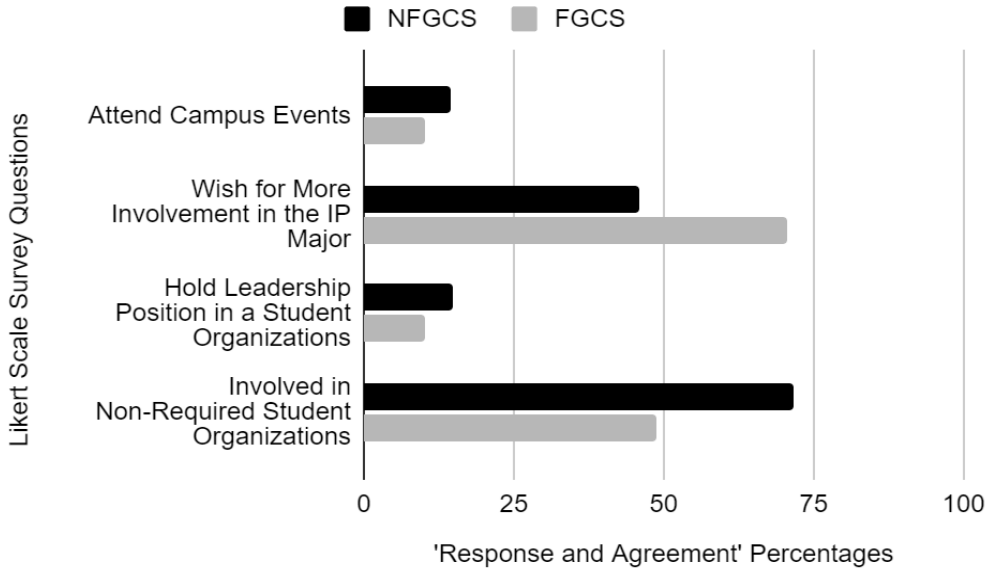


Social and Emotional Integration

Regarding participation in campus student organizations, NFGCS reported involvement in non-required student organizations (71.7%) more than FGCS (48.9%). The same was true for holding leadership positions, with NFGCS holding leadership positions in a student interpreting organization (15%) more than FGCS (10.2%). When questioned about their desire to be more involved in the IP major, the vast majority (70.5%) of FGCS wished they were more involved with their major, whereas NFGCS reported less desire in this category (46%). Although they reported a desire for more involvement, FGCS reported that they *never* attended campus events (10.2%), almost double that of their NFGCS counterparts (5.3%). The same question elicited similar information from the top of the scale. NFGCS reported *always* attending campus events at a higher rate (14.5%) than FGCS (10.2%).

Figure 6

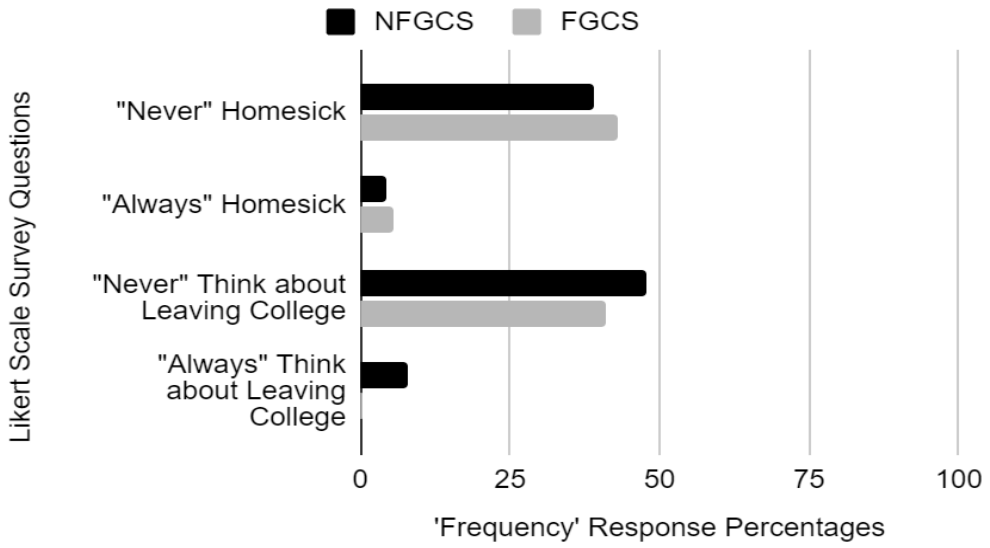
Academic and Social Integration



Students were asked about their emotional thoughts related to being a college student. NFGCS reported the highest responses in both always thinking about leaving (8%) and never thinking about leaving (47.8%). In comparison, no FGCS reported always thinking about leaving the college or university (0%), but 40.9% reported never thinking about leaving. A question about being homesick resulted in a transverse response from the two groups: FGCS reported always being homesick (5.7%) compared to NFGCS (4.4%), whereas NFGCS reported never being homesick (38.9%) less than FGCS reported never being homesick (43.2%).

Figure 7

Emotional Responses to College



Discussion

The findings of this study depict how FGCS compare to NFGCS regarding specific aspects of academic life. This study highlighted the differences and similarities in their academic experiences, perceptions, and needs. The findings may provide insight for interpreter educators to offer improved experiences for FGCS enrolled in interpreter education. The data highlights seven areas within the realm of students' academic experiences: (1) academic achievement and confidence, (2) academic commitment and perception of belonging, (3) learning preferences, (4) learning perceptions, (5) financial and family commitments, (6) academic and social integration, and (7) emotional responses to college. Comparative analysis of student responses offers a view into the challenges faced by FGCS enrolled in interpreter education programs.

Academic Achievement and Confidence

While NFGCS showed higher academic achievement through GPAs, their academic confidence was lower than their actual achievement in interpreting projects and presentation skills. FGCS, even with lower GPAs, reported higher confidence in their interpreting projects and presentation skills than their NFGCS counterparts. Confidence is an indicator of recognizing one's limitations. Given the crucial choices required of professional interpreters, such as whether a particular interpreting assignment is within their level of competence, it is vital to develop an awareness of personal capabilities. FGCS may struggle with this skill. Conversely, there are benefits to overestimating one's abilities such as self-confidence, which can offer positivity, self-motivation, and more open communication. Faculty can utilize the benefits of the FGCS's confidence to develop a collaborative classroom while keeping in mind the need to monitor the critical decision-making skills of the FGCS.

Academic Commitment and Perception of Belonging

Perceptions about learning differ between FGCS and NFGCS. FGCS reported a lower commitment to learning while simultaneously reporting an enjoyment of learning more than their NFGCS counterparts. Given that FGCS often arrive at college with greater family and financial commitments than NFGCS, the results related to commitment to learning may result from balancing numerous obligations and being realistic with their limited time. Unsurprisingly, FGCS reported feeling less prepared for college and as though they may not belong in higher education compared to NFGCS. The idea of belonging can include an array of feelings related to acceptance and inclusion, which can impact one's identity as being a part of something such as a student cohort. If FGCS do not feel they belong, their grades and overall success can be negatively impacted, which should be considered when developing curriculum and training the faculty in interpreter education. Curiously, FGCS reported feeling they belonged in their IP programs more than NFGCS. The results could be interpreted as an indicator that interpreter education is a welcoming field whether by the faculty and students in the programs or by the deaf community, who often support students in their pursuit of becoming interpreters, or that they are developing skills that can lead to employment.

Learning Preferences and Perceptions

The study's most important finding was the students' learning preferences and perceptions. Overwhelmingly, FGCS reported being more comfortable receiving feedback from their classmates and professors than NFGCS. FGCS also felt more respected by their professors and preferred to work in teams more than NFGCS. This data aligns with the notion that the cultural nature of FGCS is interdependence given their membership in working-class families that tend to rely on one another interdependently. While teamwork and acceptance of peer feedback may seem to be positive attributes, they do not necessarily align with the current culture of higher education. Although group assignments and peer feedback appear in higher education, more assignments require independent work and professor-only feedback. FGCS may experience a disadvantage when operating in an environment that traditionally values independent work since interdependence is often a cultural norm for them. FGCS's trust in their professors' understanding of their individual learning needs and their professors' ability to assist them with identifying their assets exceeds that of NFGCS. The trust that FGCS reported feeling may correlate positively to their academic successes since positive relationships will likely improve persistence and retention. Understanding students' learning preferences and perceptions can offer interpreter educators insight into adjusting their course materials, class structure, and overall expectations of their students.

Financial and Family Commitments

The financial information garnered in this study resembled what has been found in other studies. Although this study did not request personal financial information, most FGCS reported worrying about finances. FGCS in this study were also more likely to live off-campus with their families and actively support their family members for more than 20 hours per week, such as driving them to appointments, providing childcare, and even cooking or cleaning. FGCS, in general, are more likely to come from families with lower incomes and often face financial limitations when intermixing with wealthier students on college campuses. Financial burdens of regular collegiate decisions may include whether they should purchase textbooks or attend a study session that includes splitting the cost of food; they also weigh skipping classes to take an extra shift at work. FGCS's responsibilities toward family members and basic financial stressors often negatively impact their attempts at earning a degree. Allowing flexibility in the educational process can benefit FGCS in becoming signed language interpreters.

Academic and Social Integration

Regarding academic involvement, FGCS reported a desire to be more involved in the major. The involvement results may correlate with their reported family and financial responsibilities, such as having less time to participate in campus events due to outside commitments. Another reason FGCS may be less engaged is that they do not know the importance of social integration due to their lack of familial academic role models. FGCS in this study reported much lower involvement in non-required student organizations than NFGCS, yet they tend to hold leadership positions when they are involved. FGCS's willingness to take leadership positions aligns with their reported high confidence as well as their nature of interdependence. The results indicate a high level of commitment among FGCS to continuing their education, even though they may not participate in campus events and organizations at the same level as NFGCS.

Overall, FGCS appear to be disadvantaged in higher education, and yet they approach the undertaking with positive perceptions. FGCS are pioneers of their families; they do not have family role models to assist them with the process of achieving a college degree, and yet they persist in an alien environment. There are personal assets that FGCS bring to higher education that the faculty and administration could foster. The FGCS participants in this study were enthusiastic about learning. They maintained a solid resolve to care for others, trusted their professors, yearned to work with their classmates, had a strong desire to be even more involved with their major, and emanated confidence. Regardless of the challenges that FGCS bring to the classroom, their spirit and grit can strengthen collaborative learning, inspire trust in faculty, display confidence for others, and add a layer of positivity to learning environments.

Future Research

As this study serves as an initial line of inquiry into the experiences, perceptions, and needs of FGCS enrolled in signed language interpreter education, there are several research possibilities. Future projects could include an additional survey directly asking FGCS what would help them continue their pursuit of a degree, using the survey questions from this project to collect data on heritage signers, collecting similar data by way of interviews, observations, focus groups, or case studies as a means to triangulate the findings and further understand the FGCS experiences, perceptions, and needs. Doing the same study again especially post-pandemic could be helpful to better understand how the experiences, perceptions, and needs may have changed for FGCS.

Limitations

Adequate response rates and strict data calculation do not prevent the potential for participant error. While the survey results provide insight into FGCS experiences, perceptions, and needs, they do not create a complete picture of all FGCS enrolled in interpreter education programs. This is the first foray into the line of inquiry of FGCS enrolled in interpreter education, and some survey questions would benefit from refinement. Gauging the experiences, perceptions, and needs of FGCS based on survey research is limiting; therefore, additional forms of data, such as interviews, observations, focus groups, or case studies, would contribute to a more thorough analysis and perspective.

Practical Application

Recognition of FGCS as a unique minority group can lead to a better understanding of their learning needs and impact the way educators approach their learning. FGCS can be supported by educators who understand their unique challenges and strengths, are willing to foster their potential, and have patience for what they genuinely do not know about successfully operating in the higher education system. Per

the results of this study and aligning with the personal experience of this study's author, FGCS studying signed language interpretation could benefit from the following teaching strategies: (1) ensure all course information is organized and easily accessible; (2) ensure all course materials are easy to understand; (3) incorporate group work into the curriculum; (4) offer clear and direct feedback on student work; (5) allow time for peer feedback; (6) offer extra credit for student participation at campus events and include remote participation options (such as virtual participation); (7) openly, respectfully, and honestly modulate student confidence; (8) offer consistent patience if students ask the same question more than once; (9) persistently and kindly show students where to find information, allowing them to be independent; and (10) offer flexibility with course assignments to alleviate any pressure caused by the family and financial burdens. When working with students who do not easily fit into the college setting, it is the faculty who can be the chief ally to FGCS and, with minor considerations, it is the faculty who can make the critical difference in students' success.

Conclusion

This paper reviewed the data collected from (N=201) bachelor's degree students of signed language interpreting, 44% (n=88) of whom self-identified as being FGCS and 56% as NFGCS (n=113). Such a high percentage of minority students responding to the survey for this study calls attention to a population worthy of consideration within the realm of interpreter education. The data from this study aligns with other studies showing that FGCS often arrive at college with barriers to their academic success. Similar to other diverse populations such as veterans, students with learning disabilities, ethnic minority students, and low-income students, FGCS are marginalized within the setting of higher education. Consideration of the vulnerability of FGCS can inform planning and implementing curricula in interpreter education to build productive learning environments that intentionally orient toward student learning. The information garnered from this study can inform interpreter educators to better understand the circumstances of an underrepresented group of students and create better learning environments for FGCS.

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Appendix
Questionnaire Excerpt

DEMOGRAPHICS

1. Age
    - 18–19
    - 20–21
    - 22–25
    - 26–30
    - 31–over

2. Ethnic Identity
    - White or Euro-American
    - Black, Afro-Caribbean, or African American
    - Latino or Hispanic American
    - East Asian or Asian American
    - Middle Eastern or Arab American
    - Native American or Alaskan Native
    - Mixed
    - Other

3. Gender
    - Female
    - Male
    - Transgender
    - Nonbinary
    - Other

4. What do you consider to be your first language?
    - English
    - American Sign Language
    - Spanish
    - Other

5. What is your audiological status?
    - Hearing
    - Hard of Hearing
    - Deaf

6. Employment

	40+ hours/ week	25–39 hours/ week	10–24 hours/ week	1–9 hours/ week	I don't work
I work during the school year					
I work during the summers					

7. I am currently enrolled in
    - An online interpreting program
    - An on-campus interpreting program
    - A hybrid interpreting program

8. Average number of credits I take/semester
    - Less than 12 credits

- 12–17 credits
- 18 credits or more

9. Current Residence
    - I live on campus.
    - I live off-campus with family
    - I live off-campus on my own
    - I live off-campus with roommate(s)
    - Other

10. Current Academic Standing
    - Freshman or first-year student
    - Sophomore or second-year student
    - Junior or third-year student
    - Senior or fourth-year student
    - Fifth-year student or beyond
    - Other type of undergraduate student

11. My current GPA
    - 3.5–4.0
    - 3.0–3.4
    - 2.5–2.9
    - 2.0–2.4
    - Under 2.0

12. I have a learning disability
    - Yes
    - No
    - Unsure

13. My Parent's education

	Less than High School	High School	Some College	2-year Degree	4-year Degree	Master's degree or above	Unsure
Mother							
Father							

14. Time I spend supporting my family members
    - Less than 5 hours/week
    - Between 5 and 10 hours/week
    - Between 11 and 20 hours/week
    - More than 20 hours/week

15. Deaf family members
    - I have deaf parent(s)
    - I have deaf sibling(s)
    - I have deaf grandparent(s)
    - I do not have any of the above

ACADEMIC PERCEPTION

16. I am involved in a non-required student organization
    - Yes
    - No

17. I hold a leadership position in an IEP organization
    - Yes
    - No

18. I chose my IEP because
    - Faculty
    - Cost/financial aid package
    - Location
    - Program reputation
    - Flexibility of program
    - Encouraged to apply by family/friends

19. Agreement scale

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
I enjoy learning					
I struggle with learning					
I was well prepared for college					
I feel that I belong in higher education					
I feel that I belong in the IP program					
I prefer to work in teams					
I prefer to work independently					
I am confident with my interpreting-related projects					
I am confident in my skills of giving presentations					
I am confident with my writing skills					
I am comfortable giving feedback to my IP classmates					
I am comfortable receiving feedback from my IP classmates					
I am comfortable receiving feedback from my IP professors					
I am friends with other IP students					
I am committed to learning					
I see myself as part of my college/university					
I see myself as part of my IP program					
I feel respected by my IP professors					
My IP professors understand my individual learning needs					
My IP professors assist me with identifying my assets					
I know where to find tutoring for special needs/ skills					
I wish I was more involved in the IP major					
I am too embarrassed to ask questions in class					

20. Frequency scale

	Always	Frequently	Occasionally	Rarely	Never
I have thought about leaving the IP program					
I have thought about leaving the college/university					
I am homesick					
I feel frustrated in my IP courses					
I feel proud about my IP accomplishments					
I am confused about course assignments					
I attend campus events					
I worry about finances					