Predictive Variables for Academic and Clinical Success in Speech-Language Pathology

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Short Header: Variables for Success in S-LP

ABSTRACT

Admissions criteria are set by a university in an attempt to choose the candidates who will be the best clinicians and professionals to represent their field of choice. Our study aimed to help pinpoint the admissions criteria that would be most helpful in determining the applicants who would make the best clinicians in the field of speech and language pathology. Seventeen years of data on previous students enrolled in the Master of Science in Speech-Language Pathology program at the University of Alberta were examined for this purpose. A number of admissions variables (undergraduate grade point average [GPA], prerequisite GPA, Graduate Record Exam [GRE] score and subscores, undergraduate degree, letters of reference, statement of career interest, age, and gender) as well as outcome variables (program GPA and clinical evaluation scores) were examined. Results indicated that current admission criteria account for 27% of the variability of students' academic performance and 3% of the variability in students' clinical performance. These results suggest that there may be other admission criteria that are more predictive of academic and clinical success than the ones currently employed within the Master of Science in Speech-Language Pathology program at the University of Alberta.

INTRODUCTION

Debate exists regarding which admission criteria for professional programs are the most important in determining the best candidates for a program – those who will be the best clinicians and professionals to represent their field of choice. Every year programs are flooded with applicants, all of whom presumably believe they possess the qualities necessary for success in a particular profession. Of these applicants, many are highly qualified; however, programs only have a limited number of seats and must endeavour to choose the best candidates. In attempting to deliver high-quality professionals into the community in return for the government's investment in post-secondary education programs, the task of the admissions committee is to determine who will be best suited to fill a limited number of spots in their program and ultimately, who will make the best clinicians to serve the public.

The Canadian government has identified a need for speech and language pathologists throughout Canada and provides funding to Canadian universities to train practitioners to meet these needs. In 2009, 55 percent of total university revenue was supplied by the Canadian Government (Statistics Canada, 2009). The government is heavily invested in ensuring university students succeed and become productive members of society.

In Canada, there are currently nine universities that offer a graduate level program in speech and language pathology. These universities are situated in British Columbia, Alberta, Ontario, Quebec and Nova Scotia. Of these programs, three are French language programs, while the remaining six are English language programs. Speech-Language and Audiology Canada (SAC) (formerly The Canadian Association of Speech-Language Pathologists and Audiologists [CASLPA]) (2010) surveyed all of the Canadian schools about their individual program

characteristics and found that in the 2009-2010 year, there were a total of 1717 applications received for admission to the clinical master's degree program in speech and language pathology at the nine Canadian universities. Of these applicants, only 331 were admitted to a program in 2010 (CASLPA report, 2010). Thus, there are many students who are interested in pursuing a career in speech and language pathology, however, program space is limited. The number of applicants to these programs has been increasing every year (CASLPA report, 2010); therefore, it is crucial to determine how to find the best candidates for these programs.

The most important reason why admissions committees for professional programs, including speech and language pathology, must select carefully for their programs is that the chosen students will become service providers to the general public. Since the ultimate goal of any health professional education program is to produce clinicians who will provide the best service possible, admissions committees want to choose the students with the greatest potential for becoming truly excellent in their practise. Additionally, there is a growing awareness of the need for high quality clinical researchers to increase the current knowledge of best practices in order to provide the best patient-oriented care and ultimately better health outcomes (CIHR, 2011). Thus, admission committees are charged with finding not only academically superior candidates, but also those who are well rounded in terms of life experiences, as well as those who are motivated towards a process of continual learning to provide the best care possible to the people they serve. These non-academic qualities of potential students are not always easily assessed.

While academic variables, such as undergraduate grade point average (GPA) and graduate records examination (GRE) scores, are often an important consideration in the

admissions process, there is debate as to how well these criteria predict clinical performance (Forrest & Naremore, 1998). Therefore, many programs require applicants to give an indication of their non-academic characteristics as well through reference letters, personal statements, and other similar requirements. Intuitively, non-academic admissions requirements should be good predictors of a student's performance in a clinical setting; however, evidence is still lacking that would direct admissions committees to the most important predictors of an applicant's success, not only academically, but clinically as well.

Different schools have different approaches to the admissions process and different professions have different criteria that they consider to be most important. While professional education programs have the right to exercise autonomy in the student admission process, decision-making should be informed by empirical research. Research on the predictive power of admissions criteria on academic and clinical success has been carried out in a number of fields outside of the rehabilitation professions such as nursing, medicine, medical radiation, clinical psychology, and pharmacy. Munro (1985) investigated correlates of success in graduate clinical specialty programs in nursing. She examined undergraduate grade point average (GPA), Graduate Record Examination (GRE) scores, references, interviews, and essays as predictor variables. Total GPA, clinical GPA (grades in courses where students worked directly or indirectly with clients), and theoretical GPA (all other courses) were outcome variables. Munro found that the verbal and quantitative components of the GRE, the undergraduate GPA, and personal essay scores correlated significantly with the total GPA and the theoretical GPA. None of the admissions variables, however, correlated with clinical GPA. While these findings are informative, interpretation of the results must be tempered by the fact that these correlations

only accounted for 10% of the variance in GPAs. Furthermore, the sample was large (n=435) but homogenous (mostly white, female, psychiatric nurse), which limits the findings from being applied to other populations with different demographics.

More recently, Blackman, Hall, and Darmawan (2007) addressed the issue of admissions criteria in the field of nursing. They studied an undergraduate nursing population of 179 to determine which variables would predict their clinical competence and academic achievement. The students were compared according to their GPA for each semester, their prior learning in the subject, age, gender, and their self-ratings of clinical competency prior to their clinical experiences with the outcome variables of clinical score and final GPA by semester. As would be expected, the researchers found that students who did well in their second last semester of school did comparatively well in their last semester of school, as well as in their clinical placements. Type of clinical placement was found to have an effect on the overall rating of the students, with students whose placements were in private health scoring better than their classmates who participated in placements in public health. Furthermore, students were asked to rate their own clinical competence by rating how much supervision they felt they would need during their placements; those students who rated themselves as needing less supervision were found to score higher in their placements. The study also revealed that prior academic experience in related fields was detrimental to the clinical score. This was hypothesized by the researchers to be due to the fact that these students were allowed to use their prior experience as credit for certain classes and, therefore, did not take all the same classes as their peers, thus reducing their preparedness for the clinical experience.

Admissions criteria have been an important issue in the field of medicine as well. In a

unique experiment, Devaul et al. (1987) compared 144 accepted students to 56 initially-rejected students who were later accepted into medical school when the size of the program increased. The participants were compared on a number of variables: academic variables including undergraduate GPA, undergraduate science GPA, total Medical College Admission Test (MCAT) score, and six MCAT subscores; demographic variables including age, gender, ethnicity, and residence; preference variables including pre-professional advisor evaluation, interviewer rating, and committee rating; and psychological profile including the Myers Briggs, Allport-Vernon-Lindzey, and Edwards Personal Profile. The researchers found that GPA and MCAT scores accounted for 32% of the variance between the accepted and initially-rejected students, and concluded that the remainder of the variance was presumably related to subjective interviewer preference. No significant differences were noted between the groups through four years of medical school and one year post graduation except that, across groups, women performed better than men. The authors concluded that the interview process did not improve admissions decisions.

In contrast to the findings of Devaul et al. (1987) are the findings of Rem, Oren, and Childrey (1987) in the field of clinical psychology. Rem, Oren, and Childrey (1987) found that interviews were reliable across interviewers. Faculty believed the interview to be crucial, although it was not specifically studied for predictive validity.

In another study on medical school admissions, Peskun, Detsky, and Shandling (2007) examined correlations between admissions variables such as undergraduate GPA and MCAT score, non-cognitive assessments such as autobiographical sketch, personal essay, and references, as well as interviews and a composite score called MAX30 (60% GPA, 20% non-

cognitive, 20% interview). Medical school outcome variables included non-cognitive measures such as the Objective Structured Clinical Examination (OSCE) score and Internal and Family Medicine ward evaluations, as well as academic measures such as the Internal and Family Medicine clerkship grades and residency ranking. The researchers came to three important conclusions: (1) non-cognitive admissions variables predicted residency ranking, (2) undergraduate GPA and MCAT scores were the best predictors of final grades in medical school, and (3) non-cognitive admissions variables correlated with non-cognitive medical school variables.

Kwan, Childs, Cherryman, Palmer, and Catton (2009) investigated admissions decision-making and outcomes in the field of medical radiation science. The admissions criteria under evaluation were undergraduate GPA (minimum one year), prerequisite GPA for courses in biology, math, physics and chemistry, and an interview (rated on communication, compatibility, initiative, and self-evaluation). The outcome criteria were final GPA, performance on didactic courses (two groups: technical knowledge and skills courses and professional practice and patient care courses), and the national certification exam. The researchers found undergraduate GPA and GPA in prerequisite biology, math and physics courses positively correlated with performance in technical knowledge and skills courses, professional practice and patient care courses, and final GPA. Within each sub-discipline in medical radiation science, it was the discipline-specific undergraduate courses that correlated to performance in technical knowledge and skills courses and professional practice and patient care courses. The researchers suggested that these admissions criteria were adequate for finding the most successful applicants.

In a doctor of pharmacy program, McCall, Allen, and Fike (2006) examined the correlations between admissions criteria and the outcome measures of first-professional year GPA, final GPA, and graduation without delay. Admissions criteria included were prerequisite GPA, undergraduate major (B.A., B.S., or M.S.), organic chemistry school type (two-year or four-year), and additional chemistry, biology, and math courses taken. Data on 424 students revealed that additional biology courses and a B.S. undergraduate degree were significantly correlated with higher first-professional year GPA, total GPA, and graduation without academic delay or suspension. This suggests that these specialized courses and an in-depth background knowledge of the field helped those students succeed.

The validity of the GRE as an admissions measure is an important consideration. . Kuncel, Hezlett, and Ones (2001) addressed the validity of the GRE in a meta-analysis of 1753 independent samples from 1521 studies involving 82659 graduate students across disciplines. The admissions criteria investigated were four GRE measures including Verbal, Quantitative, Analytical, and Subject Tests as well as undergraduate GPA. The outcome variables were: (1) graduate GPA, (2) first-year graduate GPA, (3) comprehensive examination scores, (4) faculty ratings, (5) number of publications or conference papers, (6) number of times publications were cited, (7) degree attainment, and (8) time it took to attain degree. The researchers also examined the mediating influence of academic discipline (humanities, social sciences, life sciences, or math-physical sciences), status as a native English speaker, and age. They found that GRE scores and undergraduate GPA predicted graduate GPA, first-year graduate GPA, comprehensive exam scores, number of times publications were cited, and faculty ratings. Undergraduate GPA and GRE scores had similar predictive validity for all of these outcome

measures except number of times publications were cited. In addition, GRE scores were positively correlated with degree attainment and number of publications or conference papers. Of the four GRE measures, Subject Tests tended to have the highest predictive value for all outcome variables except 'time it took to attain degree', which did not correlate with any admissions variables. Because the GRE's predictive validity generalizes to different discipline areas, first languages, and age brackets, the researchers suggested that it is unlikely that unexamined variables would prove the GRE invalid, and asserted the value of the GRE in making admissions decisions. However, some of the data used in this meta-analysis were collected from Educational Testing Service (ETS), which publishes the GRE, thus creating a possible bias in a portion of the data and therefore the results of this meta-analysis.

As speech and language pathology is an area of rehabilitative medicine, it is of interest to examine the research on admissions from other rehabilitation disciplines such as physical therapy and occupational therapy. Thieman, Weddle and Moore (2003) investigated the academic and clinical predictors in a physical therapy program. They looked at undergraduate GPA, prerequisite GPA, GRE score, major, undergraduate university, age, statement of interest and reference letters. They found that while the clinical score of the students did increase over the course of their four placements, none of the variables examined predicted the clinical outcome measure. However, age, GRE scores and prerequisite GPA accounted for 37% of the variability in graduate GPA.

Salvatori (2005) examined 15 years of admissions data from McMaster University for both occupational therapy and physical therapy programs. At first these programs considered GPA and autobiographical information, but over time introduced an interview process because,

even though GPA was the highest correlating variable with success in their program, they anticipated that the interview would help to refine their selection process even more. With GPA used as a cut off to determine who got an interview, faculty conducted a multi-mini interview (seven stages, 10 minutes at each station) to provide the selection committee with insight into applicants' general communication skills, as well as to determine their suitability for the program. The analysis of the interview revealed that it had an overall inter-rater reliability of .70 for the occupational therapy interviews and .68 for the physiotherapy interviews and was, therefore, considered a reliable part of the selection process for these programs.

Vargo, Madill, and Davidson (1986) investigated the predictability of the interview for success in occupational therapy candidates, among other predictor variables. They found that the interview was not significantly correlated with the clinical score they used as their measure of clinical success. These researchers did find that an occupational therapy prerequisite class was the best predictor of success in the program. In addition, they found that all the predictor variables they examined, undergraduate GPA, prerequisite GPA and statement of interest were better predictors of success in the program, as defined by graduate GPA, than the interview. This finding led them to drop the interview from their admissions process to allow them to focus on more predictive variables such as GPA.

Research examining the correlation between performance on admissions requirements and clinical and academic outcomes in the field of speech and language pathology is even rarer than research in other fields. We found only three relatively recent studies examining predictors of success in graduate programs for speech and language pathology. Forrest and Naremore (1998) investigated undergraduate GPA, verbal, quantitative and analytical subtests

of the GRE, undergraduate major, and undergraduate university as admissions variables. They determined that the predictors of success as judged by graduate GPA and PRAXIS (an exam designed to measure beginning teachers' knowledge and skill) score in order of strength were: undergraduate GPA, undergraduate major (e.g. majors in disciplines other than speech and hearing correlated more highly with success), and GRE score. Unfortunately, Forrest and Naremore had a sample size of only 30, which raises concerns about generalizability. Furthermore, they used outcome variables that reflected academic knowledge rather than clinical skill.

In another study in the field of speech and language pathology, Ryan, Morgan, and Wacker-Mundy (1998) examined admissions criteria in a graduate program and found a high correlation between students' prerequisite GPA and their GPA at the end of the program. These researchers also analyzed students' GRE scores and found that students who scored low on the GRE also scored low on the National Examination in Speech Pathology and Audiology (NESPA). However, they also found that over half of the students who scored high on the GRE scored less than 700 on the NESPA, while 33% of the low-scorers achieved a score over 700. Interestingly, they also found that the students who took the prerequisite courses by taking a year of intense training in the field of speech and language pathology scored higher on the NESPA than those students who had a major in communication sciences and disorders, suggesting that the intensity and recency of prerequisites increases performance on the national exam.

More recently, Halberstram and Redstone (2005) examined the following admissions criteria in speech and language pathology: undergraduate GPA, GPA in undergraduate speech courses, undergraduate major, quality of reference letter, quality of personal essay, age,

relevant previous work experience, and student's native language. Students' success in the graduate program was judged by objective (i.e., graduate GPA) and subjective (i.e., academic staff rating of academic and clinical strength) measures. The results showed that graduate GPA was significantly correlated with GPA in undergraduate speech courses, quality of personal statement, undergraduate GPA, and quality of reference letter. Academic and clinical ratings by academic staff members were significantly correlated with GPA in undergraduate speech courses and quality of reference letters. Only GPA in undergraduate speech courses and quality of reference letters were significant for both criterion variables. Like Forrest and Naremore (1998), Halberstram and Redstone also had a small sample size (n=23) and though they made an attempt to include outcome measures more closely related to clinical success, their only measure of clinical success was subjective.

Health sciences admissions research has examined many academic and non-academic admissions variables to find the variables that best predict academic and clinical success. The aim of this research is to find the admissions variables that will allow admissions committees to utilize educational resources responsibly by selecting individuals who will become the most proficient practitioners. As reviewed earlier in this paper, in the field of speech and language pathology, the admissions variables that have been examined as potential predictors of success are: undergraduate GPA, undergraduate prerequisite GPA, GRE (verbal, quantitative, and analytical subtests), undergraduate major, undergraduate university, reference letters, personal essay, age, work experience, and native language. Outcome variables that have been shown to predict success in speech and language pathology programs have included: graduate GPA, PRAXIS score, NESPA score, and academic staff rating of clinical and academic strength.

Striking findings from the previous research in the field of speech and language pathology are, first, that a degree in speech and hearing science/communication sciences and disorders actually predicted lower performance on academic and clinical measures (Forrest and Naremore, 1998; Ryan, Morgan & Wacker-Mundy, 1998). Secondly, quality of reference letter was the only non-academic admissions variable to predict academic and clinical success (Halberstram & Redstone, 2005). To date, the research done in the field of speech and language pathology has been conducted on small sample sizes and used examinations or subjective rankings as measures of clinical success. Arguably, there is need for research on larger sample sizes that includes more practical, objective measures of clinical success. Additionally, admissions variables used successfully in other health science disciplines need to be considered in the field of speech and language pathology. These variables include: clinical competency self-rating (Blackman et al., 2007), gender (Devaul et al., 1987), and interviews (Peskun, Detsky, & Shandling, 2007; Salvatori, 2005).

Our study aims to identify the admissions criteria that will be most helpful in determining the applicants who will make the best clinicians in the field of speech and language pathology after they graduate. Seventeen years of data from previous students enrolled in the Master of Science in Speech-Language Pathology program at the University of Alberta were examined for this purpose. A number of demographic and admissions variables were included to determine which were most highly related to our outcome variables (program GPA and clinical evaluation scores).

METHOD

Participants

The participants were 636 students who graduated with a Master of Science in Speech-Language Pathology at the University of Alberta from 1992 to 2009 inclusive.

Materials

Two rating forms were used in quantifying qualitative student data:

1. The Standardization of Career Interest Statements (Appendix A) was used to evaluate content, presentation, and style of students' career interest statements.
2. The Standardization of Letters of Reference (Appendix B) was used to evaluate the referee's general appraisal of the applicant, knowledge of the applicant, and evaluation of specific abilities of the applicant.

These rating scales were chosen because they had been used historically within the department to rate career interest statements and reference letters for admissions.

Procedures

Admissions data were retrieved from archived students' files. All identifying information included in the files (e.g., students name, referee name) was removed by a research assistant before data collection began. Data collected from the files included the following.

Demographic information:

1. Gender
2. Age
3. Previous degree
4. Previous major

5. Undergraduate GPA
6. Prerequisite GPA (See Appendix C for a list of courses)
7. Verbal, quantitative, and analytical GRE subscores
8. Career interest statement score
9. Average reference letter score

Dependent variables:

1. Average graduate GPA
2. Average clinical score

Conversion of Quantitative Information. Some quantitative information acquired from the student files required additional computations before being used in the statistical analyses. Students' ages were calculated by subtracting the students' birth date from the start date of their program. In addition, GPAs that were not provided in the 4 point scale used at the University of Alberta were converted using an online converter. An average GPA assigned during the graduate program was used for the graduate GPA variable and an average of all clinical scores assigned during placements was computed for the clinical score variable. Clinical percentage scores were assigned by clinical educators using the Wisconsin Procedure for Appraisal of Clinical Competence (Appendix D) from 1992-2000 then the Clinical Appraisal Form (Appendix E) from 2000-2009.

***Conversion of Qualitative Information*.** Several qualitative variables were grouped into non-linear categories for analysis. Previous degree was divided into five categories: arts, science, arts and science honours, education and other (e.g., commerce). Previous major was divided into five categories: linguistics and languages, psychology, education (any major),

speech and audiology, and other (e.g., biological sciences, English, etc.).

Some of the predictor variables required conversion to numerical values for the statistical analysis. Career interest statements and reference letters were assigned numerical values using the Standardization of Career Interest Statements provided in Appendix A and the Standardization of Letters of Reference provided in Appendix B. These forms were developed for a previous unpublished research study conducted at the University of Alberta (Dacyshyn, 1998). Using the standardization form in Appendix A, each career interest statement was assessed for content, presentation, and style. In the content and presentation categories, the student received one point for each specific requirement that was met. In the style category, students received 2 points for each specific requirement that was met. If the requirement was violated, points were deducted, but not below zero (i.e., no negative score). Total points were calculated, with a higher score representing a more positive outcome.

Completion of the Standardization of Letters of Reference required that the referee supplied a Letter to Support Application for Graduate Admission (Appendix F) so that scores for Specific Abilities on the Standardization of Letters of Reference were available. Using the standardization form in Appendix B, each letter of reference was assessed for general appraisal, knowledge of the applicant, and the referee's rating of the applicant's specific abilities. For general appraisal letters were given a score of one to four, one being overall negative appraisal and 4 being the most positive and complete appraisal. For knowledge of the applicant, letters could receive up to two points for period of time the referee had been acquainted with the student and period of time since regular contact. Two points were given if the referee and the student had been in contact in the last two years, while zero points were given if the referee

and the student had not been in contact in the last four years. Two points were awarded if the student and the referee had been acquainted for more than two years, and zero points were given if the referee and student had been acquainted for less than 4 months. All reference letters included general appraisals of specific abilities of the student. Students were rated on a scale from 5 to 0.5, 5 being outstanding ability and 0.5 being inadequate opportunity to observe. Students were rated on 9 different traits such as academic achievement and verbal skills for a possible score of 45. Total points were calculated, with a higher score representing a more positive letter of reference. Referees who did not supply this document were excluded. The average score of all remaining references was used in the statistical analysis.

Reliability and Data Analysis. Reliability was assessed for recalculated GPAs. Five percent of all converted GPA scores were checked to ensure accuracy. Ninety-nine percent reliability was achieved.

Inter-rater reliability also was assessed in the scoring of career interest statements and letters of reference. First, agreement between a researcher (J.R.) and the research assistant on ratings of a small sample of career interest statements and letters of reference was achieved. Agreement was reached by a researcher and the research assistant scoring career interest statements and letters of reference separately, comparing their scores, and discussing areas of disagreement until complete agreement could be reached. The research assistant then scored all the career interest statements and letters of reference. Two graduate students (S.M. and J.T.) were then trained in the scoring of career interest statements and letters of reference. Agreement between the two graduate students on ratings of a small sample of career interest statements and letters of reference was achieved. Agreement between graduate students was

achieved in the same way that agreement between a researcher and the research assistant was achieved. Then ten percent of the students from each class were selected using an online random number generator and their career interest statements and letters of reference were scored by the graduate students to assess inter-rater reliability.

Two stepwise regression analyses were conducted, one for each dependent variable – graduate GPA and clinical scores. All of the demographic and independent variables were considered. Correlations between each demographic and independent variable and dependent variable also were calculated. Intraclass correlations were conducted to compare the inter-rater reliability between the research assistant and the graduate students' scoring of the career interest statements and the letters of reference.

RESULTS

There were 636 students, who graduated from the University of Alberta Master of Science in Speech-Language Pathology program from 1992 to 2009, included in this analysis. The majority of students in the program over the last 17 years were female (m = 17; f = 619). Student ages ranged from 21-50, with the average age of all students in the program being 25.6 years. Students were compared according to the type of degree they had prior to entering the program: there were 299 arts students, 111 science students, 60 education students, 108 honours students, 6 students in the other category, and 52 students whose primary degree was unclear. Students were also compared according to their undergraduate major: there were 232 psychology majors, 167 linguistics and languages majors, 48 education majors, 19 speech and hearing/communication sciences and disorders majors, 123 students who fell into the other

category, and 47 students whose major was unclear. Another variable examined was overall undergraduate GPA. Students admitted to the program had average undergraduate GPAs ranging from 2.98 - 4, with an average of 3.6. For admittance to the program students also were required to complete a set of prerequisite courses. Students had an average prerequisite GPA of 3.63 with a range of 2.9 - 4. The program also requires students to complete the GRE. Students admitted to the program had a GRE verbal average in the 64th percentile (range 5th-99th percentile), quantitative average in the 53rd percentile (range 1st-97th percentile), and analytical average in the 66th percentile (range 10th-99th percentile).

Data were analyzed using SPSS and a stepwise regression analysis for each of the two dependent variables: overall GPA in the program and overall mean score of clinical ratings. The analysis took into account all of the requirements for admission, as well as the stated demographic variables. The analysis demonstrated that 23% of the variance in graduate GPA was accounted for by all of the variables considered in the stepwise regression. Only 3% of the variance of clinical analysis was accounted for by the measured variables.

Correlations between each predictor variable and the outcome variables were calculated to determine the association of each predictor variable to the outcomes scores. Undergraduate GPA and graduate GPA were significantly correlated, $r = .326$, $n = 630$, $p = .000$, indicating that those students who had higher GPAs upon entrance to the program graduated with higher GPAs. Similarly, prerequisite GPA also was significantly correlated with graduate GPA, $r = .358$, $n = 630$, $p = .000$. All GRE scores were found to be positively correlated with graduate GPA performance, such that higher GRE scores were associated with higher graduate GPA scores (GRE verbal $r = .190$, $n = 629$, $p = .000$, GRE quantitative $r = .239$, $n = 629$, $p = .000$

and GRE analytical r = .172, n = 607, p = .000). Both of the subjective measures, letters of reference and career interest statements, were positively correlated with graduate GPA, r = .170, n = 629, p = .000 and r = .139, n = 632, p = .000, respectively. This indicated that letters of reference that rated the student more favourably were correlated with higher GPA scores. Likewise, career interest statements that met more of the scoring criteria were correlated with increased graduate GPA. Age at enrolment was negatively correlated with graduate GPA, suggesting that the older a graduate was when they entered the program, the lower their graduate GPA would be upon completion of the program, r = -.168, n = 633, p = .000. Sex was negatively correlated with graduate GPA as well, r = -.140, n = 633, p = .000, which, due to the coding method used, suggests that males had lower graduate GPA scores than females in the program.

The second outcome variable investigated was clinical appraisal score. Undergraduate GPA was positively correlated with clinical appraisal scores, r = .114, n = 627, p = .004, indicating that higher undergraduate GPA scores were associated with higher clinical scores. GPA of prerequisite courses was positively correlated with clinical appraisal scores, r = .122, n = 627, p = .002, indicating that as prerequisite GPA increased so did clinical appraisal scores. Only one GRE score had a significant correlation to clinical appraisal scores; GRE analytical was positively correlated, r = .088, n = 605, p = .030, indicating higher GRE analytical scores were correlated with higher clinical appraisal scores. Letters of reference were positively correlated with clinical appraisal scores, r = .111, n = 626, p = .006, indicating that students who had more favorable letters were also rated more highly in the clinic. The sex of the students was negatively correlated to clinical appraisal scores, r = -.122, n = 630, p = .002, indicating that

males scored lower on their clinical appraisal than their female counterparts.

Table 1

Correlations between predictive variables and outcome measures

	Graduate GPA	Clinical Scores
Age	-.168**	-.030
Sex	-.140**	-.122**
Undergrad Degree	-.004	-.015
Major	.047	-.027
GPA Undergrad	.326**	.114**
GPA Preparatory Courses	.358**	.122**
Career Interest Statement	.139**	.050
Letter of Reference	.170**	.111**
GRE Verbal	.190**	-.006
GRE Quantitative	.239**	-.032
GRE Analytical	.172**	.088*

** = significant correlation at 0.01 level (2-tailed)

* = significant correlation at 0.05 level (2-tailed)

In addition to the stepwise regression analyses and correlations carried out on the data, two intraclass correlations were calculated to evaluate inter-rater reliability for the scoring of statements of career interest and letters of reference. The first intraclass correlation found that the two graduate students and the research assistant were consistent in their scoring of career interest statements 67.5% of the time. Sixty-six percent of the time, the graduate students gave lower scores on career interest statements reflecting more stringent scoring standards. The graduate students scored more rigorously in the style and content categories than the research

assistant. The graduate students typically noted more errors in the categories such as punctuation, grammar and capitalization than the research assistant. Also, the graduate students occasionally did not award marks in the areas of content such as previous volunteer experience that the research assistant did award. In addition, the Standardization of Career Interest Statement had some margin for subjectivity. For example, one rater may consider a topic sentence adequate for the whole statement while another rater found it inadequate.

The second intraclass correlation was conducted to compare the inter-rater reliability between the research assistant and the graduate students' scoring of the reference letters. The intraclass correlation found that their scores were 99% in agreement with each other.

DISCUSSION

While the correlations found in the current study were fairly weak (ranging from $r = .088$, $p = .030$ to $r = .358$, $p = .000$) and the variables studied could only account for 23% of the variance in graduate GPA and 3% of the variance in clinical scores, the results are consistent with previous research on admissions in the field of speech and language pathology. In both the current study and previous research, graduate GPA was correlated with undergraduate GPA (Forrest & Naremore, 1998; Halberstram, & Redstone, 2005), prerequisite GPA (Ryan, Morgan, & Wacker-Mundy, 1998; Halberstram, & Redstone, 2005), GRE scores (Forrest & Naremore, 1998; Ryan, Morgan, & Wacker-Mundy, 1998), reference letter scores (Halberstram, & Redstone, 2005), and statement of career interest scores (Halberstram, & Redstone, 2005).

Previous research in the field of speech and language pathology that considered a clinical outcome variable had two outcomes in common with the current study. Both

Halberstram and Redstone (2005) and the current study found that prerequisite GPA and reference letter score predicted ratings of students' clinical performance.

Although a correlation between age and academic performance was not found in previous research into students' performance in speech and language pathology, this finding has been documented in other professions. Thieman, Weddle and Moore (2003) found that older students received lower grades than younger students in physical therapy programs. Likewise the current study found that older students performed more poorly than younger students in academics. This finding is perhaps due to the fact that older students often have more commitments outside of school so they are unable to dedicate as much time to studying outside of school hours. The large sample size in the current study (n=636) compared to previous research in speech and language pathology is a possible explanation for the reason the current study documented a correlation between age and academic performance while others have not. Previous studies in the field of speech-language pathology had sample sizes of 23 to 96 (Halberstram & Redstone, 2005; Ryan, Morgan, & Wacker-Mundy, 1998). A bigger sample size resulted in increased statistical power which allowed the researchers to find correlations that exist.

Unlike previous research, the current study found sex to be correlated with academic and clinical performance. Males were found to perform more poorly than females academically and clinically. Again, it is possible that this study was able to reveal a difference that did not appear in previous studies because this study had a significantly larger sample size (n=636).The larger sample size resulted in the current study including larger numbers of male applicants. However, there was still a small number of males in the current study (n=17) which resulted in

reduced statistical power when examining the correlation between sex and academic and clinical outcome measures. It is possible that males may be evaluated more poorly because their treatment style differs from that of females or that they do not share the same treatment style as their clinical supervisor, who is most likely female. In the field of nursing, there is a documented gender bias against male nurses, where male nurses are stereotyped as being less caring than their female counterparts (O'Lynn, 2004). It is possible that in the field of speech and language pathology similar biases exist due to the limited number of males in the field.

Only one variable was found to predict academic performance in previous studies that was not found to be significant in this study. That variable was undergraduate major (Forrest & Naremore, 1998; Ryan, Morgan, & Wacker-Mundy, 1998). In both of these previous studies, students with undergraduate degrees in speech and hearing/communication sciences and disorders performed more poorly than those who did not. A number of factors could contribute to this including the fact that the University of Alberta's program is structured to accommodate students who do not have undergraduate degrees in speech and hearing. Very few of the participants in the present study had undergraduate degrees in speech related fields (n=19).

Also, in contrast to previous research, the present study found undergraduate GPA, GRE analytical score, and sex (females performed better) to be correlated with clinical performance. The only comparable study on admissions in the field of speech and language pathology used subjective measures of clinical outcome and only had a sample size of 23 (Halberstram, & Redstone, 2005).

Two interesting findings emerge from the comparison of the previous research and the present study. Firstly, prerequisite GPA is the only variable that predicts both academic and

clinical performance among studies. And secondly, GRE analytical score appears to be the most significant GRE score in admissions to speech and language pathology. GRE analytical score was found to be the GRE score which was most highly correlated with graduate GPA in Forrest and Naremore's study (1998) and was found in the present study to be the only GRE score to correlate with clinical success. This correlation likely reflects the fact that clinical success requires a student to be skilled at problem-solving, decision-making, and compiling evidence to form conclusions and plans.

In the future, consideration should be made with respect to what variables are important to include and the methodology employed. Independent variables that were considered in other research studies in the field of speech and language pathology that were not considered in the present study were: undergraduate university, relevant work experience, and native language. Dependent variables that may contribute to better provide a measure of success might include: SAC exam scores, career attrition, career satisfaction, etc. Considering more and different variables in the future may account for the variance for which the variables in the current study could not account.

Suggested changes in the methodology include finding new ways to evaluate career interest statements and different statistical methods. There was only 67.5% inter-rater agreement on the scoring of career interest statements. Future research can improve inter-rater reliability by (a.) providing better training for raters, (b.) providing more specific guidelines for using the Standardization of Career Interest Statement (e.g., What characteristics must a topic sentence for the whole statement have?) and (c.) creating a standard for vigilance (e.g., Each statement must be read through twice thoroughly before a score is assigned.). Further

investigation into the areas in which raters tended to differ in their assessment of career interest statements would be an important step in determining what changes need to be made.

A stepwise regression model was used to determine the relationship between predictor and outcome variables. A more powerful statistical model could be used in the future to determine the variables which are the most important for predicting academic and clinical success. There was not a large spread of data in this analysis due to the fact that successful applicants to a speech-language pathology master's program are all high achieving students who enter the program at the top of their classes. Similarly, once in the program, students do very well and there is a small margin of variability among graduate GPA and clinical competence scores. Due to the limited variability within the data, it is difficult to analyze differences among performance. Utilizing a stronger statistical model which is able to capture subtle difference among data points and aid in predicting success of candidates would be a useful endeavour for further research.

With the weaknesses of the current analysis in mind, this study adds to the current knowledge of admissions variables in speech and language pathology. Information from this study can facilitate the selection of the applicants who will become the best clinicians. Firstly, that GRE analytical scores should be weighted more highly than other GRE scores in admissions decisions because the analytical subscore has been found to be correlated with both academic and clinical success. Also, reference letters and prerequisite GPA should be considered important admission variables because they were found to be the only variables to correlate with clinical success in this study and a previous study (Halberstram and Redstone, 2005) and they also both predicted academic success. In addition, the way that career interest statements

are evaluated should be revisited to come up with a more objective means of scoring. And finally, other variables should be considered for admissions that may account for more of the variance in clinical outcomes.

Research into admissions variables and clinical outcomes is important because the students accepted into speech and language pathology programs become the health care practitioners serving the public. If research can direct admissions committees to select students with maximum potential for affecting positive change in the communication and swallowing health of individuals, there will be far reaching benefits.

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APPENDIX A

Standardization of Career Interest Statement

Student: _____

Content

Thoughtful Consideration

How they became interested in speech and language pathology (SLP): _____/1

Learning more about the profession:

- Volunteer/work experience in SLP _____/1
- Observation of a therapy session _____/1
- Personal/family contact with an SLP/relationship with SLP client _____/1
- Research in speech/language _____/1

Other related experiences:

- Any other volunteer experience/SLP _____/1
- A healthcare background _____/1
- Counselling/teaching/tutoring experience _____/1
- Work experience involving child/adult care _____/1

Content Total: _____/9

Presentation

Legibility: Typed or word-processed _____/1

Format: Paragraphs, margins, and spacing _____/1

Length: Equivalent of two pages double spaced (*-1 for too short or two long) _____/1

Presentation Total: _____/3

Style

Introductory Statement: Must be a topic sentence for the entire statement _____/1

Vocabulary: _____/2

*-1 for >3 uses of a word within a paragraph (excluding function words and words without synonyms such as speech pathology)

*-1 for incorrect use of word or abbreviation

Grammar: _____/2

*-1 for each grammatical error (e.g., incorrect verb tense)

Punctuation: _____/2

*-1 for each punctuation error (e.g., incorrect use of commas)

Spelling: _____/2

*-1 for each spelling error

Organization: _____/2

*-1 for inappropriate topic sentence for a paragraph

*-1 for more than one topic in a paragraph

Capitalization: _____/2

*-1 for each new incorrect capitalization (e.g., Speech Pathology, Master's)

Style Total: _____/13

Page Total: _____/25

APPENDIX B

Standardization of Letters of Reference

Student: _____

*Use a separate form for each letter of reference.

*Letter to Support Application for Graduate Admissions must be completed to score a letter.

General Appraisal:

4 = the most positive, complete *2 = evidence of more than one problem*

3 = mostly positive, one flaw *1 = overall negative*

General Appraisal Total: _____/4

Knowledge of Applicant:

Period of time of acquaintanceship _____/2

2 = > 2 years *0.5 = 4-7 months*

1.5 = 1-2 years *0 = < 4 months*

1 = 8-11 months

Period of time since regular contact _____/2

2 = < 2 years *0 = > 4 years*

1 = 2-4 years

Knowledge of Applicant Total: ____/4

Specific Abilities:

** Copy directly from the Letter to Support Application for Graduate Admission*

5 = Outstanding *2 = Average*

4 = Superior *1 = Marginal*

3 = Good *0.5 = Inadequate Opportunity to Observe*

Academic Achievement _____/5

Scholarly Promise _____/5

Research Ability _____/5

Teaching Potential/Promise _____/5

Verbal Skills _____/5

Writing Skills _____/5

Industriousness _____/5

Judgement _____/5

Overall Rating _____/5

Specific Abilities Total: _____/45

Page Total: _____/53

APPENDIX C

Prerequisite Courses

Application to the MSc-SLP program requires the completion of a four-year undergraduate degree and the completion of 8 prerequisite courses. These courses are selected to provide speech-language pathology applicants with the background needed to succeed in the MSc-SLP program. The following courses and associated knowledge/skills are prerequisites to the MSc-SLP program:

Statistics Introduction to statistical methods. A course entitled Research Methods may or may not fulfill the statistical elements of this course-content area. Content should include basic descriptive and inferential statistics. If an applicant wants to put forward a course entitled Research Methods to satisfy the statistics prerequisite, s/he should send the course outline to the Department for pre-approval or submit the course outlined with his/her application for review by the Admissions Committee.

Child Development or Developmental Psychology Note: Introductory courses in Psychology do not fulfil this requirement, even if the topic was covered as a part of the course. Courses named Child Psychology may or may not fulfil the requirement. Please check the course description to ensure that the content covers development rather than clinical issues.

Cognitive Psychology A course in cognition, learning, or human information processing. (Formerly *Theories of Learning*)

Neuroanatomy or Neuropsychology Structure and function of the human central and peripheral nervous systems including mechanisms of neural activity and signalling, principles of neocortical organization, functional aspects of sensory and motor systems, and higher cognitive functions.

Introductory Linguistics A general survey course that covers the core areas of linguistics. Other courses may be substituted for an introductory course only if they cover all core areas.

Articulatory Phonetics Introduction to the International Phonetic Alphabet and practice in phonetic transcription.

Child Language Development, Child Language Acquisition or First Language Acquisition A course describing typical language development in children, from birth to school entry.

One additional linguistics course If the Introductory Linguistics course was a full-year course (6 credits), no additional coursework will be necessary.

APPENDIX D

Clinical Appraisal Form based on the W-PACC

University of Alberta Clinical Appraisal Form 1

STUDENT CLINICIAN _____ DATE _____

PLACEMENT ❑ *SPA 524 (Intersession Yr.1)* ❑ *Additional Hours (SPA___)*
❑ *SPA 525 (Fall Term Yr. 2)*

PRACTICUM SITE
INSTITUTION: CORBETT CLINIC
ADDRESS: 2-70 CORBETT HALL

TYPE(S) OF PROBLEM(S) _____
PROBLEMS IN ADDITION TO COMMUNICATION _____ AGE(S) OF CLIENT(S) _____
TOTAL NUMBER OF THERAPY SESSIONS _____ SUPERVISOR(S) _____

Interpersonal Skills Scale [ ] *
Professional Technical Skills Scale [ ] *
Average $\frac{(IS + PTS)}{2}$ = [ ]

* *% Score =* $\frac{\text{sum of scored items}}{\text{number of items scored x 10}}$

Comments

Personal Qualities Summary

number of Satisfactory *items* [ ]
number of Inconsistent *items* [ ]
number of Unsatisfactory *items* [ ]
number of Lack of Information *items* [ ]
number of Does Not Apply *items* [ ]

_____
Supervisor's Signature

1

University of Alberta Clinical Appraisal Form 2

Interpersonal Skills	NA	*	Needs ***specific direction*** &/or demonstration from supervisor to perform effectively			Needs ***general direction*** from supervisor to perform effectively			Demonstrates ***independence*** by taking ***initiative***; makes changes when appropriate and is effective		
1. Accepts, empathizes, shows genuine concern for the client as a person and understands the clients problems, needs & stresses.		1	2	3	4	5	6	7	8	9	10
2. Perceives verbal &/or nonverbal cues which indicate the client is not understanding the task; is unable to perform all or part of the task; or when emotional stress interferes with performance of the task.		1	2	3	4	5	6	7	8	9	10
3. Creates an atmosphere based on honesty & trust; enables the client to express his feelings & concerns.		1	2	3	4	5	6	7	8	9	10
4. Conveys to the client in a nonthreatening manner what the standards of performance & behavior are.		1	2	3	4	5	6	7	8	9	10
5. Develops understanding of the teaching goals & procedures with client.		1	2	3	4	5	6	7	8	9	10
6. Listens, asks questions, participates with supervisor in therapy &/or client related discussions; is not defensive.		1	2	3	4	5	6	7	8	9	10
7. Requests assistance from supervisor &/or other professionals when appropriate.		1	2	3	4	5	6	7	8	9	10
8. Creates an atmosphere based on honesty and trust enabling family members to express their feelings or concerns.		1	2	3	4	5	6	7	8	9	10
9. Develops understanding of teaching goals & procedures with family members.		1	2	3	4	5	6	7	8	9	10
10. Communicates verbally with other disciplines on a professional level.		1	2	3	4	5	6	7	8	9	10

** Specific direction from supervisor does not alter unsatisfactory performance and inability to make changes.*

University of Alberta Clinical Appraisal Form 3

Professional Technical Skills	NA	*	Needs ***specific direction*** &/or demonstration from supervisor to perform effectively			Needs ***general direction*** from supervisor to perform effectively			Demonstrates ***independence*** by taking ***initiative***; makes changes when appropriate and is effective		
Developing and Planning											
1. Applies academic information to the clinical process.		1	2	3	4	5	6	7	8	9	10
2. Researches problems and obtains pertinent information from supplemental reading and/or by observing other clients with similar problems.		1	2	3	4	5	6	7	8	9	10
3. Develops a semester management program (conceptualized or written) appropriate to the clients needs.		1	2	3	4	5	6	7	8	9	10
4. On the basis of assessment and measurement can appropriately determine measurable teaching objectives.		1	2	3	4	5	6	7	8	9	10
5. Plans appropriate teaching procedures.		1	2	3	4	5	6	7	8	9	10
6. Selects appropriate stimulus materials suitable to the age and ability level of the client.		1	2	3	4	5	6	7	8	9	10
7. Sequences teaching tasks to implement designated teaching objectives.		1	2	3	4	5	6	7	8	9	10
8. Plans strategies for maintaining on-task behavior (including structuring the teaching environment and setting behavioral limits).		1	2	3	4	5	6	7	8	9	10
Teaching											
9. Gives clear concise instructions in presenting materials and/or techniques in management and assessments.		1	2	3	4	5	6	7	8	9	10
10. Modifies level of language according to needs of the client.		1	2	3	4	5	6	7	8	9	10
11. Utilizes planned teaching procedures.		1	2	3	4	5	6	7	8	9	10
12. Adaptability - makes modifications in the teaching strategy such as shifting materials and/or techniques when the client is not understanding or performing the task.		1	2	3	4	5	6	7	8	9	10
13. Uses feedback and/or reinforcement which is consistent, discriminating and meaningful to the client.		1	2	3	4	5	6	7	8	9	10
14. Selects pertinent information to convey to the client.		1	2	3	4	5	6	7	8	9	10
15. Maintains on task behavior.		1	2	3	4	5	6	7	8	9	10
16. Prepares clinical setting to meet individual client and observer needs.		1	2	3	4	5	6	7	8	9	10
17. If mistakes are made in the therapy situation is able to generate ideas of what might have improved the situation.		1	2	3	4	5	6	7	8	9	10

** Specific direction from supervisor does not alter unsatisfactory performance and inability to make changes.*

Professional Technical Skills	NA	*	Needs ***specific direction*** &/or demonstration from supervisor to perform effectively			Needs ***general direction*** from supervisor to perform effectively			Demonstrates ***independence*** by taking ***initiative***; makes changes when appropriate and is effective		
Assessment											
18. Continues to assess client throughout the course of therapy using observational recording, standardized and nonstandardized measurement procedures and techniques.		1	2	3	4	5	6	7	8	9	10
19. Administers diagnostic tests according to standard criterion.		1	2	3	4	5	6	7	8	9	10
20.Prepares prior to administering diagnostic tests by: a) having appropriate materials available b) familiarity with testing procedures		1	2	3	4	5	6	7	8	9	10
21.Scores diagnostic tests accurately.		1	2	3	4	5	6	7	8	9	10
22. Interpret results of diagnostic tests accurately.		1	2	3	4	5	6	7	8	9	10
23.Interprets accurately results of diagnostic testing in light of other available information to form an impression.		1	2	3	4	5	6	7	8	9	10
24. Makes appropriate recommendations and/or referrals based on information obtained from the assessment or teaching process.		1	2	3	4	5	6	7	8	9	10
Reporting											
25. Reports information in written form that is pertinent and accurate.		1	2	3	4	5	6	7	8	9	10
26. Writes in an organized, concise, clear and grammatically correct style.		1	2	3	4	5	6	7	8	9	10
27. Selects pertinent information to convey to family members.		1	2	3	4	5	6	7	8	9	10
28. Selects pertinent information to convey to other professionals including all nonwritten communications (ph calls conferences).		1	2	3	4	5	6	7	8	9	10

Personal Qualities	NA	Lacks Information	Unsatisfactory	Inconsistent	Satisfactory
1. Is punctual for client appointments.					
2. Cancels client appointments when necessary.					
3.Keeps appointments with supervisor or cancels appointments when necessary.					
4.Turns in lesson plans on time.					
5.Meets deadlines for reports.					
6. Turns in attendance sheets on time.					
7.Respects confidentiality of all professional activities.					
8.Uses socially acceptable voice, speech and language. such as phone calls and conferences.					
9. Personal appearance is appropriate for clinical setting and maintaining creditability.					
10. Appears to recognize own limitations and stays within boundaries of training.					

** Specific direction from supervisor does not alter unsatisfactory performance and inability to make changes.*

APPENDIX E

Clinical Appraisal Form

Clinical Appraisal Form

Department of Speech Pathology and Audiology
Faculty of Rehabilitation Medicine

Student Clinician:		Date:	mm/dd/yyyy
Service Type (s):		Client Ages:	
Client Disorder Areas:		Site:	
Clinical Educator:		% Supervision:	
Course Number:		# of Days Missed:	
		Total % Score:	

Each skill is rated on the following scale:

1. Aware of Skill — Student shows awareness of skill but takes no responsibility for own learning and demonstrates little or no evidence of competence even with direct instruction or modeling
2. Specific Guidance — Student shows some competence in this task but requires direct supervision and modeling or specific instruction in interpretation and execution
4. General Guidance — Student shows competence in this task but requires collaborative supervision and general guidance in interpretation and implementation
6. Independence — Student shows competence and independence in this task in appropriate contexts with minimal supervisory input in interpretation and implementation
7. Excellence & Initiative — Student demonstrates extraordinary skills, additional effort and initiative in service delivery or personal growth

The student:	1 Aware of skill	2 Specific guidance	3	4 General guidance	5	6 Independent skill	7 Excellence & initiative	
PLANNING	1	2	3	4	5	6	7	NA
1. provides rationale for assessment and treatment goals and activities	☐	☐	☐	☐	☐	☐	☐	☐
2. designs activities that are appropriate for the client(s) age, interest and ability level	☐	☐	☐	☐	☐	☐	☐	☐
3. generates ideas and materials for treatment activities	☐	☐	☐	☐	☐	☐	☐	☐
CLINICAL SKILLS	1	2	3	4	5	6	7	NA
4. conducts assessments effectively including formal and informal pre and post treatment assessment of skills and progress	☐	☐	☐	☐	☐	☐	☐	☐
5. creates an appropriate initial treatment plan including identification of goals and teaching sequences for each client and is able to consistently apply teaching steps (hierarchy) and plan for modification of goals or teaching steps when needed	☐	☐	☐	☐	☐	☐	☐	☐
6. creates a positive learning environment for clients	☐	☐	☐	☐	☐	☐	☐	☐
7. provides clear instructions	☐	☐	☐	☐	☐	☐	☐	☐
8. provides specific and meaningful feedback to clients	☐	☐	☐	☐	☐	☐	☐	☐
9. applies cues and supports to promote client progress	☐	☐	☐	☐	☐	☐	☐	☐
10. collects and effectively organizes ongoing data	☐	☐	☐	☐	☐	☐	☐	☐
11. is sensitive to client's behavior, attention and energy level and makes needed adjustments	☐	☐	☐	☐	☐	☐	☐	☐

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								2
12. is able to adapt activity design and teaching strategies within the session	☐	☐	☐	☐	☐	☐	☐	☐
13. is able to identify appropriate recommendations for clients including continuation or termination of treatment and follow up service delivery through appropriate program(s)	☐	☐	☐	☐	☐	☐	☐	☐
COMMUNICATION AND COLLABORATION	1	2	3	4	5	6	7	NA
14. communicates in a respectful manner using plain language in written and verbal communications	☐	☐	☐	☐	☐	☐	☐	☐
15. actively listens and is sensitive to verbal and non-verbal cues	☐	☐	☐	☐	☐	☐	☐	☐
16. offers suggestions & ideas during problem solving	☐	☐	☐	☐	☐	☐	☐	☐
17. establishes a shared understanding of client concerns and engages client in decision making	☐	☐	☐	☐	☐	☐	☐	☐
18. recognizes the impact of diversity in relationships and adapts communication and collaboration strategies appropriately	☐	☐	☐	☐	☐	☐	☐	☐
19. addresses challenging issues in a timely and professional manner and effectively manages conflicts and misunderstandings	☐	☐	☐	☐	☐	☐	☐	☐
REPORTING	1	2	3	4	5	6	7	NA
20. reports information in an organized, concise and easily understood format	☐	☐	☐	☐	☐	☐	☐	☐
21. includes accurate and relevant information in reports with appropriate amount of detail	☐	☐	☐	☐	☐	☐	☐	☐
SERVICE DELIVERY	1	2	3	4	5	6	7	NA
22. manages client caseload effectively and selects the appropriate type of service for clients considering the advantages and disadvantages of the available service delivery options (e.g. individual, consult, group, education program etc.)	☐	☐	☐	☐	☐	☐	☐	☐
23. addresses individual client, family and environmental needs within the service delivery approach	☐	☐	☐	☐	☐	☐	☐	☐
24. is sensitive to cultural differences, recognizes their impact on meeting client needs and adapts service provision appropriately	☐	☐	☐	☐	☐	☐	☐	☐
25. demonstrates ability to modify program design such as changes in treatment approach or service delivery model	☐	☐	☐	☐	☐	☐	☐	☐
EDUCATION & GROUP FACILITATION SKILLS	1	2	3	4	5	6	7	NA
26. develops and communicates clearly defined participant objectives with a demonstrated understanding of participant knowledge	☐	☐	☐	☐	☐	☐	☐	☐
27. utilizes a variety of techniques to present information, acknowledge contribution, promote participation & application of learning	☐	☐	☐	☐	☐	☐	☐	☐
28. manages a group effectively and facilitates interaction among group members	☐	☐	☐	☐	☐	☐	☐	☐
LEARNING AND GROWTH	1	2	3	4	5	6	7	NA
29. demonstrates accurate self-perception regarding strengths and weaknesses	☐	☐	☐	☐	☐	☐	☐	☐
30. identifies personal and professional goals and strategies to achieve growth in these areas	☐	☐	☐	☐	☐	☐	☐	☐
31. identifies and applies appropriate information from academic, clinical and service delivery resources	☐	☐	☐	☐	☐	☐	☐	☐
32. increases understanding of disorders and or service options through questioning, reading, researching, observations, continuing education etc.	☐	☐	☐	☐	☐	☐	☐	☐
33. delivers feedback to and receives feedback from the clinical team in a positive manner which promotes clinical growth	☐	☐	☐	☐	☐	☐	☐	☐

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Each skill is rated on the following scale:

1	2	3	4	5	6
Unsatisfactory			Inconsistent		Satisfactory

PROFESSIONALISM	1	2	3	4	5	6	NA
34. arrives on time & fully prepared for scheduled activities & appointments and provides notification if unable to attend appointments or activities	☐			☐		☐	☐
35. manages time effectively and fulfills all clinical & non clinical responsibilities (including paperwork) in a timely manner	☐			☐		☐	☐
36. respects confidentiality of all professional activities	☐			☐		☐	☐
37. uses socially acceptable voice, speech & language during phone calls, meetings & conferences	☐			☐		☐	☐
38. personal appearance is appropriate for clinical setting & maintaining credibility	☐			☐		☐	☐
39. approaches clinical placement with a positive attitude demonstrated by respect for the staff and agency, flexibility, and a willingness to learn from and participate in practicum experiences	☐			☐		☐	☐

TOTAL POSSIBLE SCORE				***STUDENT SCORE***		
# of items scored between 1-33:	_____	*X 7*	_____	Items 1-33	_____	
# of items scored between 34-39:	_____	*X6*	_____ +	Items 34-39	_____	+
TOTAL POSSIBLE		=	_____	STUDENT SCORE =	_____	
TOTAL SCORE *Student Score / Total Possible*	= _____	*x 100*		_____ *% (transfer to first page)*		

DESCRIPTION OF PLACEMENT

STRENGTHS

AREAS OF IMPROVEMENT

GOALS

_____

CLINICAL EDUCATOR SIGNATURE

Clinical Appraisal Form Template Mar 2011 - #3800 (REVISED July 13, 2011)

APPENDIX F

Letter to Support Application for Graduate Admission

UNIVERSITY OF ALBERTA
FACULTY OF GRADUATE STUDIES AND RESEARCH
KILLAM CENTRE FOR ADVANCED STUDIES
2-29 TRIFFO HALL

Letter to Support Application for Graduate Admission

Last Name of Applicant	First and Middle Name(s)	
Department Speech Pathology and Audiology	Degree applying for Master of Science	Area of Specialization Speech-Language Pathology

To the Referee: We are particularly interested in the applicant's ability to carry on advanced study and research, teaching ability, potential for successful study in the applicant's field, and weaknesses, if any. We would appreciate knowing the basis for your statements.

1. **General Appraisal**

(attach a separate sheet if necessary)

2. **Knowledge of Applicant:** In what capacity and for how long have you known the applicant (eg. as teacher, supervisor, employer)?
I was the applicant's _____ for _____ years and/or _____ months between the years _____ and _____.

In my opinion, of the _____ (number) students in this category I have supervised/dealt with in the last five years, I would rank this student in the upper _____ percent.

3. **Ability in the English Language:** Please comment on the applicant's ability to comprehend spoken English, to teach in English, and to pursue a research problem and write a scholarly report or thesis in English.

(attach additional sheet if necessary)

4. **Specific Abilities:** For each category, check the most appropriate box.

	Outstanding (top 5%)	Superior (top 15%)	Good (top 25%)	Average (top 50%)	Marginal (lower 50%)	Inadequate opportunity to observe
Academic Achievement	☐	☐	☐	☐	☐	☐
Scholarly Promise	☐	☐	☐	☐	☐	☐
Research Ability	☐	☐	☐	☐	☐	☐
Teaching Potential/Promise	☐	☐	☐	☐	☐	☐
Verbal Skills	☐	☐	☐	☐	☐	☐
Writing Skills	☐	☐	☐	☐	☐	☐
Industriousness	☐	☐	☐	☐	☐	☐
Judgement	☐	☐	☐	☐	☐	☐
Overall Rating	☐	☐	☐	☐	☐	☐

5. **Referee**

Name of Referee (please print)	Academic Rank/Position	Department
Institution	Address and Postal Code	Telephone Number
E-mail Address	Date	Signature of Referee

Personal information on this form is collected under the authority of Section 33(c) of Alberta's ***Freedom of Information and Protection of Privacy Act*** for authorized purposes including admission and registration; administration of records, scholarships and awards, student services; and university planning and research. Students' personal information may be disclosed to academic and administrative units according to university policy, federal and provincial reporting requirements, data sharing agreements with student governance associations, and to contracted or public health care providers as required. For details on the use and disclosure of this information call the Faculty of Graduate Studies and Research at 492-3499 or see www.ualberta.ca/FOIPP.

05/01/09