



Undergraduate action research as a high-impact mentorship practice in community interpreting studies

Investigación-acción con estudiantes de grado: una práctica de mentoría de alto impacto en estudios de interpretación comunitaria

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Abstract: This article is a case-study examining how both Latino/a and non-Latino/a interpreting students carry out undergraduate research within the Community Interpreting Certificate at Viterbo University. Students worked in small groups to develop a variety of skills and new understandings--both personal and professional--within the field of interpreting by designing and carrying out action research projects in their own rural communities in Wisconsin. Through the analysis of surveys distributed at the beginning and the end of student research projects, this article discusses students' perceptions, outcomes and challenges faced throughout their action research process. Conclusions underscore how the practice of mentoring students through undergraduate action research can be a successful High-Impact Practice to empower students and engage them in their local communities.

Keywords: Undergraduate research, action research, mentorship, High-Impact Practices (HIPs), community interpreting.

Resumen: Este artículo es un estudio de caso que analiza cómo los estudiantes de grado (latinos y no latinos) desarrollan trabajos de investigación en los estudios conducentes a la obtención del Community Interpreting Certificate de la Universidad de Viterbo. Los estudiantes trabajaron en grupos pequeños para desarrollar una variedad de destrezas y nuevos conocimientos (personales y profesionales) en el campo de la interpretación, a través del diseño y realización de proyectos de investigación-acción dentro de sus propias comunidades rurales en el estado de Wisconsin. A través del análisis de las encuestas distribuidas al principio y al final de los proyectos de investigación, este artículo examina las percepciones y las dificultades a los que los estudiantes se enfrentan durante el proceso de su investigación-acción así como los resultados que presentan. Las conclusiones destacan como el proceso de mentoría durante la investigación-acción es una práctica de alto impacto (*High-Impact Practice*) exitosa para empoderar y fomentar el compromiso de los estudiantes con sus comunidades locales.

Palabras clave: Investigación de estudiantes de grado, investigación-acción, mentoría, práctica de alto impacto, interpretación comunitaria.

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1. INTRODUCTION

The main objective of this study is to present students' perceptions of learning when carrying out their own undergraduate action research projects within the skill-based Community Interpreting Certificate at Viterbo University. The literature review of this paper examines undergraduate research as a High-Impact Practice (HIP) within higher education in the United States. Situated within a gap in the literature, this study explores how HIPs affect the *quality* of student learning. Mentoring is then explored in terms of professor-student developmental relationships that guide undergraduate research, especially for underrepresented minority students. Both HIPs and mentoring are also examined through the lens of translator / interpreter training. The main characteristics of this pedagogical mentoring practice and the methodology of this case study are then described. By way of mixed methods, this paper discusses the results of student self-assessments at both the beginning and the end of their projects. Finally, we draw conclusions and consider the limitations and future avenues of research and application.

It is important to underline that the instructor, research mentor and author of this paper has analyzed the experience of twelve interpreting

students with the understanding that mentoring is reciprocal in nature. These students represent a range of perspectives and identities in terms of country of origin, dominant language, age, educational background, etc. A White, middle-class, university instructor and scholar, who grew up in US suburbia, cannot attest to the lived-experience of students (both Latino/a and non-Latino/a) that carried out these initiatives on their own, and mostly within rural communities. Furthermore, a professor in this role must be humbled by the students' vision and clarity in their own action research, learning from the challenges that the students face when they ask questions about the context of their own lives. Indeed, teachers and mentors in such privileged roles may become, in many moments of the research process, the mentees themselves.

2. LITERATURE REVIEW

2.1. Undergraduate research as a high-impact practice

High-Impact Practices (HIPs), endorsed by the Association of American Colleges and Universities (AAC&U) are defined as educational opportunities that are time intensive, aide the learning process beyond the classroom, entail significant connections with faculty and students, foster interpersonal collaboration with diverse individuals and offer regular and meaningful feedback (Kuh, 2008). Kuh outlines that such pedagogical approaches may include learning communities, collaborative projects, service learning, studying abroad and undergraduate research, all of which promote deep learning and a variety of positive outcomes for undergraduate students. Though many of the effective educational opportunities here described as High-Impact Practices have been implemented in higher education for decades, Kuh's work (2008), which coins the term *High-Impact Practices*, is based on data obtained from the NSSE (National Survey of Student Engagement). In an effort to combat low enrollment and unstable retention at US universities today, Kuh's work led institutions to apply High-Impact Practices into their university curriculums more strategically.

While Kuh and others have repeatedly demonstrated that HIPs such as undergraduate research lead to positive outcomes for both students and institutions of higher education, additional recommendations suggest bolstering that impact by thoughtfully designing projects to match program and institutional culture and objectives (Brownell and Swaner, 2009a).

Though studies around the success of HIPs have focused on retention and success as measured by grade-point average, the literature also indicates a need for studies to move beyond grades, persistence and completion, to focus also on the *quality* of student learning (Kuh, 2008; Brownell and Swaner, 2009a). This project empirically measures the implementation of undergraduate action research as a High-Impact Practice in an interpreting curriculum to gauge how students perceive their learning process. This project was also intended to serve as a model for embedding more research into the humanities at Viterbo University, enhancing a culture of academic rigor across disciplines, and intentionally including students of diverse backgrounds in undergraduate research.

HIPs such as undergraduate research, which emphasize student-faculty research partnerships, have proven to be particularly effective for the retention and success of first-generation, low-income students and those who belong to underrepresented minority groups (Nagda, et al., 1998; Kuh, 2008; Brownell and Swaner 2009b; Olson-McBride, et al., 2016). One study, examining the cumulative impact of five categories of HIPs (service learning, internships, senior experience, research with faculty and study abroad), found that Latino/a students who participated in three or more of these High-Impact Practices were 35% more likely to graduate on time than Latino/a students who did not carry out any of these HIPs. Furthermore, the retention of Latino/a students in this study was greater than the non-Latino/a students who had carried out three or more High-Impact Practices (Huber, 2010). Huber's work encouraged the implementation of undergraduate research projects into the Community Interpreting Certificate at Viterbo, since most of the participating students self-identified as Hispanic or Latino/a. Moreover, Viterbo's program had suffered from a historically high attrition rate for Latino/a students, specifically (Pinzl, 2018). Between 2014-2018, for example, 38% (13 of 34) of students who enrolled in the program did not complete it. When broken down by ethnicity, the attrition rate of Latino/a students was 58% (11/19) as compared to 13% (2/15) of non-Latino/a students. Undergraduate research was therefore implemented as a High-Impact Practice in this program to boost Latino/a student retention and success.

As Kilgo and Pascarella (2016) indicate, undergraduate research has been studied since the 1990s in terms of both cognitive-related and educational attainment outcomes. However, when examined within the more recent framework of High-Impact Practices, some authors suggest that undergraduate research contributes specifically to improved retention

rates, academic performance, student satisfaction and engagement in the classroom (Brownell and Swaner, 2009a; Olson-McBride et al., 2016). Indeed, these authors assert that undergraduate research encourages the development of research skills, proves to aide students in problem solving, and boosts both their satisfaction and active engagement with their academic experience.

The type of undergraduate research chosen for implementation in this interpreting program was action research (AR). Student engagement in AR projects with university instructors seems to foster the faculty-student relationship (Moore and Gayle, 2010), encourage student voices to be heard, support developmental growth and potentially enhance the curriculum (Kur et al., 2008). As explained by Sagor (2010), AR can be used for “micro” level projects that aim to focus on student learning attributes or for “macro” level projects aiming to examine institutional-level or program issues. This action research study was carried out at Viterbo to investigate issues on both the micro and macro levels of the Interpreting Certificate with two major objectives. On the micro level, this initiative aimed to foster a developmental student-faculty mentorship relationship to boost students’ confidence as both aspiring practitioners and interpreting researchers. Since faculty members who implement undergraduate research into their curriculums are also urged by HIP scholars to “provide mentoring rather than just program oversight, and attend to the quality of the mentoring relationship (balancing challenge with support)” (Brownell and Swaner, 2009b), mentoring was also considered in this curriculum component. On the macro level, the objective was to incorporate undergraduate research as a strategy for student retention and success in the 2018-19 academic year, considering the historically high rate of attrition (particularly of Latino/a students) within the program. While the first goal intends to aid students’ developmental growth and academic success, the latter intends to boost the success and quality of the interpreting program at Viterbo.

Strategies such as mentoring students through undergraduate research within interpreting studies, were intended, therefore, not only help to give more social capital and confidence to the students who participated, but also serve to foster more spaces of equity and social justice within both academia and communities beyond the institution.

2.2. Mentorship: definitions and approaches

Research on High-Impact Practices (particularly in terms of student-faculty research partnerships) intersects with literature on mentorship in that both point to the enhancement of student retention and success (Newton and Wells-Gloer, 1999; Jacobi 1991; Nagda et al., 1998). Before examining this intersection, however, a brief overview of definitions and approaches as related to mentorship is merited.

Since the mid-1970s, mentoring research has focused primarily within the areas of education, the workplace (Merriam, 1983; Kram, 1985), youth and psychology (Jacobi, 1991; Eby et al., 2008). Consequently, a variety of ways to think about mentorship have emerged, which include, but are not limited to: peer-mentoring, e-mentoring (Ragins and Kram, 2007), multiple mentoring (Patel, 2017), reverse mentoring (Murphy, 2012), formal (structured, organizational or institutional) and informal (organically formed, personal) mentoring (Izner and Crawford, 2005).

Despite a range of mentoring approaches, there is also an apparent lack of consensus on how to define mentoring itself. Widely-held understandings of the term within education, management and psychology entail hierarchical, one-on-one developmental relationships between an individual with less experience (the mentee or protégé) and an individual with more experience (the mentor) (Jacobi 1991; Zellers et. al, 2008). Similarly, the classic understanding of faculty-student mentorship relationships is one in which the professor takes on the role of “mentor”, who teaches and guides the student (or “mentee”), both academically and personally (Jacobi, 1991).

The faculty-student research relationship carried out in this study, may in some ways exemplify the above classical definitions of mentorship. However, these one-directional visions fall short of describing reciprocal developmental relationships, particularly when mentoring across difference (whether cultural, racial, ethnic, generational, etc.). Zellers et al. lay out a more contemporary view of mentorship as “a reciprocal learning relationship characterized by trust, respect and commitment” (2008: 555). Similarly, Hinton et al., push back on hierarchical mentorship conceptualizations from the lens of Critical Race Theory, suggesting that these models are “maintained as a pipeline for White men to maintain a position of power within existing institutions” (2009: 188). Instead, these authors endorse an inclusive multicultural mentoring model that fosters and acknowledges differences. With the aim of encouraging those of ethnic minority groups to participate in mentoring, Williams and Schwiebert underline dialogue between mentors and protégés as

something that is bi-directional when it comes to learning and growth, explaining that,

When the mentor and protégé view each other as individuals in the process of development rather than as superiors or subordinates, the power and hierarchy are diminished and may be replaced by collaboration and openness (2000: p. 61).

Others have also outlined collaborative mentoring, based on open communication and establishing both a space for continuous group learning and a culture of experimentation (Buck, 2004). In the case of the Latino/a interpreting students studied here, mentorship was understood as a dynamic process and a learning partnership built on trust, reflecting a reciprocal, though often asymmetrical relationship between individuals (faculty, students, or otherwise) that participated in the Community Interpreting Certificate in the spring of 2018.¹

In this Community Interpreting Certificate, where most students identify as Latino/a, it is essential to look at mentoring across difference. It should also be noted that the White faculty member in this study was working to form developmental relationships with both White and Latino/a students. As Hinton et al. also suggest:

There is no one-size-fits-all mentoring approach ... faculty's and students' backgrounds and experiences have to be considered when trying to make all feel valuable and valued... We encourage those already empowered to lend their power and visibility to help students of color feel connected, despite being continually and systemically marginalized in the classroom and in other university environments (2009: p. 200).

Indeed, several fundamental frameworks were considered when mentoring interpreting students of diverse backgrounds in this study. Within the literature on mentoring in the workplace, Kram (1985) asserts that mentoring can function to enhance career and psycho-social development of both mentor and mentee. While career-related functions of a mentor-mentee relationship revolve around themes of coaching,

¹ This definition is inspired by the intense literature review of mentorship definitions put forth by Tammy D. Allen and Lillian Turner de Tormes Eby (2007) in the book *The Blackwell handbook of mentoring: a multiple perspectives approach*, (p.10). See reference list for full source information.

protection, exposure, visibility and challenging assignments, psycho-social functions are focused on affording a role-model, acceptance, confirmation, counseling, and friendship. Zellers et al. (2008) further define the roles of mentors in both of Kram's function categories. In terms of career-related functions, they assert that mentors become sponsors (guiding, protecting, opening doors, and making introductions) or coaches (teaching, challenging, and providing feedback). As for psycho-social functions, these authors affirm that mentors become role models (demonstrating behaviors, attitudes, and values) or counsellors (providing support, advice, and coping strategies).

2.3. Mentoring in interpreting and translation

While students can generally count on academic support within an institution of higher education, the functions of mentorship within the realms of career promotion and psycho-social support may not always be evident. This is the dynamic role that the instructor tried to fulfill in this study, in order to lead students through their action research, serving in the roles of coach, career builder, and role-model in different stages of the research project. In the capacity of mentor as coach, the instructor in this study was teaching, challenging and providing feedback throughout the processes of research topic selection, research proposals, writing, survey creation, data analysis and dissemination of results in the form of a conference poster presentation. As a career builder, the instructor was guiding students into community spaces where interpreting is either carried out or needed, and aiding students in professional networking in the community. As the psycho-social propeller, the instructor was role-modeling how to present at a conference by organizing the culminating undergraduate research conference event where students presented their results, confirming their hard-work and counseling them beyond their fear of presentation and failure. In essence, the dual role of instructor and research mentor in this project was established through a variety of mentorship methods, effectively balancing challenge and support as recommended by Brownell and Swaner (2009b).

Within the parameters of community interpreting studies education in the US, however, there is still room for empirical research on mentorship. Sign language interpreting does provide some guidance when it comes to mentorship and mentorship models (Clark, 1995) as well as literature related to mentoring via distance delivery (Witter-Merithew et al., 2002).

However, though it seems logical that mentoring would come up in other studies related to work placements and university-industry collaborations within interpreting and translation programs, such parallels often go unmentioned as observed, for example, in an article by Jaccopard (2018) on work-placements at the University of Western Australia. Moreover, Saldanha (2019), describes the lack of mentoring she perceives within translation programs in Europe, as students move toward a professional career, and underlines the gap that exists from her perspective, between academia and the profession. One comparative study carried out in Catalonia, Spain, points to an effective multi-mentoring model that connects translation and interpreting studies students strategically and methodically to freelance professionals (Olalla-Soler, 2018). In a similar vein, D'Hayer (2013) describes the need for “communities of practice,” both virtual and otherwise, when training public service interpreters. Such “communities of practice” incorporate the influence of a broad spectrum of stake holders from which public service interpreters may learn. Within educational settings for public service interpreting, D'Hayer proposes that “alumni can be presented as mentors who have experienced the curriculum and moved forward in their professional development” (p. 336). While mentorship has been explored in a limited amount of studies within interpreting and translation, literature as related to undergraduate research as a mentorship tool is yet to be extensively studied.

Finally, it should be noted that several other types of mentorship beyond the student-faculty relationship were present throughout this undergraduate research initiative, reflecting a collaborative, intercultural and multi-mentor model. Students did not interact with the instructor alone in the project, since part of the assignment required them to work within their communities, building networks beyond the academic institution both in terms of stakeholders and practicing community interpreters. Stakeholders in the community such as medical professionals, interpreters at local hospitals, judges, police officers, lawyers, farmers, librarians and real estate professionals were some of the spheres of influence that also provided information and guidance around language access to inquiring undergraduate researchers. Furthermore, peer-mentoring and intercultural mentoring through students' research teams may have influenced students as they worked collaboratively with diverse others, dialoguing and leaning on one other both inside and outside the classroom. Finally, as mentioned previously, the unique mentoring partnership between instructor / research mentor and students was bidirectional.

3. METHODOLOGY

Action research (AR) was chosen as the research method for this initiative, with the intent of carrying out reflective practice in interpreting education. Such reflective practice in AR within the realm of teaching language has been defined in terms of four key stages: (1) the teacher reflects on their teaching and creates a plan for improving a problem, (2) the teacher conducts research to gain perspective, (3) the teacher analyses the results through observation, and (4) the teacher reflects and plans for further action (Burns, 2010). In identifying a high attrition rate for Latino/a students as well as a perceived gap between theory and practice in the field of interpreting, implementing an undergraduate action research project into Viterbo's Community Interpreting Program was an attempt to remediate these problems.

However, the focus of this article is on how students' action research projects within the Community Interpreting Certificate curriculum were implemented, carried out and perceived via students' self-assessment. In essence, this paper is an examination of action research (carried out by students) within action research reflective practice (carried out by the instructor).

3.1. Undergraduate action research in the interpreting curriculum

Though action research (AR) appears across a plethora of disciplines and professions, it is generally characterized with the objective of both "benefiting the research participants, who are often service users, and providing professional development for practitioners" (Gibbs et al., 2017). In the case of Latino/a Community Interpreting Certificate students at Viterbo, most had served as interpreters throughout the course of their childhood or had witnessed their immigrant family members in need of language access services, leading them to become what Gibbs et al. outlines as "insider-researchers" (2017: pp. 11-12). Indeed, the literature cites that AR can be used as a tool to explore social justice issues, and / or as a tool for student engagement that leads students to a deeper understanding of community, especially when it comes to co-collaborative projects that involve community stakeholders (Moore and Gayle, 2010;

Gibbs et al., 2017). Furthermore, AR has demonstrated enhanced community engagement as well as heightened intellectual, social and emotional engagement on the part of students (Pain et al., 2013). Since language access for Limited English Proficient individuals in the US is a question of social justice, assigning AR projects to interpreting students was implemented with the intention of helping students make connections between their skill sets and the need for their services locally, ultimately fostering their engagement in their own communities. Finally, AR has shown to improve the connection between theory and practice (Katsarou and Tsafos, 2013), which was another important student learning objective of the Community Interpreting Certificate at Viterbo.

To create a manageable timeline for student projects, the semester was laid out in three stages and aligned with the student learning outcomes (SLOs). In stage I (Theory and Literature Review), students were introduced to research and introductory concepts about community interpreting (textbooks, academic articles, codes of ethics and standards of practice, etc.). This stage was linked to the following SLOs for the Community Interpreting Certificate: (1) Obtain a conceptual and theoretical framework of interpreting as a profession and as a field of study; (2) Acquire a basic understanding of the current reality of community interpreting and potential corresponding dilemmas.

In stage II (The Study of Techniques and Methodology), alumni visited the classroom to explain their research questions, methodology and results of their project the previous year. As a peer mentor, this was intended to give prospective undergraduate researchers an idea or a roadmap for what would lie ahead, motivating them to envision a successful project. Students were then made to envision where else in their communities they wanted to learn more about language access, deciding on six sectors: dairy farms, pharmacies, the Department of Natural Resources (DNR), dentist offices, real estate and libraries. One student surveyed the DNR because they knew that in their hometown there were problems around communication and the law when it came to hunting in their rural county. Another student chose pharmacies in their city because as a recent immigrant, they remembered the difficulty in obtaining medications and understanding directions for taking them at the local drug store when they first arrived. Students worked in groups of 3-4 to formulate research questions and write a simple research proposal,

including their proposed methodology and expected results. This research stage was tied to the following program learning objective: to develop the support networks necessary for students to analyze and confront the major dilemmas professional interpreters are faced with in the field today.

In stage III (Research, Analysis and Dissemination), students then developed and distributed questionnaires designed to answer their research questions, before compiling and analyzing the data. With conclusions about language access in their communities, and in alignment with Brownell and Swaner's (2009b) High Impact Practice recommendation to "provide opportunities for 'real-life' applications (of undergraduate research), whether through publication, presentations, or project implementation (n. p.)" students were then required to make a poster to present their work at a professional interpreting conference. Attendees of this event were interpreting practitioners, working in the community. By contributing information about interpreting services in the region, interpreting students engaged with their future interpreting colleagues while gaining personal, professional and academic skills. This stage was linked to the following Community Interpreting Certificate learning objectives. Students would: (1) achieve refined linguistic skills, in English and secondary language via professional speaking and writing. (2) analyze cultural and ethical issues to encourage appreciation, respect for differences, and effective communication within the field of community interpreting (3) become effective communicators and advocates in community interpreting settings.

3.2. Student subjects

The level of education, age and life experience of the twelve interpreting students studied here varies considerably. This interpreting program works closely with area high schools to encourage highly bilingual heritage speakers² of Spanish to take college courses that will give them a boost toward a professional career upon high school graduation, accounting for the five students in this study who had not yet earned their high school diploma. Two other students had not studied beyond high school and the remaining students had either earned an

² For the purpose of this study, we will base our use of the term "heritage speaker" on the following widely used definition: "a student who is raised in a home where a non-English language is spoken, who speaks or merely understands the heritage language and who is to some degree bilingual in English and the heritage language" (Valdés, 2000: p. 1).

undergraduate or Master's degree, or were working to obtain one. Since many of the students enrolled in the program were high schoolers or still completing their undergraduate degree, it is logical that two thirds of students were completing formal action research for the first time.

Additionally, 58% of students (7 of 12) participating in this study self-identified as Hispanic or Latino/a. Of these seven students, 6 had little to no experience with university coursework before enrolling in the program. A significant number of participating students were also "underrepresented" in that they were first-generation, low-income students. Therefore, while mentoring methods were generally the same for all students, the mentorship literature detailed previously in this paper confirms that that mentoring should be tailored to each student, taking difference into account. Given the limited participants in this study, the results are thus explored in aggregate rather than by ethnicity.

3.3. Mixed method analysis

While students worked to carry out their projects, they were also being surveyed by their instructor / research mentor to assess their perceptions about their research experience and how those perceptions changed over time. Before beginning the project, the author of this paper consulted the Institutional Review Board (IRB) at Viterbo University to assure that all questions of ethics regarding human subjects were considered. It was esteemed that the project did "not satisfy the (US) federal definition of Human Subjects Research (HSR) because it is not *designed to develop or contribute to generalizable knowledge*" and therefore did not need official IRB approval.³ The study was instead characterized as a Quality Improvement (QI) project. Consent forms were, however, still distributed to participating students, informing them that completing the surveys was optional and that their answers would not affect their grade.

Students were then given two surveys: (1) at the beginning of the semester, after having formulated their proposal and (2) after they had completed the presentation of their work. Both surveys were practically identical, though the first survey contained several questions projecting about students' ideas as they moved forward. The second survey included

³ The same reasoning was upheld by the IRB for the students' research projects, therefore the students were also not required IRB (Institutional Research Board) approval. The author is able to provide proof of this determination by request.

a few slight modifications once the work was completed as well as some additional open-ended questions only applicable at the end of the project.⁴ The surveys were adapted from the ROLE survey, an assessment tool intended for students in any field of research and developed based on a 3-year study of the essential features of undergraduate research (Lopatto, 2003).

Both adapted ROLE surveys consisted of multiple-choice questions, open-ended questions and rating scales that intended to measure how much students felt they had gained from their experience in intellectual, attitudinal, and social manners. Of the 15 students that partook in this project, 12 completed both the first and second surveys distributed. The responses of students who had not completed both surveys were eliminated. To maintain the anonymity of students, each pair of student surveys was randomly assigned a number and their names were eliminated from the data. The language used throughout this paper also maintains gender neutrality of all participating students.

In both surveys, students were asked to rate their perceived gain in terms of 26 question items. When thinking about how much of a gain they perceived, they were asked to choose between none / very small (1); small (2); moderate (3); large (4) and very large (5). Their answers were then used to populate an Excel sheet using a scale of 1-5 that compared their answers from survey 1 to survey 2. Corresponding bar graphs were then generated, organized by theme, and can be found throughout the results and discussion portion of this article.

For all item pairs that did not have one of the two answers, a pair-wise method of elimination was implemented. Similarly, all answers of N/A were treated as missing information and eliminated as a pair. This was because (1) we could not be certain why students chose the answer N/A and (2) the option of “non-applicable” did not fit into the 1-5 scale used to qualify categories and would have contaminated results if given a numerical value. Thus, the quantitative data for each question item includes only the students who responded to both surveys.

As researchers Verd and López (2008) affirm, the combination of qualitative and quantitative methods of analysis contributes to efficient

⁴ The author will distribute these survey templates by request.

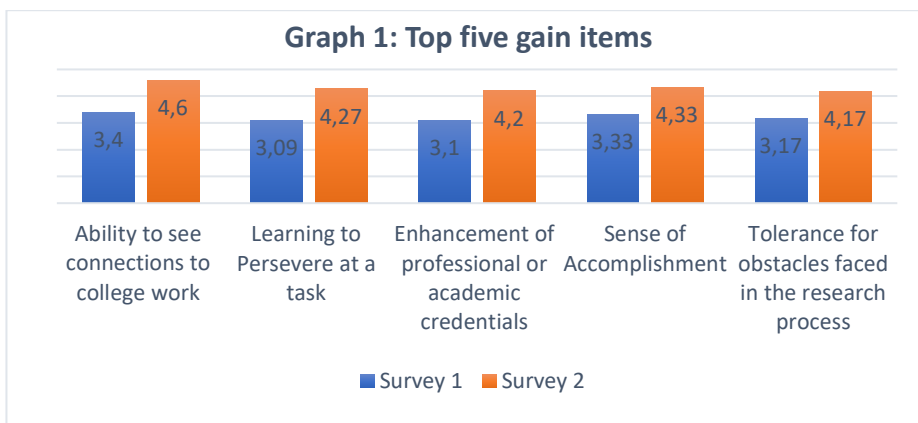
analysis when the result is more than the sum of its parts. Given the variety of question and answer-types solicited in the student ROLE surveys, a mixed methods approach was therefore used. The quantitative data paired naturally with themes from the qualitative analysis, and both types of data are treated as complimentary and converging.

4. RESULTS AND DISCUSSION

4.1. Gains chart categories

To facilitate the analysis of the remaining 25 gains items in the aforementioned “gains” chart, items were grouped loosely into five major categories: (1) social and interpersonal skills, (2) general academic skills, (3) research skills, (4) personal development, and (5) professional development.

Though positive change was noted in every single gains item, there were five specific items that stood out as having changed by at least a full point on a scale of 1-5. These five items were reported by students in the first survey as having perceived a “moderate” gain in survey one, while shifting to a “large” gain by survey 2. They fell within the larger categories of general academic skills, professional development and especially on personal development. See graph 1.



While all 25 items started out as gains that were “moderate,” 12 out of 25 (48%) of all items ended with a “large” gains perception by the end

of the study. While this information is an interesting starting point, it is essential to further explore what students said in multiple-choice and open-ended survey questions in correlation with these numerical gains results for a clearer picture of what students perceived in the process. Qualitative data will, therefore, be explored alongside the quantitative results in this discussion section.

4.2. Perceptions about mentoring

One of the main objectives of this initiative was to foster a better mentorship program for students in the interpreting program, particularly Latino/a students who have historically struggled with their course work and dropped out for reasons that seemed to include lack of college readiness, financial difficulty, child-rearing, etc. (Pinzl, 2018). Moreover, frequent mentor-mentee contact has long been indicated as an essential and constructive characteristic of a mentoring relationship (Dubois and Neville, 1997). For these reasons, and because mentorship has proven to bolster both student retention and success (Newton and Wells-Glover, 1999; Jacobi, 1991), it was deemed important to ask students at the beginning and at the end of the project (1) how much direct contact they perceived having with their research mentor and (2) how available they perceived their mentor to be at each stage.

At the beginning of the project students estimated on average that they spent about 2.18 hours of direct contact with their research mentor per week. By the end of the project this average had jumped to 3.38 hours per week. Similarly, students were asked in each survey to classify mentor availability. Initially students found their research mentor to be available more than half the time, with a slight increase in their perception of mentor availability upon the conclusion of the project. Finally, students were asked to rate their perception in terms of developing a continuing relationship with a faculty member, who in this case was also their research mentor. At the beginning of their project, students perceived that they had gained moderately regarding a continuing relationship with a faculty member, but largely by the end.⁵

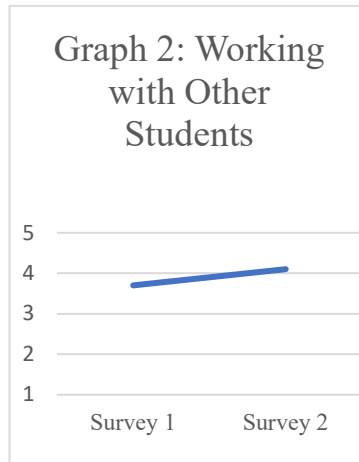
⁵ See *Graph 3: Social and Interpersonal Skills Table* for a visual representation of these results.

In the first survey, students were also asked in what ways they felt they had autonomy in their project design. Though options included: being assigned a project by their research mentor, working exclusively with a mentor to design the project, choosing among various projects suggested by their mentor and designing the entire project on their own, the majority (7 of 12) indicated that they had worked with their mentor *and* team to design the project. We examine more extensively below how students perceived group work, underlying how peer-mentoring may have also influenced their experience.

4.3. Perceptions about group work

Both the qualitative and quantitative data on the topic of group work reveals that students found working with their peers to be positive in some way, even if they also felt some tension or apprehension in the process. Eleven of twelve use positive words to describe group work such as “good,” “great” or “helpful.” While five students identified group work as alleviating the work load, one third recognized other positive benefits of group work, for example, learning together and about group members, cooperation skills, and sharing ideas. Most of the nervousness, frustration and uncertainty that was identified in the first survey and had predominantly dissipated or transformed by the conclusion of the project. In survey 1, a student writes about his / her feeling about group work saying, “(I feel) a little nervous, since I don’t talk to the people I’m with.” The same student later responds to the same question in survey two reporting, “I really enjoyed working with my colleagues. I understood how they worked and more about them.” Even though many identify group work as one of the most difficult parts of the project, all students participating in team projects found collaboration to be helpful or positive in some way by the end.

Students were also asked to rate how much group work enhanced or detracted from their experience. The average of student responses to these questions is measured according to this rating system illustrated in graph 2 below, showing a slight increase in satisfaction regarding group work overall (from 3.7 to 4.1).



Graph Key

Students were asked to rate group work by choosing among the following choices:

- 1) Working with other students was the worst part of the research project
- 2) Working with other students moderately detracted from my experience
- 3) Working with other students did not affect my satisfaction one way or the other
- 4) Working with other students moderately enhanced my experience
- 5) Working with other students was the best part of the project

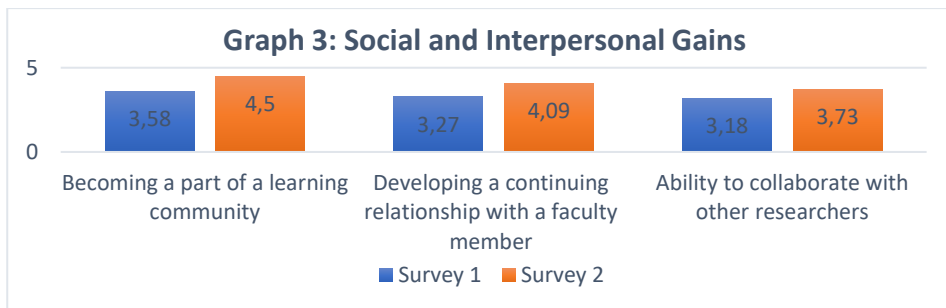
To sum up group work in the words of one participant:

As the profession of community interpreting is so fundamentally community-based, it is only appropriate that it (his undergraduate research assignment] be a group project. We had some minor logistical glitches at the beginning of our project with one member's location being far away from the rest of us and with a lack of initiative, but this issue was quickly addressed by the professor. In the end, groups were reformulated accordingly, which I think was beneficial to the quality of the research in all groups.

Indeed, this quote reveals that while the value of the group work was esteemed logical and motivational, difficulties were also recognized along the way. It is noteworthy that the student mentions the importance of the

quick resolution of obstacles with the help of the research mentor, again indicating the need for a consistent student-faculty-mentor relationship. Finally, the student reports that working with classmates was overall satisfactory and contributed positively to the result of *all* the projects carried out in this cohort.

Two question items on the gains charts seem to compliment the information gathered about group work and fit within the larger category of social and interpersonal skills: “ability to collaborate with other researchers” and “becoming a part of a learning community.” Looking at graph 3 we see that becoming part of a learning community comes .08 points shy of moving a full point up, putting this item as sixth of 25 gains items. The second item, “developing a continuing relationship with a faculty member,” illustrates the point made above about the gains students felt about student-faculty mentorship relationships in the research process. The third, points to a developing a sense of collaboration with peers and colleagues.

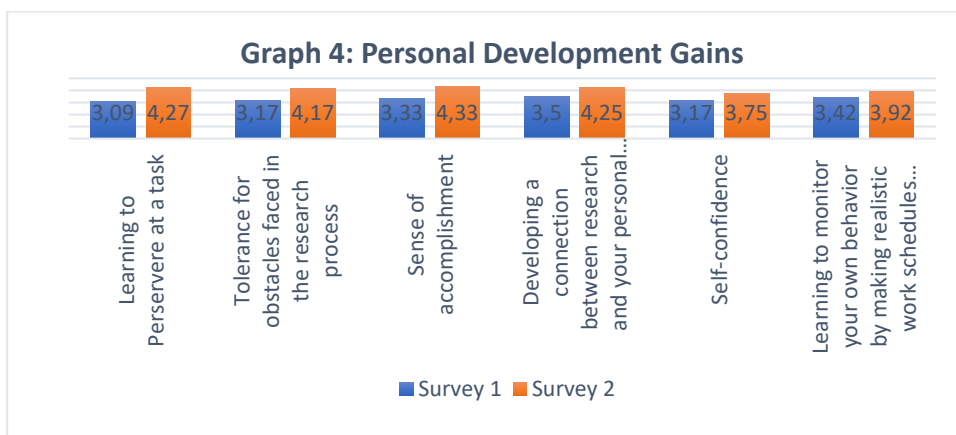


4.4. Motivation

Though all students reported some level of initial motivation at the very beginning of the project, many first expressed lukewarm sentiments that included qualifiers such as “pretty,” “kind of” or “fairly” motivated, while others expressed significant motivation from the start. By the end of the project, some students indicated that stress or feeling overwhelmed throughout the project led to temporary dips in enthusiasm. Ten out of twelve report an overall increase or deepening of enthusiasm by the end of the project. As one student writes,

At the beginning, I was extremely excited for this project. Once we were paired up ... I started looking at what we needed to do and what path we selected, I started to feel overwhelmed. It had been a while since I'd done anything like this, and I found myself becoming anxious with the thought of everything we needed to do. After taking a step back, I was able to break the project down into sections which was much more tolerable and not so overwhelming. Our project had many hiccups, which definitely caused me to become overwhelmed, but through great teamwork, it all came together. I felt great about our final project and I'm proud of the accomplishments we achieved during the project.

The above student describes personal development, explaining that through challenges they not only develop problem-solving skills but also the capacity to persevere. The student's intention to create a manageable project is related to the quantitative gains question item "learning to monitor your own behavior by making realistic work schedules and correcting your mistakes." Also noted is the help of the team to pull through the challenges, even though group work was not part of the survey question item they were answers. Once again, while the student is optimistic on the outset of their answer, they recognize obstacles, and land on a positive note. Such resilience is related to yet another question item, "tolerance for obstacles faced in the research process." Finally, the student's pride in their work leads us to question item "sense of accomplishment." In conclusion, we observe a significant uptick in personal development gains as displayed in graph 4.



Related to these apparent gains in personal development, students also pointed to how their increasing notions of civic engagement and community awareness led to intrinsic motivation to participate and build on their research (5 of 12). Many were able to see how their results had potential to educate the community on language access in the future. These sentiments are captured by another student in survey two:

Having completed the project, my enthusiasm for the subject matter has been fueled considerably. Although at times I felt the project was either rushed or lacked depth, due largely to logistical time constraints, I had the genuine feeling that I, along with my classmates, was scratching the surface of a very underappreciated and overlooked field within the La Crosse community. In other words, ... I felt that our projects helped to shed light on how little we, including the general public, know about how, when, where, and why interpreting services are (not) used in the area. I hope that this exposition of how little we know and how sparse the academic literature is on the subject will prompt future students and academics to investigate further the issues that we helped to uncover.

The question item “sentiment of becoming a part of a learning community” though mentioned previously in relation to group work, reveals itself here again but in the context of a larger learning community that includes spaces that move beyond the classroom. Furthermore, question item “sense of contributing to a body of knowledge” is here noted with an average moderate gain (3.45) in survey 1, moving to an average large gain in survey 2 (4.09).

4.5. Perceived obstacles

Before carrying out their research, students were asked what they viewed as potential obstacles and difficulties. They were asked a similar question again after completion of the research project, but the question was reframed, asking what obstacles or difficulties they would see if they were to *continue* working on the research.

Both before and after the projects were carried out, the main obstacle that students foresaw was the cooperation of research participants,

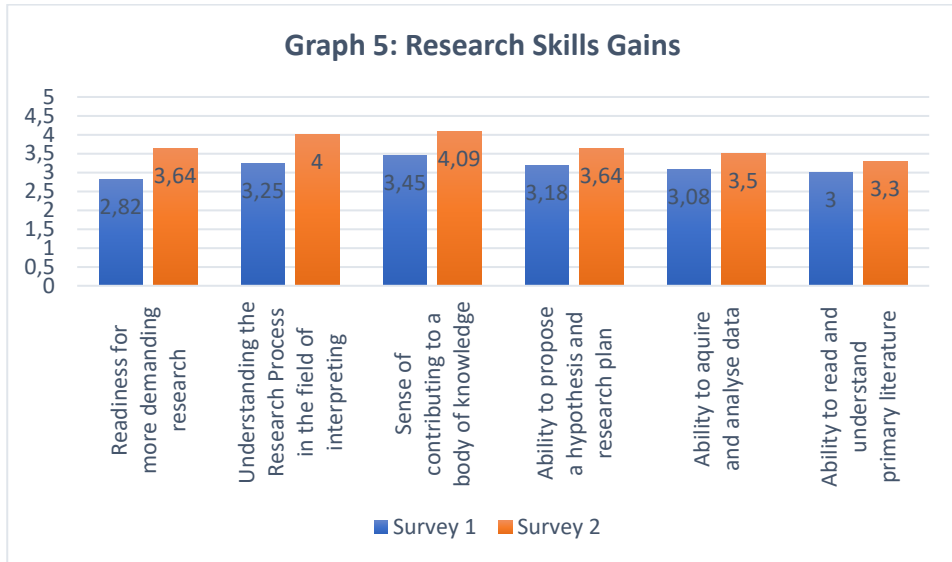
particularly the difficulty of obtaining survey responses. However, many more students commented on cooperation and participation of surveyed participants in the second survey. This is particularly notable in the students that had never carried out a research project before. As one student writes in response to obstacles foreseen in continued research on this project, “Getting results is something I already had difficulties with and I think that getting results for a more in-depth project would be much harder.” Though those without prior experience had not as easily foreseen this obstacle before carrying out their projects, the challenge of survey collection became very clear to them by the end of their research process and seemed to be more troubling to them than potential time constraints or group work logistics.

At the beginning of the project, approximately one third of students were worried about the time for finishing the project as well as group work challenges such as coordinating schedules, working together and sharing the workload. By the end, only two mentioned foreseeing these issues if they were to continue working on this research. Nevertheless, this is likely to be related to the fact that the question was hypothetical.

4.6. Reported challenges

Moving from the hypothetical to the actual experience of students, some initially reported uncertainty about carrying out their projects, especially those who had never done an undergraduate research project before. Some also indicated feeling a lack of guidance, a sensation of not knowing where to start, or not knowing how or where to get information. One student states difficulty in “clearly defining what it is I want to find. I have so many questions I want answered, and it’s hard to narrow it down to only one.” This sort of sentiment is noted much more by students in the first survey than in the second. There was also some indication that students felt challenged in carrying out tasks related to the research itself, writing the proposal or the appropriate presentation of data. Throughout the project, students also found group coordination and communication to be a challenge as well as finding the time to get the project done by the deadline. Survey participation of community members was also a major obstacle for many.

It seems appropriate here to address the gains category of research skills. Graph 5 illustrates that students did perceive gains in all categories with two categories reaching “large gains.” However, the gains ranged from .75 to .3 points from survey 1 to survey 2, an arguably smaller change in perception than in other gains categories, perhaps reiterating the difficulty that students encountered with the research process itself.

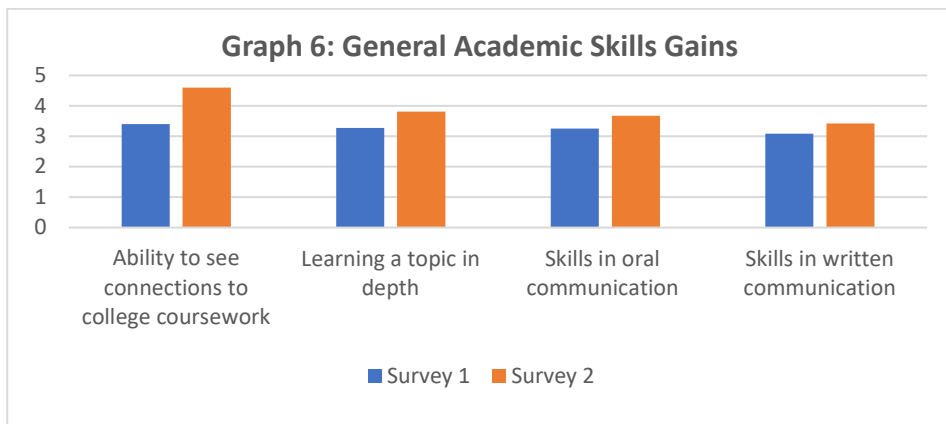


4.7. Enthusiasm

Overwhelmingly, students found the process of learning, particularly learning skills, methods or new awareness about their community to be exciting. As one student expresses in survey 1, “I am excited to learn what our research will reveal, and I am especially excited to work on developing potential solutions or any problems / issues we end up identifying.” Indeed, students indicate excitement about many specific parts of the research project, especially analyzing results and presenting them. Several also indicate the potential that their work has for continued engagement with their communities and the profession of interpreting. They became aware of contributing to a larger body of research within the field. The same student quoted above in survey 1 above expands in survey 2 by responding,

“The potential for making a difference in the community is the most exciting aspect by far.”

Since the most recurring theme related to student enthusiasm was about learning, it is logical to compare the general academic skills gains to these qualitative results. By far, the question item “ability to see connections to college coursework” is the greatest gain that students perceive within the general academic skills category, beginning just above a “moderate” gain and pushing toward a “very large” gain by the end. The rest of the items in this category, however, proved only slight gain perceptions as observed in graph 6.



4.8. Benefits and drawbacks

From the beginning, all students found their action research to be somehow positive. No one reported this project to be a completely negative experience upon completion, though one student did state that the project took away from practical skill-building:

The project benefited me in my understanding of the state of affairs of community interpreting in the La Crosse area. However, I believe it had a negative impact on the development of my practical interpreting skills. Mostly due to a tight timeline, I felt that so much attention was given to the project that it detracted from the time and effort that I was able to dedicate towards regular practice and development of skills like simultaneous exercises, consecutive notetaking, sight translations, etc.

That said, students overwhelmingly mentioned how this project was aiding them in building skills, knowledge, and experience. They also observed significant connections between their work and the field as well as the impact that this work can have on their communities.

4.9. Lessons learned

Students seemed to conclude two major observances about the discipline of community interpreting from their action research. First, their projects underscored the great need for interpreters in their communities and the importance of language access for Limited English Proficient (LEP) individuals. One student writes, “how integral ... (this) research ... is to LEP populations—how important it is, how necessary.” Although students may have already had this inkling based on primary literature, class discussions and personal experience, their undergraduate action researched helped them to point more precisely to where language access was needed in a more credible way. In addition, students learned about what the job entailed as displayed here:

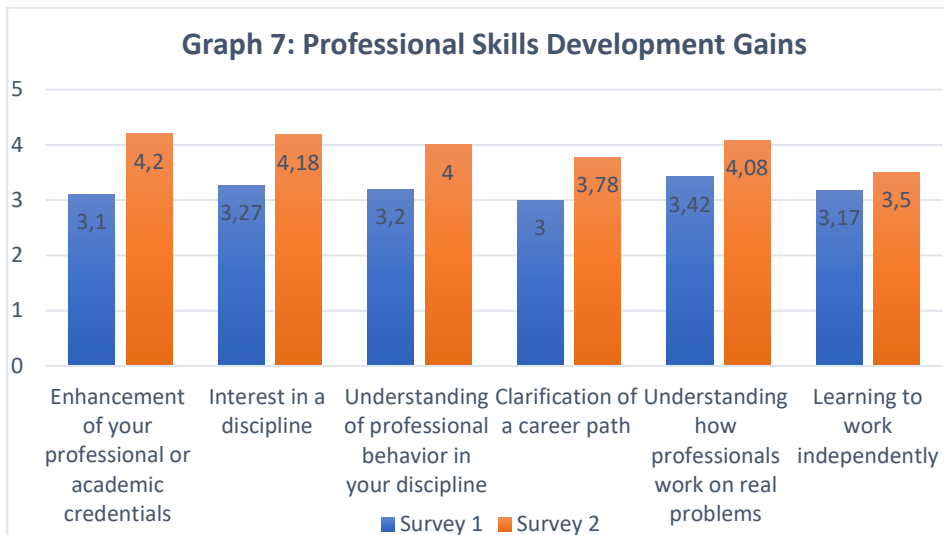
(...) this project did, indeed, significantly inform me about how community interpreters are (not) perceived, contacted, contracted, and understood by the community at large ... [and] about some of the major obstacles community interpreters face during their work in the community of La Crosse and the surrounding area, such as a general lack of understanding and consensus among service providers with regard to the provision of language access services to the LEP community.

Apart from the difficulties and obstacles that interpreters encounter in the field, students also mentioned the discipline and presence required on the job, the study of terminology, the emotional management, the breadth of the field and the continuing education that interpreters are obliged to carry out as practitioners.

4.10. Career plans

While career plans after this project varied significantly among students, most described positive, forward-looking ideas for future. Although one student reported their project had not influenced their plans and two were uncertain, six indicated that the project confirmed or strengthened their desire to become interpreters. Several reported a desire to work in the sector that they researched saying, “after I get certified I would like to have the opportunity to work with real estate agencies.” These motivations are also echoed in the question items “interest in a discipline” and “clarification of a career path.”

Such responses give way to the category of professional skills development, where again we see increased gains overtime. While all items begin closer to “moderate” gain perceptions, four end in “large” gains perceptions as observed in graph 7.



Apart from the professional skills that students reported on, one fourth of surveyed students stated that the research project fueled their desire to help or be proactive in the community. One remarks, “it makes me want to stand up and say something,” indicating a sense of empowerment. Another states, “It (this research project) has come alongside my passions for service and social justice around access to services. Further evidence that I/we can make a difference in the community.” A third reports, “this

project influenced my future plans mostly in my possible interest in continued research,” as discussed in the following subsection.

4.11. Future research

Students’ motivation to continue building upon their projects was overwhelmingly positive; all revealing diverse desires to continue to somehow expand on their project. Many hope to inform the public and give back to the community in the form of trainings as reflected in the following quote,

I feel very motivated to use what I learned. At least I am going to volunteer ... and provide the results back to other(s) ... in the hopes that they get something out of it too. I would definitely be open to conducting a more in-depth project and eventually publish the results...

Some students explain specifically how they would like to return to the specific sectors that they researched to volunteer, conduct further research, implement change and monitor results; two hoped to eventually publish their work. As one writes,

I want to treat what I did as a research project as a trial run and better the study / questionnaire and redistribute it. I now know I would rather ... ask for their (the survey-taker’s) permission, then send it (the survey). I will be able to get more responses instead of just sending it.

These comments affirm the students’ desire to continue learning and point toward a recurring theme of a heightened community awareness and desire for civic engagement. As another illustrates, “I feel like the public should be more aware. They should know they have a right. I want patients to know their rights.”

4.12. Recommendations to future students

Students talk about a plethora of benefits when contemplating a conversation with future undergraduate researchers in the interpreting program. One fourth of students underline personal developmental that is

both attitudinal and emotional (as outlined in the ROLE survey). In the words of one, “It is helping students to be confident, think positive, control emotions, and learn to deal with real life problems in the interpretation field.” Others report how such skills are related to improved social, academic, research and professional skills:

Completing projects such as this one, helps to instill confidence in the student’s abilities to research a topic and develop a plan. Coming up with a plan and sharing it through a presentation truly helps student’s confidence in speaking in front of others which is something we will have to do in our professional careers. Being comfortable talking in front of others and to complete strangers is something which will truly enhance our abilities to execute our responsibilities as an interpreter, this is why it is so important for us, as students, to work on and improve these skills.

4.13. Advice for improvement

When asked for advice on improving the project, the primary recommendation from most students was to give them more time. While the time constraints for this project were due to specific logistics related to enrollment and pre-set dates, this student suggestion will be considered for the future.

4.14. Retention rates

Since part of the objective of carrying out this study was to improve retentions rates, particularly for Latino/a students in the interpreting program, we briefly present those numbers here. For context, Latino/a student retention of the 4 previous years (2014-18) was calculated at 42% and for non-Latino/a students at 87%.

Of the 12 students studied here in 2019, 8 (67%) successfully graduated from the program. The retention rate for Latino/a participants was 57% compared to an 80% retention rate for non-Latino/a students. While these findings may initially indicate increase in retention for Latino/a students than previous years (by 15%), we must not forget that 4 other participants in this undergraduate research initiative were not accounted for in this calculation, since their survey information could not be included. In summary, and as described here below, an accurate

depiction of student retention or attrition in this study is hard to determine by ethnicity or otherwise, due to the small sample size.

5. LIMITATIONS

The principal limitation of this study is the previously mentioned sample size of student participants. With only twelve student participants, any data related to student retention or attrition is clearly non-generalizable. In addition, this project examines an initiative within one interpreting program. A longitudinal study, with larger sample sizes, other language pairs and more interpreting studies programs would be required for more conclusive metrics. The secondary limitation of this study is the reliance on self-reporting measures and retrospective data, situating results within students' perception rather than using more objective methodologies. Finally, as in most action research carried out by a professor in the context of the classroom (Gibbs et al., 2017), the instructor's description of this initiative and analysis of the data is centered on their own reflective process, rather than a more critical outside view or methodology. Peer-review methods to mitigate such subjectivity should be considered in future studies.

Within the parameters of these limitations, we must also acknowledge that this project was propelled by both quantitative and qualitative research, bringing significance to the work carried out. Certainly, there is more room for investigation around how the implementation of undergraduate action research in interpreting programs may be of great benefit not only to aspiring interpreters, but to the communities in which they provide language access. Future research within this program may therefore seek to understand more about what students find relevant about their research for application in their future community interpreting roles, in this way moving away from a strictly sociological approach and toward data that might be increasingly useful to the scholarship of teaching and learning in community interpreting.

6. CONCLUSIONS

The incorporation of undergraduate research into a Community Interpreting Program as a High-Impact Practice (HIP) and mentorship tool is presented here to aid students' developmental growth and academic

achievement. Within these parameters, the project was successful in encouraging student empowerment and engagement in their local communities. Students perceived that they had gained in all twenty-five items on which they were surveyed, helping us to evaluate the quality of student learning. These gain items were grouped into five categories that included social and interpersonal skills, general academic skills, research skills, personal development and professional development.

As per Kuh's definition (2008), this High-Impact Practice was time intensive for students and the instructor / research mentor. However, and more importantly, incorporating undergraduate action research into the interpreting curriculum propelled learning beyond the interpreting classroom, encouraged important connections between faculty and students, and presented the opportunity for students to receive regular and meaningful feedback for a transformational learning experience. These objectives are also characterized by HIP implementation (Kuh, 2008). Based on student feedback for improvement, this project will be carried out over the course of an academic year instead of a semester for future cohorts.

This article highlights how students benefited from the career support and the psycho-social support of their mentors throughout their projects as affirmed by Kram (1985). The mentorship as related to career building, provided students with the challenging assignment of carrying out action research, exposed them to the reality of the field of interpreting in their own communities, aided them in gaining visibility as aspiring interpreters, and coached them through the process. In terms of psycho-social support, students' undergraduate action research projects provided them with role-models both in terms of interpreting researchers and practitioners. These researchers and practitioners in turn accepted, confirmed and provided feedback on the students' work at the interpreting conference where students presented poster presentations. Whether formal or informal mentoring came from their instructor, interpreting practitioners or peers, the students were guided through the building and establishment of networks beyond their usual circles and gained a greater sense of community engagement while reporting personal satisfaction as a result. This project was also an opportunity to encourage students to view learning as a continuous process. Finally, the mentorship that took place

through these undergraduate research projects was reciprocal, as the instructor and research mentor also learned much along the way.

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