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Program Satisfaction Among Speech-Language Pathology Graduate Students Who Complete a
Thesis

by
Hayley Gaydos

A thesis to be
submitted in partial fulfillment
of the requirements for the degree of
Master of Science in the Department of Communication Sciences and Disorders
Idaho State University
Summer 2021

December 1, 2020

Heather Ramsdell-Hudock
College of Rehabilitation Comm Sciences
MS 8116

RE: Study Number IRB-FY2021-117: SATISFACTION AMONG SPEECH-LANGUAGE
PATHOLOGY GRADUATE STUDENTS WHO COMPLETE A THESIS

Dear Dr. Ramsdell-Hudock:

I agree that this study qualifies as exempt from review under the following guideline: Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).

The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

This letter is your approval, please, keep this document in a safe place.

Notify the HSC of any adverse events. Serious, unexpected adverse events must be reported in writing within 10 business days.

You are granted permission to conduct your study effective immediately. The study is not subject to renewal.

Please note that any changes to the study as approved must be promptly reported and approved. Some changes may be approved by expedited review; others require full board review. Contact Tom Bailey (208-282-2179; fax 208-282-4723; email: humsbj@isu.edu) if you have any questions or require further information.

Sincerely,

Ralph Baergen, PhD, MPH, CIP
Human Subjects Chair

TABLE OF CONTENTS

List of Tables	v
Abstract.....	vi
Introduction	1
Purpose	8
Methods	9
Results	10
Discussion.....	26
Limitations and Future Directions.....	29
References	30
Appendix	32

LIST OF TABLES

Table 1	Table of Data for Graduate Education Experience.....	13
Table 2	Fisher's Exact Test and Φ : Satisfaction and Recommendation.....	14
Table 3	Table of Data for Level of Social Support	15
Table 4	Chi Square/Fisher's Exact Test and Φ : Level of Social Support.....	16
Table 5	Table of Data for Level of Self-leadership Skills	17
Table 6	Chi Square/Fisher's Exact Test and Φ : Level of Self-leadership Skills.....	18
Table 7	Table of Data for Experience in the Field	19
Table 8	Chi Square/Fisher's Exact Test and Cramer's V: Experience in the Field	21
Table 9	Table of Data for Age at Graduation	21
Table 10	Fisher's Exact Test and Cramer's V: Age at Graduation	22
Table 11	Table of Data for Study Habits	24
Table 12	Fisher's Exact Test and Cramer's V: Study Habits	25

Program Satisfaction Among Speech-Language Pathology Graduate Students Who Complete a
Thesis

Thesis Abstract–Idaho State University 2021

Purpose: Many graduate programs in speech-language pathology provide students with the option of completing a thesis as a means of fulfilling a graduation requirement. There had been no study to date that examines the effect of thesis completion on students' satisfaction with their graduate education. We expected that there would be a direct positive relationship between the program satisfaction among graduate students and their decision to complete a thesis, compared to those who completed an alternative project.

Method: A survey was distributed by email to speech-language pathologists who graduated from the Speech-Language Pathology Master's Program at Idaho State University in the past 7 years. Questions were presented in a variety of formats, including multiple choice questions, Likert scales, and open response. The content of the survey related to the participants' experiences with their graduate education, whether or not they completed a thesis, and other influential factors related to satisfaction. Pearson's Chi-Square, Fisher's exact test, Cramer's V, and Phi ϕ are reported.

Results: There were no statistically significant differences between groups of those who completed a thesis and those who did not with respect to satisfaction with graduate education, social support, self-leadership skills, study habits. The only statistically significant finding was that SLPs who completed a thesis were as a group younger at graduation than those who did not complete a thesis.

Conclusions: Results are informative and suggest faculty do not need to strive to encourage or provide opportunities for all students to complete a thesis. Instead, students can continue to be encouraged to pursue their interests and complete a thesis or a capstone project to fulfill program requirements, with the knowledge that students are equally satisfied with and supported in their graduate education regardless of either decision.

Key words: graduate program, speech-language pathology, Master's thesis, capstone project, satisfaction, mentorship, graduate advisor

Program Satisfaction Among Speech-Language Pathology Graduate Students Who Complete a Thesis

Increased satisfaction in students promotes “retention, performance, and willingness to recommend their degree to others” (Bright & Graham, 2016, p. 17), therefore increasing the educational value of a program. Factors that have been found to be most influential in predicting satisfaction with a graduate program or new job are an individual’s perceived level of social support, self-leadership skills, years of experience in the field, and age (Blood et al., 2002; Bright & Graham, 2016; Tompkins, 2016; Uzman & Maya, 2019). Graduate students in speech-language pathology often have the option of completing a Master’s thesis as part of a graduation requirement, which has the potential to greatly influence their level of satisfaction with their educational program. However, there has been no study to date that has investigated the relationship between completion of a thesis, as opposed to an alternate option in graduate programs, and level of satisfaction with graduate education.

Satisfaction

There is lack of agreement in the literature on a single definition for “satisfaction,” perhaps because of the many facets of life that influence satisfaction. Wang et al. defined overall life satisfaction as “an individual’s conscious evaluation of his or her life based on self-set standards” (2019, p. 2). Defining student satisfaction with experiences in higher education is even more difficult. In their study about student satisfaction in Romanian undergraduate programs, Bacila et al. noted that student satisfaction is affected by “the degree to which higher education institutions meet or exceed their expectations” (2014, p. 841). Bright and Graham (2016) stated that satisfaction is highly influenced by the relationship between an individual’s desires and available opportunities. If opportunities do not exist to match an individual’s desires,

satisfaction ratings will decrease. For example, if a student desires the ability to take an elective certification course on Spanish and the university that the student attends does not offer this kind of certification, the student will be less satisfied with the university.

A number of researchers have investigated the relationship between satisfaction and the factors that affect stakeholders in each study (e.g., job satisfaction among speech-language pathologists working in public schools [Blood et al., 2002]), so it is difficult to extrapolate results of satisfaction surveys to new and specific demographics, such as the population of interest in this study (e.g., satisfaction with educational programs among speech-language pathology graduate students who complete a thesis). Accordingly, the variables of satisfaction that most closely match the demographic of the participants of this study have been chosen from the literature. University student satisfaction surveys are most frequently directed toward undergraduate students, so these surveys contain many variables that are irrelevant to the present study. For example, one survey on university student satisfaction included cafeteria quality in determining overall student satisfaction (Bacila et al., 2014), which does not closely apply to our study's population of interest. Job satisfaction surveys, and surveys of graduate students in other fields have defined satisfaction in ways that align with our primary purpose, and therefore have been cited in the development of our survey. In particular, we were interested in exploring students' self-rating of satisfaction with graduate education as it relates to completion of a thesis or not.

Social Support

One of the most important factors that has been found to influence student satisfaction is their social support network. In a study that examined the relationship between students and their thesis supervisors, social support was explored as the network of people that a student can utilize

for support and stress relief during the completion of their graduate coursework (de Kleijn et al., 2012). The authors surveyed 409 Master's students attending a Dutch university for social and behavioral sciences, geosciences, and humanities. Students were asked to rate statements such as “‘My supervisor trusts me’ and ‘My supervisor wants me to do things his/her way’” on a 5-point Likert scale, with 1 being “(almost) never” and 5 being “(almost) always” (de Kleijn, 2012, p. 930). The researchers found that students more positively rated their thesis-writing experience and credited their supervisor’s contribution to their education when there was a stronger interpersonal relationship with the advisor (de Kleijn, 2012). Interpersonal relationship was defined as the students’ perceived amount of emotional or personal closeness to the advisor during the process of thesis development (de Kleijn, 2012).

This finding aligns with results from a study conducted by Tompkins et al. (2016) where student satisfaction was investigated in 228 graduate students in clinical, counseling, or combined professional psychology doctoral programs. In this study, students were asked to complete a survey utilizing a 5-point Likert scale, in which they responded to questions about individuals in their lives, such as, “conveyed respect for you as an individual,” with 1 being “not at all” and 5 being “to a very large extent” (Tompkins, 2016, p. 104). They explored the influence of three types of social support on graduate students’ satisfaction: faculty support, classmate or peer support, and family and friend support. Tompkins et al. (2016) found that strong support from faculty members was most highly associated with positive levels of student satisfaction. Because the completion of a thesis requires close work with faculty members, which has been shown to influence student satisfaction ratings, these factors of social support were included in the present study.

Self-leadership Skills

Beyond social support, another factor that has been found to influence satisfaction is an individual's own self-leadership skills. Uzman and Maya (2019) explored the relationship between life satisfaction and self-leadership strategies in 360 Turkish university students. The three main self-leadership strategies explored were behavior-focused strategies, natural reward strategies, and constructive thought strategies. Behavior-focused strategies were defined as techniques that involve "observing oneself, rewarding oneself, punishing oneself, setting goals for oneself and determining reminders for oneself" (Uzman & Maya, 2019, p. 80). Natural reward strategies were defined as "emotional strategies involving highlighting the enjoyable and satisfying aspects of a job or a task and ignoring the unpleasant or difficult parts of it" (Uzman & Maya, 2019, p. 80). Constructive thought strategies were defined as observing one's own thoughts, determining whether or not they are healthy, and seeking to change these thought patterns that are not constructive. In constructive thought strategies, individuals "identify and change unhealthy thoughts that are based on wrong beliefs and hypotheses" (Uzman & Maya, 2019, p. 80). Students were asked to fill out a survey rating their own self-leadership strategies, as well as their overall life satisfaction on a Likert scale. It was found that self-leadership strategies are a good predictor of life satisfaction in students because self-leadership strategies enable students to control their own behaviors and thoughts in a positive way. Accordingly, self-leadership strategies were explored in the present study because students who are better at self-leadership strategies may be more satisfied with their graduate education regardless of whether or not they complete a thesis.

Years of Experience and Age

Other variables that can influence satisfaction are years of experience and age. Blood et

al. (2002) conducted a study in which different variables were examined in relation to the job satisfaction ratings of 1,207 practicing school-based speech-language pathologists. Job satisfaction was defined as “an attitudinal variable measuring the degree to which employees like their jobs and the various aspects of their jobs” (Blood et al., 2002, p. 283). In addition to questions about their demographic and work setting, participants were asked to fill out the *Job Satisfaction Survey* (Spector, 1996). It was found that years of experience in the field, as well as a more advanced age positively affected reported satisfaction ratings. The authors hypothesized that this is due to an increased respect for authority, confidence in the subject material, and understanding of one’s own skills (Blood et al., 2002). Age and experience may likely influence student satisfaction because these factors affect the way the students perceive the value of their educational program.

In a study about the satisfaction levels in 130 Spanish university students completing an undergraduate dissertation, researchers found that the perceived level of usefulness of the educational program directly affected students’ satisfaction (Martinez-Roget et al., 2020). The way that students determine usefulness of a program is based on the extent to which students feel that the skills they acquired match the skills they need in the job market. (Martinez-Roget et al., 2020). Furthermore, the level of usefulness of the program stemmed from the amount of skill that students felt they acquired during their program. Because age and experience can create a broader understanding of one’s own skill in relation to a field of study, these factors can influence the perceived usefulness of a program, depending on the student. Accordingly, was important to account for age and experience at the time of program completion in the present study because these factors can significantly influence satisfaction.

Importance of Recommending Graduate Programs

It is not only important to understand these factors that influence student satisfaction, but it is also important to understand why student satisfaction matters. Student satisfaction with graduate programs is crucial their own education as well as the university's success. Bright and Graham (2016) studied satisfaction ratings among graduate students in public administration programs at various universities. From ten randomly-selected Master's in Public Administration programs, 562 students were asked to rate their satisfaction with their program on a 6-point Likert scale, with 1 being "very dissatisfied" and 6 being "very satisfied" (Bright & Graham, 2016, p.22). The authors found that students who were older and had less work experience in the field were most satisfied (Bright & Graham, 2016). They explored students as consumers of a product (in this case, their education being the product) and argued that students' opinions and feelings about a graduate program are valuable to the university's well-being. Bright and Graham (2016) argued that universities exist in a competitive market, in which they all seek to attract the most qualified students and funding. They stated that it is in each universities' best interests to value the levels of satisfaction reported by their students. If students are more satisfied, they are more likely to recommend a program, which can indirectly lead to future increased enrollment for the university (Bright & Graham, 2016). In addition to benefiting the university, higher satisfaction ratings among students are associated with better retention of material and performance (Bright & Graham, 2016). Because of this, highly satisfied students will likely emerge from their programs as better prepared clinicians.

Graduation Requirements

Producing well-prepared clinicians is presumably the goal for all graduate programs in speech-language pathology, but there are varying degree requirements among the many

programs that offer a graduate degree in this field. In addition to required coursework, many graduate programs in speech-language pathology may set additional written and oral examination procedures for program completion. Purdue University is ranked as the third best university in the United States for graduate programs in speech-language pathology (U.S. News, 2020). This program requires students to select one of two tracks to fulfill graduation requirements: capstone or thesis. Both tracks offer educational opportunities in consuming research, where the capstone project involves using evidence-based practice in clinical applications, and the thesis option involves conducting novel research. Some programs, however, do not have the added requirement to core curriculum for program completion. The Master's program at Vanderbilt University, which is ranked as the best speech-language pathology program in the nation (U.S. News, 2020), offers a voluntary thesis option for students, but does not require students to choose between a thesis and alternative written project.

Idaho State University's Master's program in speech-language pathology requires students to choose one of two options, much like Purdue University. Students can choose to complete a thesis or a capstone project and elective courses. Examples of possible elective courses include Special Topics in Orofacial Myology, Telehealth for Speech-Language Pathology, Auditory Language Learning, Spanish Certificate courses, and Geriatric Certificate Program courses. The intent behind completing a capstone or thesis project is to increase education in evidence-based practice, giving students the chance to consume or conduct novel research. Each project is typically completed over the course of a year, where thesis students work intensively one-on-one with an advisor throughout the process, while capstone students work mostly independently to complete the project. Because of the difference in faculty involvement between the two project types, and because social support is so influential to student

satisfaction, there is potential for correlation between high satisfaction with graduate program and thesis completion.

Purpose

Accordingly, the *long-term goal* of this research is to improve graduate level education in speech-language pathology through exploration of factors that influence satisfaction with graduate programs. The *objective* of the present study was to explore students' self-rating of satisfaction with graduate education as it relates to completion of a thesis or not. We set out to explore trends in program satisfaction that could help inform students' decisions about whether to pursue a thesis option or not. The *hypothesis* was that there would be a direct positive relationship between program satisfaction and completion of a thesis, such that students who chose to complete a thesis express greater satisfaction with their graduate education. The hypothesis was formulated on the basis of current literature that states students experience higher levels of satisfaction when they perceive more social support (Tompkins, 2016), which they may receive from faculty during the completion of a thesis. Studies have identified the most influential forms of social support are from peers, family or friends, and faculty (Tompkins, 2016). The *rationale* for the proposed research was that the knowledge gained would help inform students on which option to choose in order to maximize satisfaction with their graduate education, and likewise improve their graduate education experience.

We tested our central hypothesis by pursuing the following four *specific aims* within the framework of a survey distributed to recent graduates of Idaho State University's Speech-Language Pathology Program. Among students who complete a thesis, and those who do not, we identified how the following factors differ:

- **Aim 1.** Perceived level of social support (from peers, family/friends, and faculty),

- **Aim 2.** Level of self-leadership skills (as measured by responses to questions about self-leadership skills such as behavior-focused strategies, constructive thought strategies, and natural reward strategies),
- **Aim 3.** Experience in the field (as measured by responses to questions about number of years working, number of hours worked per week, clients served, and settings of employment), and
- **Aim 4.** Age.

Methods

A survey (see Appendix), approved by the Human Subjects Committee at Idaho State University, was sent out to SLPs via email. The focus was to explore the relationship between students' self-rating of satisfaction with graduate education and decision to fulfill a thesis option or not. Survey questions queried everything from clinician demographic information to perceived level of social support and self-leadership skills. For responses to be included in data analyses, respondents must have been practicing members of ASHA (the American Speech, Language, and Hearing Association) and completed all questions on the survey. Responses were recorded via Likert scaling, multiple choice, and free response.

Participants

There are currently more than 170,000 SLPs nationally, according to records reported by ASHA. In order to generalize survey results to the clinical population as a whole, a sample size of 600 would guarantee a margin of error no greater than 4% for 95% confidence intervals for proportions (Daniel & Cross, 2013). However, due to the nature of this project, we distributed surveys via email only to graduates of Idaho State University's Master's Program in Speech-Language Pathology from the past 7 years; approximately 350 graduates. To obtain at least a 20% response rate, two emails were sent, an initial email requesting participation and providing

the survey link, and one follow-up reminder email, again requesting participation and providing the survey link. Anonymous responses were obtained.

Data Analysis

Descriptive statistics (frequencies, percentages, mean, and range) were calculated to describe demographics and response rates. Survey response comparisons between those who completed a thesis and those who did not are represented in tables for the following categories: graduate education experience (Table 1), social support (Table 3), self-leadership skills (Table 5), experience in the field (Table 7), age at graduation (Table 9), and study habits (Table 11). Inferential statistics were calculated using IBM SPSS Statistics for Windows, Version 27. Pearson's Chi-Square and Fisher's Exact Test were used to explore the relationship (or level of independence) between criterion and predictor variables. Criterion variables included SLPs' educational and work experiences, factors related to satisfaction with graduate programs, and geographical location. The predictor variable was whether or not the respondent completed a thesis. Phi ϕ or Cramer's V were employed to describe the strength of association between criterion and predictor variables. These are useful for depicting the effect size.

Results

Of the 305 surveys emailed, 91 (29.8% response rate) were returned, and 87 (95.6% of the total response rate) were useable. Surveys were excluded because one respondent was an audiologist and did not complete the survey, and three respondents did not respond to the primary question of interest (whether or not they completed a thesis). All respondents obtained a master's degree in speech-language pathology from Idaho State University, were certified SLPs through ASHA (seven clinical fellows; one other), and provided informed consent and permission to use their responses for research purposes. Also, one respondent appeared to

misinterpret the question, “how old were you when you graduated from your master’s program?”, responding with their graduation year. An average respondent age was used for this instance.

Questions were asked related to respondent demographics, clinical experience, and experience in graduate school, including perceptions of social support, employment of self-leadership skills, and use of study habits. With the exception of graduate education experience and study habits, below we discuss questions in order of the project aims. Additionally, the question, “During your graduate education, did you complete a Master’s thesis or equivalent research project/paper?” allowed for comparisons between the 69 SLPs who completed a thesis and 18 who did not.

Chi-square Analysis

Chi-square tests of independence were completed using IBM SPSS Statistics for Windows, Version 27 to explore the relationship between SLPs completion of a thesis (or not) and satisfaction, perceived level of social support, employment of self-leadership skills, experience in the field, age at graduation, and use of study habits with/during their graduate education. A standard alpha of .05 was used to determine statistical significance between the criterion and predictor variables. Chi-square analyses have the unique prerequisite that each cell must contain an expected count of at least 5 in 20% of the cells. Fisher’s exact test was designed for small samples and is thus more accurate than Chi-square in instances where more than 20% of the cells contain an expected count below 5. Conversely, chi-square is more accurate than Fisher’s with large samples. Accordingly, Fisher’s exact test results are reported in instances where the prerequisite cell count was not met. In addition to exploring the significance of the relationships between variables, effect size was calculated. Phi ϕ was used for effect size

calculations in 2x2 crosstabulation analyses, and values of 0.1 for Phi ϕ were considered a small effect, 0.3 a medium effect, and 0.5 a large effect. Cramer's V was used for effect size calculations in crosstabulations greater than 2 x 2. Using Cramer's V, the number of degrees of freedom determines the phi coefficient (ϕ_c) necessary for each range of effect sizes. The higher the number of degrees of freedom, the smaller the phi coefficient needs to be in order to determine a large effect size. When Cramer's V was used, the ranges, according to the degrees of freedom, are described in the notes sections of the tables.

Some of the response categories were collapsed in order to validate the use of chi-squares by meeting the prerequisite that there was an expected count of at least 5 in 20% of the cells. All tables in this paper contain a fully, or more complete representation of the pre-collapsed raw data. Data were collapsed as follows. Satisfaction with graduate education was collapsed from seven categories to three (such that extremely satisfied, moderately satisfied, and slightly satisfied responses became *satisfied*; and neutral, slightly dissatisfied, moderately dissatisfied, and extremely dissatisfied responses become *neutral or dissatisfied*). All questions with yes, no, and neutral response options were collapsed two levels such that yes responses remained *yes*, and no and neutral responses became a single *no or neutral* category. Sometimes there was also a *no response* category option included, if some participants did not respond. Likert scale questions related to level of agreement were collapsed from six categories to four (such that strongly agree and somewhat agree responses became *agree*; neutral responses remained *neutral*; strongly disagree and somewhat disagree became *disagree*; and no response remained *no response*). Ages at graduation were grouped to *less than or equal to 25*; *26 to 35*; and *greater than or equal to 36 years*.

Variables of Interest

Graduate Education Experience

For information related to graduate education experience, see Table 1. Speech-language pathologists who completed a thesis and those who did not were equally satisfied/dissatisfied with their graduate education. There was a higher percentage of SLPs who did not complete a thesis and were either satisfied (difference of 2.17% between those who completed a thesis and those who did not) or neither satisfied nor dissatisfied (difference of 2.66%) with their graduate education, and a higher percentage of SLPs who did complete a thesis and were dissatisfied (difference of 4.83%) with their graduate education. Similarly, SLPs who completed a thesis and those who did not were equally likely to recommend the graduate program in speech-language pathology at Idaho State University. There was a higher percentage of SLPs who did not complete a thesis and would both recommend (difference of 2.66% between groups) and not recommend (difference of 2.17%) the graduate program, and a higher percentage of SLPs who did complete a thesis and were neutral (difference of 8.94%) about recommending the graduate program, or did not respond (difference of 4.11%) to the question. With respect to other questions related to graduate education experience, the groups were similarly equal in their responses, as observed in Table 1.

Table 1
Graduate Education Experience (N = 87)

Responses	Thesis (<i>n</i> = 69)		Objective/Capstone Project (<i>n</i> = 18)	
	%	<i>n</i>	%	<i>n</i>
How satisfied were you with your graduate education?				
Satisfied	81.16	56	83.33	15
Neutral	2.90	2	5.56	1
Dissatisfied	15.94	11	11.11	2
I will recommend the graduate program in speech-language pathology at Idaho State University.				
Agree	69.57	48	72.22	13
Neutral	14.49	10	5.56	1
Disagree	14.49	10	16.67	3
No response	1.45	1	5.56	1

During completion of my master's degree, I was interested in someday pursuing a PhD or other doctoral degree (e.g., of Medicine, Audiology, Speech-Language Pathology, Education, etc.).

Agree	26.09	18	16.67	3
Neutral	7.25	5	11.11	2
Disagree	65.22	45	66.67	12
No response	1.45	1	5.56	1
I am planning to pursue a PhD or other doctoral degree (e.g., of Medicine, Audiology, Speech-Language Pathology, Education, etc.).				
Agree	1.45	1	5.56	1
Neutral	69.57	48	72.22	13
Disagree	27.54	19	16.67	3
No response	1.45	1	5.56	1
I passed my oral exam the first time.				
Yes	91.30	63	88.89	16
No	5.80	4	5.56	1
No response	2.90	2	5.56	1
I successfully defended my thesis the first time.				
Yes	86.96	60		
No	4.35	3		
No response	8.70	6		

The relationship between completing (or not completing) a thesis and satisfaction with graduate education and likelihood of recommending the graduate program in speech-language pathology at Idaho State University are listed in Table 7. As can be seen, the Fisher's Exact Test was not statistically significant for either comparison, and while there was also no substantial effect size (phi ϕ) between groups with respect to satisfaction with graduate education, there was a small effect size for the difference between groups on whether or not they would recommend the graduate program in speech-language pathology at Idaho State University (such that those who completed a thesis were more neutral with respect to whether or not they would recommend the program and those who did not complete a thesis were either more likely to or less likely to, but not neutral with respect to whether or not they would recommend the program).

Table 2
Thesis (or not) by Satisfaction and Recommendation (2x2): Fisher's Exact Test and Phi ϕ

Variables of Interest	Fisher's Exact Test p Value	ϕ	Effect size
Were you satisfied with your graduate education?	0.568	-.023	None
I will recommend the graduate program in speech-language pathology at Idaho State University.	0.497	0.152	Small

Aim 1. Perceived Level of Social Support

For information related to perceived levels of social support, see Table 3. When observing the raw data, SLPs who completed a thesis and those who did not were equally satisfied/dissatisfied with their graduate education. There was a higher percentage of SLPs who did not complete a thesis and felt unsupported by peers (difference of 8.21% between those who completed a thesis and those who did not), and a higher percentage of SLPs who did complete a thesis and felt supported by peers (difference of 3.86%) or felt neither supported nor unsupported (difference of 5.80%) by peers. Similarly, SLPs who completed a thesis and those who did not felt equally supported by family and friends. There was a higher percentage of SLPs who did not complete a thesis and felt supported by family and friends (difference of 7.25% between groups), and a higher percentage of SLPs who did complete a thesis and felt neither supported nor unsupported (difference of 5.80%), or felt unsupported (difference of 1.45%) to the question. Lastly, SLPs who completed a thesis overall felt slightly more supported by academic advisors than students who did not complete a thesis. There was a higher percentage of SLPs who completed a thesis and felt supported by academic advisors than SLPs who did not complete a thesis (difference of 18.12% between groups), and a higher percentage of SLPs who did not complete a thesis and felt neither supported nor unsupported (difference of 17.39%), or felt unsupported (difference of 0.72%) to the question.

Table 3
Aim 1. Level of Social Support (N = 87)

Responses	Thesis (n = 69)		Objective/Capstone Project (n = 18)	
	%	n	%	n
I felt supported by my peers in my program during graduate school.				
Yes	92.75	64	88.89	16
Neutral	5.80	4	0.00	0
No	2.90	2	11.11	2
I felt supported by my family and friends (no peers in my program) during graduate school.				
Yes	92.75	64	100.00	18
Neutral	5.80	4	0.00	0
No	1.45	1	0.00	0

I felt supported by instructors of academic and clinical coursework during graduate school.				
Yes	78.26	54	72.22	13
Neutral	2.90	2	5.56	1
No	18.84	13	22.22	4
I felt supported by academic advisors during graduate school.				
Yes	68.12	47	50.00	9
Neutral	15.94	11	33.33	6
No	15.94	11	16.67	3
I felt supported by my thesis mentor during graduate school.				
Yes	68.12	47		
Neutral	14.49	10		
No	17.39	12		

The relationship between completing (or not completing) a thesis and perceived level of social support are listed in Table 4. As can be seen, the Fisher's Exact Test was not statistically significant for any comparison, and there was also no substantial effect size (phi ϕ) between groups with respect to perceptions of social support. There was a small effect size for the difference between groups on whether or not they felt supported by family and friends (such that those who did not complete a thesis were more likely to feel supported by family and friends, and those who completed a thesis were more likely to feel neutral or unsupported by family and friends).

Table 4
Thesis (or not) by Level of Social Support (2x2): Chi Square/Fisher's Exact Test and Phi ϕ

Variables of Interest	Fisher's Exact Test p Value			ϕ	Effect size
I felt supported by peers in my program during graduate school.	0.668			0.034	None
I felt supported by my family and friends (not peers in my program) during graduate school.	0.579			0.239	Small
I felt supported by instructors of academic and clinical coursework during graduate school.	0.549			0.058	None
	X^2	df	p	ϕ	Effect size
I felt supported by academic advisors during graduate school.	2.043	1	0.175	0.153	Small

Aim 2. Level of Self-leadership Skills

For information related to self-leadership skills, see Table 5. At face value, when looking at the raw data, SLPs who completed a thesis and those who did not were equally

satisfied/dissatisfied with their graduate education. There was a higher percentage of SLPs who completed a thesis and either utilized (difference of 7.73% between those who completed a thesis and those who did not) or felt neutral about (difference of 1.69%) behavior-focused strategies, and a higher percentage of SLPs who did not complete a thesis and did not utilize behavior-focused strategies (difference of 14.98%) during their graduate education. Similarly, SLPs who completed a thesis and those who did not were equally likely to utilize constructive thought strategies during graduate school. There was a higher percentage of SLPs who completed a thesis and utilized constructive thought strategies (difference of 5.31% between groups), and a higher percentage of SLPs who did not complete a thesis and were neutral (difference of 7.73%) or utilized constructive thought strategies (difference of 2.42%). Lastly, SLPs who completed a thesis and those who did not were equally likely to utilize natural reward strategies during graduate school. There was a higher percentage of SLPs who did not complete a thesis and utilized natural reward strategies (difference of 2.66% between groups) or were neutral (difference of 16.43% between groups), and a higher percentage of SLPs who did complete a thesis and did not utilize natural reward strategies (difference of 19.08%).

Table 5
Aim 2. Level of Self-leadership Skills (N = 87)

Responses	Thesis (n = 69)		Objective/Capstone Project (n = 18)	
	%	n	%	n
I utilized behavior-focused strategies during graduate school.				
Yes	85.51	59	77.78	14
Neutral	7.25	5	5.56	1
No	7.25	5	22.22	4
I utilized constructive thought strategies during graduate school.				
Yes	60.87	42	55.56	10
Neutral	14.49	10	22.22	4
No	24.64	17	22.22	4
I used natural reward strategies during graduate school.				
Yes	69.57	48	72.22	13
Neutral	5.80	4	22.22	4
No	24.64	17	5.56	1

The relationship between completing (or not completing) a thesis and the use of self-leadership skills are listed in Table 6. As can be seen, the Fisher's Exact Test was not statistically significant for any comparison, and there was also no substantial effect size (phi ϕ) between groups with respect to use of any self-leadership skills

Table 6
Thesis (or not) by Level of Self-leadership Skills (2x2): Chi Square/Fisher's Exact Test and Phi ϕ

Variables of Interest	Fisher's Exact Test p Value			ϕ	Effect size
I utilized behavior-focused strategies during graduate school.	0.475			0.085	None
	X^2	df	p	ϕ	Effect size
I utilized constructive thought strategies during graduate school.	0.168	1	0.789	0.044	None
I used natural reward strategies during graduate school.	.048	1	0.826	-0.024	None

Aim 3. Experience in the Field

For information related to experience in the field, see Table 7. Upon inspection of descriptive statistics, SLPs who completed a thesis and those who did not were equally satisfied/dissatisfied with their graduate education. There was a higher percentage of SLPs who completed a thesis and worked in the field for under 2 years (difference of 14.04% between those who completed a thesis and those who did not) or worked in the field for 2-3 years (difference of 15.79%) before graduate school, and a higher percentage of SLPs who did not complete a thesis and worked in the field for over 3 years (difference of 1.75%) before graduate school. Similarly, SLPs who completed a thesis and those who did not were equally likely to have worked under 10 hours, between 11 and 30 hours, or over 31 hours per week. There was a higher percentage of SLPs who completed a thesis and worked wither under 10 hours per week (difference of 21.05% between groups) or between 11 and 30 hours per week (difference of 26.32% between groups) before graduate school, and a higher percentage of SLPs who did not complete a thesis and worked over 31 hours per week before starting graduate school (difference of 47.37%) .

Furthermore, SLPs who completed a thesis and those who did not were equally likely to maintain a caseload of either under 10, between 11 and 30, and over 31 clients before starting graduate school. There was a higher percentage of SLPs who did complete a thesis and maintained a caseload of under 10 clients (difference of 26.32% between groups), and there was higher percentage of SLPs who did not complete a thesis and maintained a caseload of either 11 to 30 clients (difference of 1.75%) or over 31 clients (difference of 24.56%) before entering graduate school. Lastly, SLPs who completed a thesis and those who did not were equally likely to have worked in either private practice or a school setting before entering graduate school. There was a higher percentage of SLPs who did complete a thesis and worked in private practice (difference of 10.53% between groups), and a higher percentage of SLPs who did not complete a thesis and worked in a school setting (difference of 10.53%) before entering graduate school. With respect to other questions related to graduate education experience, the groups were similarly equal in their responses, as observed in Table 7.

Table 7
Aim 3. Experience in the Field

Clinical practice post-graduate education (<i>N</i> = 87)				
Responses	Thesis (<i>n</i> = 69)		Objective/Capstone Project (<i>n</i> = 18)	
	%	<i>n</i>	%	<i>n</i>
Years of practice				
≤ 5years	34.78	24	22.22	4
6-15 years	24.64	17	27.78	5
≥ 16 years	40.58	28	50.00	9
Work setting				
College/university	0.00	0	0.00	0
Home health	4.35	3	0.00	0
Hospital	8.70	6	11.11	2
Non-residential health care	4.35	3	0.00	0
Private Practice	28.99	20	44.44	8
Residential health care	1.45	1	5.56	1
School	43.48	30	27.78	5
Other	8.70	6	11.11	2
Primary area of expertise				
Aphasia	1.45	1	0.00	0
Apraxia of speech	1.45	1	0.00	0
Articulation disorders	17.39	12	16.67	3
Alternative augmentative communication	4.35	3	5.56	1

Autism spectrum disorders	8.70	6	16.67	3
Brain disorders (neurogenics)	1.45	1	0.00	0
Cognitive communication disorders	5.80	4	0.00	0
Developmental disorders	10.14	7	0.00	0
Early intervention (feeding)	1.45	1	5.56	1
Early intervention (vocal development)	2.90	2	5.56	1
Fluency	1.45	1	0.00	0
Language disorders	21.74	15	22.22	4
Learning disabilities	2.90	2	0.00	0
Literacy	0.00	0	5.56	1
Oral myofunctional disorders	1.45	1	0.00	0
Phonological disorders	2.90	2	5.56	1
Swallowing disorders	4.35	3	11.11	2
Other	5.80	4	0.00	0
No response	4.35	3	5.56	1
Clinical practice pre-graduate education (<i>N</i> = 22)				
	Thesis (<i>n</i> = 19)		Objective/Capstone Project (<i>n</i> = 3)	
	%	<i>n</i>	%	<i>n</i>
Years of practice				
≤ 1;11 years	52.63	10	66.67	2
2;0 to 2;11 years	15.79	3	0.00	0
≥ 3;0 years	31.58	6	33.33	1
Hours per week				
≤ 10	21.05	4	0.00	0
11 to 30	26.32	5	0.00	0
≥ 31	52.63	10	100.00	3
Number of clients				
≤ 10	26.32	5	0.00	0
11 to 30	31.58	6	33.33	1
≥ 31	42.11	8	66.67	2
Work setting				
Private Practice	10.53	2	0.00	0
School	89.47	17	100.00	3

The relationship between completing (or not completing) a thesis and experience working in the field are listed in Table 8. As can be seen, the Fisher's Exact Test was not statistically significant for any comparison,. There was a large effect size (Phi ϕ) between groups with respect to primary area of expertise (such that SLPs who completed a thesis were more likely to work with clients with developmental disorders), and work setting (such that those who did not complete a thesis were more likely to work in private practice and those who did complete a thesis were more likely to work in a school). There was a small effect size (Phi ϕ) between groups with respect to number of years practiced as a speech-language pathologist (such that

those who completed a thesis were more likely to have worked less than 5 years after graduate school and those who did not complete a thesis were more likely to have worked over 6 years after graduate school).

Table 8

Thesis (or not) by Experience in the Field (2xX): Chi Square/Fisher's Exact Test and Cramer's V

Variables of Interest	Fisher's Exact Test p Value	df	ϕ_c	Effect size	
What is your primary area of expertise?	0.747	18*	0.391	Large	
In what setting do you work?	0.576	6**	0.233	Large	
	X^2	df	p	ϕ_c	Effect size
How many years have you practiced as a speech-language pathologist?	1.053	2***	0.562	0.110	Small

*18 degrees of freedom (df) determines the range of effect sizes for Cramer's V to be small = 0.02, medium = 0.07, and large = 0.12.

**Six degrees of freedom (df) determines the range of effect sizes for Cramer's V to be small = 0.04, medium = 0.13, and large = 0.20.

***Two degrees of freedom (df) determines the range of effect sizes for Cramer's V to be small = 0.07, medium = 0.21, and large = 0.35.

Aim 4. Age

For information related to age, see Table 9. Upon inspection of the descriptive statistics, SLPs who completed a thesis were more likely to be in the age group of 26 to 35 years, and those who did not complete a thesis were more likely to be under 25 years and over 36 years of age. There was a higher percentage of SLPs who completed a thesis and finished graduate school between the ages of 26 and 35 (difference of 47.10% between those who completed a thesis and those who did not), and a higher percentage of SLPs who did not complete a thesis and finished graduate school under 25 years of age (difference of 17.15%) or over 36 years of age (difference of 29.95%).

Table 9

Age at Graduation (N = 87)

Responses	Thesis ($n = 69$)		Objective/Capstone Project ($n = 18$)	
	%	n	%	n
25 years and younger	21.74	15	38.89	7
26 to 35 years	63.77	44	16.67	3
36 years and older	14.49	10	44.44	8

The relationship between completing (or not completing) a thesis and age at graduation is shown in Table 10. As can be seen, the Fisher's Exact Test was statistically significant, and there was a large effect size (Phi ϕ) between groups, such that SLPs who completed a thesis were more likely to be between 26 to 35 years of age.

Table 10
Thesis (or not) by Age at Graduation(2x3): Fisher's Exact Test and Cramer's V

Variables of Interest	Fisher's Exact Test p Value	df	ϕ_c	Effect size
How old were you when you graduated from your master's program?	0.001	2*	0.397	Large

*Two degrees of freedom (df) determines the range of effect sizes for Cramer's V to be small = 0.07, medium = 0.21, and large = 0.35.

Study Habits

For information related to study habits, see Table 11. When reviewing the raw data, with respect to browsing the internet for additional resources, there was a higher percentage of SLPs who completed a thesis and agreed (difference of 9.66% between those who completed a thesis and those who did not) or were neutral (difference of 16.67%) in their use of this study habit, and a higher percentage of SLPs who did not complete a thesis and disagreed (difference of 27.78%) with their use of this habit. With respect to restricting studies to only what was necessary, there was a higher percentage of SLPs who completed a thesis and agreed (difference of 9.42%), were neutral (difference of 7.73%) or did not respond (difference of 1.45%) to use of this study habit, and a higher percentage of SLPs who did not complete a thesis and disagreed (difference of 18.60%) with use of this study habit. With respect to accepting statements of teachers without questioning, there was a higher percentage of SLPs who completed a thesis and agreed (difference of 14.49%) or did not respond (difference of 1.45%) to use of this study habit, and a higher percentage of SLPs who did not complete a thesis and felt neutral (difference of 7.73%) or disagreed (difference of 8.21%) with use of this study habit. With respect to relating material to real-life experiences, there was a higher percentage of SLPs who completed a thesis and felt

neutral (difference of 4.35%), disagreed (difference of 1.69%), or did not respond (difference of 1.45%) to use of this study habit, and a higher percentage of SLPs who did not complete a thesis and agreed (difference of 7.49%) to use of this study habit. With respect to doing enough work to form an individual point of view, there was a higher percentage of SLPs who completed a thesis and agreed (difference of 11.59%), felt neutral (difference of 4.35%), or did not respond (difference of 1.45%) to use of this study habit, and a higher percentage of SLPs who did not complete a thesis and disagreed (difference of 17.39%) to use of this study habit. With respect to relating new material to existing knowledge on a topic, there was a higher percentage of SLPs who completed a thesis and felt neutral (difference of 4.35%), disagreed (difference of 1.45%), or did not respond (difference of 2.90%) to use of this study habit, and a higher percentage of SLPs who did not complete a thesis and agreed (difference of 8.70%) to use of this study habit. With respect to studying consistently throughout a semester, there was a higher percentage of SLPs who completed a thesis and agreed (difference of 5.07%), disagreed (difference of 5.80%), or did not respond (difference of 1.45%) to use of this study habit, and a higher percentage of SLPs who did not complete a thesis and felt neutral (difference of 15.94%) to use of this study habit. With respect to doing assignments as soon as possible, there was a higher percentage of SLPs who completed a thesis and felt neutral (difference of 15.94%), or did not respond (difference of 1.45%) to use of this study habit, and a higher percentage of SLPs who did not complete a thesis and agreed (difference of 9.66%) or disagreed (difference of 7.73%) to use of this study habit. Lastly, with respect to keeping well, organized notes, there was a higher percentage of SLPs who completed a thesis and felt neutral (difference of 1.69%), disagreed (difference of 4.35%), or did not respond (difference of 1.45%) to use of this study habit, and a

higher percentage of SLPs who did not complete a thesis and agreed (difference of 7.49%) to use of this study habit.

Table 11
Study Habits (N = 87)

Responses	Thesis (n = 69)		Objective/Capstone Project (n = 18)	
	%	n	%	n
I thought browsing around on the internet in search of additional resources to supplement class lecture was a waste of time, so I only studied seriously what was distributed in class or in course outlines.				
Agree	31.88	22	22.22	4
Neutral	33.33	23	16.67	3
Disagree	33.33	23	61.11	11
No response	1.45	1	0.00	0
I generally restricted my study to what was specifically set as I thought it was unnecessary to do anything extra.				
Agree	26.09	18	16.67	3
Neutral	18.84	13	11.11	2
Disagree	53.62	37	72.22	13
No response	1.45	1	0.00	0
I found it best to accept the statements and ideas of my professors/clinical supervisors and question them only under special circumstances.				
Agree	47.83	33	33.33	6
Neutral	14.49	10	22.22	4
Disagree	36.23	25	44.44	8
No response	1.45	1	0.00	0
I often thought of real-life situations to which the material that I was learning would be useful.				
Agree	86.96	60	94.44	17
Neutral	4.35	3	0.00	0
Disagree	7.25	5	5.56	1
No response	1.45	1	0.00	0
I found that I had to do enough work on a topic so that I formed my own point of view before I was satisfied.				
Agree	44.93	31	33.33	6
Neutral	37.68	26	33.33	6
Disagree	15.94	11	33.33	6
No response	1.45	1	0.00	0
I tried to relate new material, as I was reading it, to what I already knew on a topic.				
Agree	91.30	63	100.00	18
Neutral	4.35	3	0.00	0
Disagree	1.45	1	0.00	0
No response	2.90	2	0.00	0
I tried to work consistently throughout a term and reviewed regularly when exams were close.				
Agree	88.41	61	83.33	15
Neutral	4.35	3	16.67	3
Disagree	5.80	4	0.00	0
No response	1.45	1	0.00	0
I tried to do all of my assignments as soon as possible after they were available.				
Agree	68.12	47	77.78	14
Neutral	15.94	11	0.00	0
Disagree	14.49	10	22.22	4
No response	1.45	1	0.00	0
I kept neat, well organized notes for most subjects.				
Agree	86.96	60	94.44	17
Neutral	7.25	5	5.56	1
Disagree	4.35	3	0.00	0
No response	1.45	1	0.00	0

The relationship between completing (or not completing) a thesis and study habits are listed in Table 12. As can be seen, the Fisher's Exact Test was not statistically significant for any comparison. There was a medium effect size (Phi ϕ) between groups with respect to browsing on the internet for additional resources (such that SLPs who did not complete a thesis were more likely to utilize this study tactic), doing enough work to form an individual point of view on a topic (such that those who completed a thesis were more likely to utilize this study habit), working consistently throughout the semester (such that SLPs who completed a thesis were more likely to utilize this study habit), and completing assignments as soon as possible (such that SLPs who did not complete a thesis were more likely to utilize this study tactic). There was a small effect size (Phi ϕ) between groups with respect to accepting the statements of teachers (such that SLPs who completed a thesis were more likely to utilize this study habit), studying only what was assigned (such that SLPs who completed a thesis were more likely to utilize this study habit), relating material to real-life situations (such that SLPs who did not complete a thesis were more likely to utilize this study habit), relating new material to existing knowledge (such that SLPs who did not complete a thesis were more likely to utilize this study tactic), and keeping well-organized notes (such that SLPs who did not complete a thesis were more likely to utilize this study habit).

Table 12
Thesis (or not) by Study Habits (2x4): Fisher's Exact Test and Cramer's V

Variables of Interest	Fisher's Exact Test p Value	df	ϕ_c	Effect size
I thought browsing around on the internet in search of additional resources to supplement class lecture was a waste of time, so I only studied seriously what was distributed in class or in course outlines.	0.207	3*	0.236	Medium
I generally restricted my study to what was specifically set as I thought it was unnecessary to do anything extra.	0.601	3	0.157	Small
I found it best to accept the statements and	0.573	3	0.140	Small

ideas of my professors/clinical supervisors and question them only under special circumstances.				
I often thought of real-life situations to which the material that I was learning would be useful.	1.000	3	0.117	Small
I found that I had to do enough work on a topic so that I formed my own point of view before I was satisfied.	0.440	3	0.186	Medium
I tried to relate new material, as I was reading it, to what I already knew on a topic.	1.000	3	0.139	Small
I tried to work consistently throughout a term and reviewed regularly when exams were close.	0.240	3	0.227	Medium
I tried to do all of my assignments as soon as possible after they were available.	0.244	3	0.210	Medium
I kept neat, well organized notes for most subjects.	1.000	3	0.117	Small

*Three degrees of freedom (*df*) determines the range of effect sizes for Cramer's V to be small = 0.06, medium = 0.17, and large = 0.29.

Discussion

As part of completing of a graduate degree in speech-language pathology, many students can complete a thesis or an alternative option, such as a capstone and/or portfolio project. Previously, there has been no study that explores the relationship between completion of a thesis and students' level of satisfaction with their graduate education. To investigate the relationship between thesis completion and program satisfaction, we explored: Aim 1. Perceived level of social support (from peers, family/friends, and faculty), Aim 2. Level of self-leadership skills, Aim 3. Experience in the field, and Aim 4. Age at graduation in a cohort of alumni from Idaho State University's Speech-Language Pathology Program. The rationale behind conducting this study was to help inform faculty and future students on one way to maximize satisfaction with graduate education.

Despite our hypothesis that students who complete a thesis would be more satisfied with their graduate education, there was no statistical significance or substantial effect size between completion of a thesis and overall satisfaction with a graduate program. Students who completed a thesis and those who did not were equally likely to feel satisfied with their graduate education.

Further, there were no statistically significant findings between respondents who completed a thesis and those who did not across aims, with the exception of age at graduation (Aim 4). Perceived level of social support did not differ greatly between groups; students who completed a thesis and those who did not were equally likely to feel supported by peers, family and friends, academic advisors, and teachers. Both students who completed a thesis and those who did not were equally likely to employ similar study habits and self-leadership strategies, which included behavior focused, constructive thought, and natural reward strategies. There was no statistical significance or substantial effect size between groups with respect to level of experience in the field prior to starting their graduate program. When examining the factor of age at graduation, on the other hand, students who completed a thesis, as a group, were 35 years or younger at graduation, while those who did not complete a thesis were 36 years or older at graduation (a difference of 29.95% between groups); a statistically significant difference. This means that the group of respondents who did not complete a thesis to fulfill graduation requirements were overall older than the group of respondents who completed a thesis. As such, we can conclude that, of the individuals who responded to this survey, younger students chose to complete a thesis and older students chose not to complete a thesis, but still, age at graduation did not influence satisfaction with graduate education.

The results of this study were interesting to us as a research team. The study idea originally came from a hypothetical study designed for a course project by SLP students in a Research Methods class. The students argued, hypothetically, that those who complete a thesis are less satisfied with their graduate education than those who do not complete a thesis. From the instructor's perspective, a researcher at heart, the thought that students would feel less satisfied with graduate education when conducting research with the specialized one-on-one mentorship of a thesis advisor did not sit well. Accordingly, we set out to conduct the students' proposed study, gathered supporting literature, and designed a survey, hypothesizing the opposite of those

students in that Research Methods course. We hypothesized that students who complete a thesis will be more satisfied with their graduate education than students who do not complete a thesis. To our surprise, respondents who completed a thesis (in comparison to those who did not complete a thesis) were neither *less* satisfied nor *more* satisfied with their graduate education, but rather, they were *equally* satisfied. First and foremost, we were relieved that respondents who completed a thesis were not *less* satisfied with their graduate education than respondents who did not complete a thesis. Simultaneously, we were somewhat disappointed that those who completed a thesis were not *more* satisfied with their graduate education. However, upon reflection, the results of this study are promising in that they support continuing with status quo, continuing to provide students with thesis and alternative (e.g., capstone and/or portfolio) options for fulfilling graduate school requirements, and letting students choose their preferred option for meeting those requirements.

While no statistically significant results in favor of completing a thesis were surprising to us, we are pleased with the finding. If students who completed a thesis were ultimately more satisfied with their graduate education, then perhaps it would be in the best interest of the graduate program to offer only a thesis option to students. What would a large graduate program in SLP do if all students needed to complete a thesis? The time requirement on the part of the faculty would be overwhelming. We were concerned about the implications of this study if results revealed that a thesis proved to be a more satisfying option for graduate students. As it stands, there would not be enough faculty members to adequately supervise the completion of a thesis for all students in ISUs SLP graduate program, so the hypothesis we presented had the potential to present logistical difficulties to program curriculum if supported by the results. However, now that it is apparent that students who complete a thesis and those who do not complete a thesis are equally likely to be satisfied with their education, continuing with status quo is optimal.

Limitations

There are several limitations to this study that should be considered. One of the limitations of this study was the disproportionate number of respondents who completed a thesis compared to those who did not. Within the useable data, there were 69 respondents who completed a thesis and only 18 who did not, despite the actual distribution of students being relatively equal. Because this survey was sent out to all students within our population of interest (all students who graduated from ISUs master's program in SLP in the past 7 years), this disproportion was not due to sampling error, but instead, perhaps due to the potential likelihood of thesis students to respond to the survey. Perhaps thesis students were more likely to complete this survey due to a desire to contribute to research that also had motivated them to select a thesis option when in graduate school. Furthermore, this survey was sent to them with the explanation that it was part of a current graduate student's project, so it is also possible that they were more interested in contributing to a graduate student's project after having completed a thesis of their own. There is also the possibility that respondents could have been influenced by courtesy bias, wherein they were more likely to respond in favor of the ISU speech-language pathology program since the survey was being facilitated through the program itself. Although it is not likely that this type of response bias occurred because both groups did report being equally likely to be satisfied and dissatisfied, it is important to consider.

Conclusion

Results are informative to the program curriculum and future students. The faculty does not need to strive to encourage all students to complete a thesis, or provide opportunities for all students to complete a thesis. Instead, students can continue to be encouraged to pursue their interests and complete a thesis or a capstone project to fulfill program requirements, with the knowledge that students are equally satisfied with and supported in their graduate education regardless of either decision.

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Appendix

SATISFACTION AMONG SPEECH-LANGUAGE PATHOLOGY GRADUATE STUDENTS WHO COMPLETE A THESIS

As part of a graduate research project, my thesis adviser, Heather L. Ramsdell-Hudock, PhD CCC-SLP, and I, Hayley Gaydos, are conducting a survey to explore satisfaction with graduate programs in speech-language pathologists as it relates to the decision to complete a thesis or not. Ultimately, we hope to better inform students and faculty about the influence of completing a thesis on program satisfaction. Approval for the study has been obtained by the Human Subjects Committee at Idaho State University.

This survey is being distributed to speech-language pathologists who graduated from Idaho State University. It is brief and will take you no more than 10 minutes to complete. Your response is voluntary and any information you provide will remain anonymous. Your completion of this survey would be greatly appreciated and would help to advance the field by enabling our team to find out more about graduate education in speech-language pathology. We thank you for your time and consideration!

Please respond to all questions by selecting the appropriate option based on your current work setting. We will send two reminder emails to those who have not yet completed the survey, and responses are needed by xxx.

*Highlighting in the current form of the survey indicates branching logic that was entered into the electronic survey.

(1) Are you a member of the American Speech-Language Hearing Association (ASHA)?

- a. Yes
- b. No

(2) What is your current certification status?

- a. None
- b. Clinical fellow (CF)
- c. Certified Speech-Language Pathologist (CCC-SLP)
- d. Certified Audiologist (CCC-A)
- e. Dual certified (CCC-SLP and CCC-A)
- f. Only state licensed
- g. Other

(3) What is the highest level of education that you have completed?

- a. Associate's degree
- b. Bachelor's degree
- c. Master's degree
- d. Doctor of philosophy
- e. Other doctoral degree (e.g., of Medicine, Audiology, Speech-Language Pathology, Education, etc.)

f. Other

(4) What is(are) your area(s) of expertise? Check up to 3 areas that apply.

- | | | |
|---|--|---------------------------------|
| a. Accent modification | b. Brain disorders (neurogenics) | c. Literacy |
| d. Aphasia | e. Cognitive communication disorders | f. Oral myofunctional disorders |
| g. Apraxia of speech | h. Developmental disorders | i. Phonological disorders |
| j. Articulation disorder | k. Early intervention: infant feeding | l. Prevention and wellness |
| m. Auditory processing disorders | n. Early intervention: prelinguistic vocal development | o. Public speaking |
| p. Augmentative and alternative communication | q. Fluency | r. Resonance disorders |
| s. Aural rehabilitation | t. Language disorders | u. Swallowing disorders |
| v. Autism | w. Laryngectomy | x. Voice disorders |
| y. Bilingualism | z. Learning disabilities | aa. Other |

(5) How many years have you practiced as a speech-language pathologist?

(6) In what state do you practice? Check all that apply.

- | | | | | |
|---------------|--------------|----------------|------------------|------------------|
| a. Alabama | b. Idaho | c. Minnesota | d. North Dakota | e. Vermont |
| f. Alaska | g. Illinois | h. Mississippi | i. Ohio | j. Virginia |
| k. Arizona | l. Indiana | m. Missouri | n. Oklahoma | o. Washington |
| p. Arkansas | q. Iowa | r. Montana | s. Oregon | t. West Virginia |
| u. California | v. Kansas | w. Nebraska | x. Pennsylvania | y. Wisconsin |
| z. Colorado | aa. Kentucky | bb. Nevada | cc. Rhode Island | dd. Wyoming |

ee. Connecticut	ff. Louisiana	gg. New Hampshire	hh. South Carolina	ii. Washington DC
jj. Delaware	kk. Maine	ll. New Jersey	mm. South Dakota	nn. Other
oo. Florida	pp. Maryland	qq. New Mexico	rr. Tennessee	ss.
tt. Georgia	uu. Massachusetts	vv. New York	ww. Texas	xx.
yy. Hawaii	zz. Michigan	aaa. North Carolina	bbb. Utah	ccc.

(7) In what setting(s) do you work? Check all that apply.

- a. College/university
- b. Hospital
- c. Non-residential health care facility
- d. Private practice
- e. Residential health care facility
- f. School
- g. Other

(8) During your undergraduate education, did you complete thesis or equivalent research project/paper?

- a. yes
- b. no

(9) During your graduate education, did you complete a Master's thesis or equivalent research project/paper? (If yes, directed to answer all YELLOW HIGHLIGHTED questions. If no, will not see YELLOW HIGHLIGHTED questions.)

- a. yes
- b. no

(10) How satisfied were you with your graduate education? _____

- a. highly satisfied
- b. somewhat satisfied
- c. slightly satisfied
- d. slightly dissatisfied
- e. somewhat dissatisfied
- f. highly dissatisfied
- g. unsure

(11) How old were you when you graduated from your master's program?

(12) Did you have any experience working in the field of speech-language pathology as a SLPA or other paraprofessional prior to entering your graduate program? (If yes, directed to answer all GREEN HIGHLIGHTED questions. If no, will not see GREEN HIGHLIGHTED questions.)

- a. yes
- b. no

(13) How many years of experience did you have working in the field of speech-language pathology BEFORE entering graduate school? _____

(14) How many hours per week did you work in the field of speech-language pathology BEFORE entering graduate school? _____

(15) On average, how many clients did you maintain on your caseload BEFORE entering graduate school? _____

(16) What kinds of settings did you work in BEFORE entering graduate school? Check all that apply.

- a. College/university
- b. Hospital
- c. Non-residential health care facility
- d. Private practice
- e. Residential health care facility
- f. School
- g. Other

(17) How supported did you feel by peers in your program during graduate school?

- a. highly supported
- b. somewhat supported
- c. slightly supported
- d. slightly unsupported
- e. somewhat unsupported
- f. highly unsupported
- g. unsure

(18) How supported did you feel by family and friends (not peers in your program) during graduate school?

- a. highly supported
- b. somewhat supported
- c. slightly supported
- d. slightly unsupported
- e. somewhat unsupported
- f. highly unsupported
- g. unsure

(19) How supported did you feel by faculty in your program during graduate school?

- a. highly supported

- b. somewhat supported
- c. slightly supported
- d. slightly unsupported
- e. somewhat unsupported
- f. highly unsupported
- g. unsure

(20) How supported by the faculty did you feel with respect to advising during graduate school?

- a. highly supported
- b. somewhat supported
- c. slightly supported
- d. slightly unsupported
- e. somewhat unsupported
- f. highly unsupported
- g. unsure

(21) If you completed a thesis, how supported did you feel by your thesis mentor?

- a. highly supported
- b. somewhat supported
- c. slightly supported
- d. slightly unsupported
- e. somewhat unsupported
- f. highly unsupported
- g. unsure

(22) Behavior-focused strategies are techniques that involve “observing oneself, rewarding oneself, punishing oneself, setting goals for oneself and determining reminders for oneself” (Uzman & Maya, 2019). How often did you utilize behavior-focused strategies during graduate school?

- a. I did not utilize behavior-focused strategies during graduate school.
- b. Less than 25% of the time
- c. 26 to 50 % of the time
- d. 51 to 75 % of the time
- e. More than 76 % of the time

(23) Constructive thought strategies involve observing one’s own thoughts, determining whether or not they are healthy, and seeking to change these thought patterns if they are not constructive. In constructive thought strategies, individuals “identify and change unhealthy thoughts that are based on wrong beliefs and hypotheses” (Uzman & Maya, 2019). An example of this would be observing that you have a negative belief about your ability to do well on a test, recognizing that it is an unhealthy belief, and working to change your thought pattern about your abilities. How often did you utilize constructive thought strategies during graduate school?

- a. I did not utilize constructive thought strategies during graduate school.
- b. Less than 25% of the time
- c. 26 to 50 % of the time
- d. 51 to 75 % of the time

- e. More than 76 % of the time

(24) Natural reward strategies are “emotional strategies involving highlighting the enjoyable and satisfying aspects of a job or a task and ignoring the unpleasant or difficult parts of it” (Uzman & Maya, 2019). An example of this would be focusing on the satisfaction that comes from completing a certain project, rather than fixating on the difficult work that it requires. How often did you utilize natural reward strategies during graduate school?

- a. I did not utilize natural reward strategies during graduate school.
- b. Less than 25% of the time
- c. 26 to 50 % of the time
- d. 51 to 75 % of the time
- e. More than 76 % of the time

(25) When studying in graduate school, I thought browsing around was a waste of time, so I only studied seriously what was given out in class or in course outlines.

- a. Rarely true
- b. Sometimes true
- c. True half the time
- d. Frequently true
- e. Usually true

(26) When studying in graduate school, I generally restricted my study to what was specifically set as I thought it was unnecessary to do anything extra.

- a. Rarely true
- b. Sometimes true
- c. True half the time
- d. Frequently true
- e. Usually true

(27) When studying in graduate school, I found it best to accept the statements and ideas of my lecturers and question them only under special circumstances.

- a. Rarely true
- b. Sometimes true
- c. True half the time
- d. Frequently true
- e. Usually true

(28) When studying in graduate school, I often thought of real-life situations to which the material that I was learning would be useful.

- a. Rarely true
- b. Sometimes true
- c. True half the time
- d. Frequently true
- e. Usually true

(29) When studying in graduate school, I found that I had to do enough work on a topic so that I formed my own point of view before I was satisfied.

- a. Rarely true
- b. Sometimes true
- c. True half the time
- d. Frequently true
- e. Usually true

(30) When studying in graduate school, I tried to relate new material, as I was reading it, to what I already knew on a topic.

- a. Rarely true
- b. Sometimes true
- c. True half the time
- d. Frequently true
- e. Usually true

(31) When studying in graduate school, I tried to work consistently throughout a term and reviewed regularly when exams were close.

- a. Rarely true
- b. Sometimes true
- c. True half the time
- d. Frequently true
- e. Usually true

(32) When studying in graduate school, I tried to do all of my assignments as soon as possible after they were available.

- a. Rarely true
- b. Sometimes true
- c. True half the time
- d. Frequently true
- e. Usually true

(33) When studying in graduate school, I kept neat, well organized notes for most subjects.

- a. Rarely true
- b. Sometimes true
- c. True half the time
- d. Frequently true
- e. Usually true

(34) Other than those previously mentioned, were there factors in your life that influenced your experience in graduate school?

- a. yes
- b. no
- c. unsure

(35) How likely are you to recommend the graduate program in speech-language pathology at Idaho State University?

- a. Extremely likely

- b. Likely
- c. Neutral
- d. Unlikely
- e. Extremely unlikely

(36) During completion of your Master's degree, how well does the following statement reflect your thinking, "I was interested in someday pursuing a PhD"?

- a. Very true of me
- b. True of me
- c. Somewhat true of me
- d. Neutral
- e. Somewhat untrue of me
- f. Untrue of me
- g. Very untrue of me

(37) Since graduating from your Master's program in speech-language pathology, are you completing (or have you completed) a PhD?

- a. Yes
- b. No

(38) Since graduating from your Master's program in speech-language pathology, if you have not yet, are you planning to pursue a PhD?

- a. I am/have completed a PhD.
- b. Yes
- c. No
- d. Unsure

(39) Did you pass your oral exam the first time?

- a. Yes
- b. No

(40) Did you successfully defend your thesis the first time?

- a. Yes
- b. No