Is grit the 'X-factor' for interpreters leaving the profession?

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Abstract: This study uses the construct of grit, as measured by the persistence a person has to complete his or her goals, even when barriers are present (Duckworth, Peterson, Matthews, & Kelly, 2007). The population in this particular study was American Sign Language/English Interpreters, (current and inactive), and those who work in any type of setting (education and/or community). Participants were sent a demographic survey, as well as the 12-item Grit Scale developed by Duckworth et al. (2007). The author scored the Grit Scales based on the scoring guide by Duckworth et al. and measured the respondents' grit scores to see if they had remained in the interpreting profession because they were high in grit. Competing factors that would have forced the person to remain in the profession were also analysed. Tests measuring the analysis of variance were run for variables such as gender, hearing and marital status, the presence of Deaf[1] family members, ethnicity, educational level, and past and present certifications. Additional variables included whether or not the respondent was still a current practitioner, years of experience, why they got out of the profession, if they were satisfied with the profession, if they had another vocation in which they were currently working, if they were the sole income provider for their family, and percentage of their total family income came from the respondents' interpreting work. Respondents were asked if they had ever failed a test for sign language interpreters (American Sign Language/ English interpreters) in the United States. Those tests could be tests of knowledge (computer-based test used to test interpreting knowledge offered by the Registry of Interpreters for the Deaf to candidates for certification), or a performance-based test (like the one formerly offered by the National Association of the Deaf (NAD) certification, or current tests such as the Educational Interpreter Performance Assessments (EIPA), Sign Language Proficiency Interview (SLPI), or the American Sign Language Proficiency Interview (ASLPI)). Finally, qualitative analyses were assessed for the reasons respondents gave for initially choosing interpreting as a profession, as well as what motivated them to continue working as an interpreter.
There were two significant findings that were predictive of grit. The first finding occurred when education was grouped in three-tiers: 1) an Associate's Degree; 2) a Bachelor's Degree; 3) a Master's Degree/ terminal degree as the highest achieved level of education. The second significant finding that was predictive of grit occurred with respondents who had NAD III certification. When qualitative responses were analysed for reasons the respondent gave for initially choosing interpreting as a profession, as well as their motivation to remain in the profession, there was a significant change in each of the following categories: intellectual, societal, and monetary.

Keywords: grit, sign language interpreter, ASL/English interpreter, perseverance

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[1] The capitalized word 'Deaf' refers to those individuals who follow norms, behaviours, and customs of those within the Deaf Culture in America. These individuals value things such as eyes, hands, American Sign Language, solidarity of the Deaf community, residential schools, information-sharing, and their collectivist culture.

Introduction

American Sign Language/English Interpreters (sign language interpreters) are necessary to interpret between those who are Deaf (or hard-of-hearing) and those individuals who are not deaf. The need for interpreters has burgeoned across the United States. This is due, in part, to the legislation requiring the presence of sign language interpreters for Deaf and hard-of-hearing people in this country. Places such as those that receive federal monies are not able to discriminate based on someone's hearing loss. Pieces of legislation that have made a difference for deaf people include the following: Section 504 of the Rehabilitation Act of 1973; Public Law 94-142 of 1975 (restructured and renamed Individuals with Disabilities Education Act (IDEA) in 1997); and the Americans with Disabilities Act (ADA) in 1990 (amended in 2008). Since these federal legislations, ASL/English interpreters have been in great demand to accommodate the growing numbers of deaf people in all facets of society.

Research in the field of sign language interpreting has revealed that there is a high turnover and burnout rate for those who work in the profession (Dean & Pollard, 2001; McCartney, 2006; Schwenke, 2012; Watson, 1987). Previously identified variables from past research included role conflict, role overload, poor working conditions, unrealistic expectations of the interpreter held by the interpreter him or herself and/or by others, a lack of skill of the interpreter, and work in video relay settings. Watson (1987) almost thirty years ago lamented that competent interpreters were leaving the profession more rapidly than new ones could be trained to enter the profession (p. 79). If interpreters continue to leave the field, the profession will be in worse need of people than it already is. The demand for interpreters and translators is expected to grow 46% from 2012-2022 (Bureau of Labor Statistics, 2015).

The author first became acquainted with Grit Theory in the summer of 2012. After a review of the literature, the author discovered that there were no studies dealing with ASL/English interpreters or spoken language interpreters incorporating the construct of grit as defined by Duckworth et al. (2007). The purpose of the study was to see if ASL/English interpreters were leaving the profession due to low levels of grit and, conversely, were ASL/English interpreters still active in the profession due to high levels of grit?

Literature Review

Grit
"Grit is perseverance and passion for long-term goals" (Duckworth, Peterson, Matthews, & Kelly, 2007, p. 1087). It can also be defined as determination and a willingness to persevere when an individual faces an obstacle. The authors define grit as being comprised of two traits: perseverance of effort and consistency of interest. Grit is also synonymous with perseverance, persistence, and motivation. Duckworth et al. studied grit scores for several groups of people: West Point Military academy, the National Spelling Bee, rookie teachers, and businesses to test the Grit Scale with the individuals. The goal of each study was to determine who was successful, why they were successful, and who finished the training, competition, year, or task to completion versus which individuals did not. The

person who did finish the task to completion would be called a gritty individual. "Whereas disappointment or boredom signals to others that it is time to change trajectory and cut losses, the gritty individual stays the course" (Duckworth et al., 2007, p. 1088).

Personality

According to Bontempo, Napier, Hayes, and Brashear (2014), "Personality is a mixture of values, temperament, coping strategies and *motivation* (italics mine), among other things. A personality trait is a habitual way of thinking or doing in a variety of situations" (p. 26). A number of studies have explored the traits, characteristics, and personality of signed language interpreters and/or spoken language interpreting students since Schein's (1974) study. In his study of 20 signed language interpreters, he found that "successful interpreters [desired] to be the centre of attention and [were] independent, [not] overly anxious or rigid" (p. 42). Since that time, many others have studied ASL/English interpreters to learn more about their personality. (See Bontempo, (2012); Bontempo & Napier (2014); Bontempo et al. (2014); Doerfert & Wilcox (1986); Frishberg & Enders, 1974, as cited in Frishberg 1990; López Gómez, Bajo Molina, & Benitez (2007); Rudser & Strong, 1986; Seal, 2004; Stauffer & Shaw, 2006). Studies show that interpreters are well-educated and bright. Rudser and Strong (1986) and Seal (2004) found that interpreters ended to be smarter than the average population. One of the most well-known ways to assess personality is the Myers Briggs Personality Test. The test has been used in a handful of studies to measure the personality of signed and/or spoken language interpreters and their effectiveness as an interpreter. This takes into account their respective personality type and the demands of interpreting (Blake, n.d.; Schweda Nicholson, 2005; Wilcox, 1981). Within the test, there a 16 combinations of personality that a person can have based on how the following categories combine: introvert/ extrovert (I,E); sensing/ intuition (S,I); thinking/ feeling (T,F); and judging/ perceiving (J,P). Blake (n.d.) found that working sign language interpreters had a different personality type than sign language interpreting students. Three types of personalities did not appear in either sample: ISTP, ESTP, and ENTP (Blake, n.d.). Schweda Nicholson (2005), in her study of spoken language interpreters, revealed that most of her groups were about 50/50 in terms of personality type. The only exception was that there were more Thinkers than Feelers.

It does seem, then, that personality plays a part in one's success. Although some of the afore-mentioned studies considered factors such as goal orientation as a predictor of interpreter competence (Bontempo & Napier, 2014), none of the existing studies regarding sign language interpreter personality have applied the Grit Scale developed by Duckworth et al. (2007).

Motivation

Sternberg (1996) contends that motivation is one of the multiple intelligences people need to be successful. According to Stauffer and Shaw (2006), motivation is one of the traits critical in second language learning success. This was also found in studies by Ehrman and Oxford (1988, 1995) and Shaw and Hughes (2006). Timarová and Salaets (2011) discussed the importance of motivation in concert with learning styles and cognitive flexibility in the success of spoken language interpreters. Dörnyei and Skehan (2003) contend that the motivation of the learner is one of the two most important qualities for an individual engaged in

second language learning (the other being the attitude of the learner). Goleman (2006) contends that a person with emotional intelligence will be high in motivation, which allows that person to be successful in whatever it is is/he undertakes. Goleman lists five domains and motivation is one.

Other professions list motivation as a factor in professionals remaining in their chosen occupations such as nursing (Gambino, 2010), teaching (Battle & Looney, 2014; Grant, 2006). Roness (2011) looks at teachers who remain due to motivation and persistence. Ten Brummelhuis, ter Hoeven, Bakker, and Peper (2011) contend that motivation is essential in order to combat burnout in any profession.

Persistence

The idea that persistence is required for people to be successful, whether in their personal lives or occupational choice, is not a new concept. Even Cox (1926) after writing her book regarding her study of 300 geniuses noted general mental ability could not be the only predictor when she stated that lifetime success was due to the following traits: "Persistence of motive and effort, confidence in their abilities, and great strength or force of character" (p. 218). Although occupational success had largely been predicated on intelligence in previous studies (Dweck, 2009; Firkowska-Mankiewicz, & Słomczyńska, 2002; Gottfredson, 1997; Hartigan & Wigdor, 1989; Howe, 1999; Terman & Oden, 1947), measures of intelligence alone cannot singly account for the existing variance between the most and least successful people in various occupations (Duckworth et al., 2007). Although general mental ability is known to be one of the most significant factors that predicts occupational success, Schmidt and Hunter (1998) in a meta-analysis of over 85 years of organisational psychology studies determined that other factors must account for some of the variance.

St. John, Hu, Simmons, Carter, and Weber (2004) found that persistence played a significant role in people achieving academically. Ancillary predictors of success for signed language interpreters have also been found to include "good general mental ability, [high] self-esteem, conscientiousness, emotional stability, and openness" (Bontempo et al., 2014, p. 36).

The Big Five (Goldberg, 1990; John & Srivastava, 1999; McCrae & Costa, 1987; McCrae & John, 1992) measures five personality traits and is denoted by the acronym OCEAN: Openness to experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. (It also goes by the acronym CANOE or NEOAC).

The instrument used to assess The Big Five traits is a 44-item Likert-style with questions where respondents read the statement and then select how much they are similar or dissimilar to the statement. A few examples are the following: "I see myself as someone who is talkative." and "I see myself as someone who is somewhat careless."

Several studies have shown that traits within the Big Five have been predictive of occupational success and/ or job satisfaction. Self-esteem and emotional stability were found (Judge & Bono, 2001), as were emotional stability, conscientiousness, and agreeableness (Mount, Barrick, & Stuart, 1998). Conscientiousness, neuroticism, and general mental ability were shown to relate to career success (Judge, Higgins, Thoresen, & Barrick, 1999). Bontempo et al. (2014) incorporated the Big Five as part of their study. The Big Five constructs

Table 1. The Big Five personality traits

Big Five Traits and Scoring		
Big Five Traits	Low Scores	High Scores
Openness to Experience	Down-to-earth, uncreative, conventional, uncurious	Imaginative, creative, original, curious
Conscientiousness	Negligent, lazy, disorganized, late	Conscientious, hard-working, well-organized, punctual
Extroversion	Loner, quiet, passive, reserved	Joiner, talkative, active, affectionate
Agreeableness	Suspicious, critical, ruthless, irritable	Trusting, lenient, soft-hearted, good-natured
Neuroticism	Calm, even-tempered, comfortable, unemotional Worried, temperamental, self-conscious, emotional	Worried, temperamental, self-conscious, emotional

were assessed via questions drawn from IPIP (the International Personality Items Pool) and used to measure sign language interpreters' personality.

Dweck's (2006) research regarding the growth mindset found that people who had a fixed mentality or mindset about their general mental ability did not seem to progress and were stuck in their negatively-stereotyped groups. However, when students were taught about the way the brain works to make new connections, their learning grows, hence, the "growth mindset." Those who felt positively about their ability to learn new things and not be stuck within their negative stereotypes evidenced stellar performance.

Aptitude
A topic that has been becoming increasingly important in recent years is 'aptitude.' There have been several studies conducted to gauge whether predictive assessments are a good way to see if students would make good interpreters. However, for as many studies that confirmed the hypothesis, there are an equal number that yielded unintended outcomes. We as interpreter trainers do not want to rule someone out from doing this work, but yet administrators want to be selective in their admissions policies. The following studies looked at the screening of spoken language interpreters: Gerver, Longley, Long, and Lambert (1989); Herbert (1952); Keiser (1964, 1978); Kurz (1996); Longley (1968); Moser (1978); Nilski (1967); Pfloeschner (1965); Schweda Nicholson (1986), Shaw (2011); Sofr (1976); Szuki (1988).

This screening and interpreter aptitude were the focus of a collaborative study between the University of North Florida in the United States and three institutions in the European Union (Czech Republic, Austria, Belgium, and The

Netherlands). The main contact for the E.U. contingency was Lessius University College in Belgium. This project included signed and spoken language interpreters (Shaw, Timarová, & Salaets, 2008). Shaw (in the US) worked with collaborators Timarová and Salaets (from Lessius University College in Belgium), further building on the research already begun at that particular institution (2008).

Both groups of interpreters were given a battery of tests to determine their aptitude for interpreting and what made them successful. There were 4 tests given: the d2 Test of Attention, the Motivated Strategies for Learning Questionnaire, CNS Vital Signs, and the Achievement Motivation Inventory. Students' motivation was a predictor of success, both in signed language and spoken language interpreting (Shaw, 2011). Another interesting finding was that beginning spoken and signed language students showed more persistence than advanced students.

After a review of the literature, the interplay between the level of grit and ASL/English (or spoken language interpreters) has not been studied; however, other research studies have looked at grit. Hochanadel and Finamore (2015) discussed how grit could play a part in students' success when dealing with the growth mindset. Wolters and Hussain (2015) investigated if grit had an impact on students' self-regulated learning and academic achievement. One of the constructs within the grit scale, perseverance of effort, was shown to correlate with self-regulated learning. The other construct, consistency of interest, was only predictive of students' study environment strategies and procrastination.

Research questions

In the fall of 2014, the author secured Institutional Review Board approval for a study that would explore the following research questions: 1) Are there any variables that can predict grit in ASL-English interpreters? 2) Is a high level of grit the reason that some ASL-English interpreters remain in the profession? 3) Is a low level of grit the reason that some ASL-English interpreters leave the profession? 4) What are some competing factors ASL-English interpreters may encounter that would either keep them in the field or cause them to leave the profession?

Methodology
Participants: The participants in this study were American Sign Language (ASL)/English interpreters in a Midwestern state of the USA. The interpreters worked in education settings from early childhood to secondary school contexts, in postsecondary educational settings, and in community settings. Community settings included medical, legal, performing arts, video relay service, vocational rehabilitation, and so on. The participants of this study were contacted through the Registry of Interpreters for the Deaf (RID)[2] membership database, which is retrievable online. The RID is a national interpreter association in the US responsible for credentialing and regulating the ASL interpreting industry. More than 16,000 certified ASL interpreters are registered with RID in the US.

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[2] Registry of Interpreters for the Deaf, Inc.

Instrument: There are two forms of the Grit Scale. Duckworth et al. (2007) developed the 12- item Grit Scale (Grit-O). Duckworth and Quinn (2009) developed a shorter 8-item version, entitled the Grit-S (Short), which can garner the same information regarding grit with fewer questions, without compromising validity and reliability. Both the 12 and 8-item Grit Scales are Likert-type self-report questionnaires. The authors of the Grit Scale, Duckworth, Peterson, Matthews, and Kelly (2007) wanted an instrument that would satisfy four of their demands. They wanted it to be an instrument that did the following: 1) matched the goodness of fit with grit; 2) was a valid and reliable test; 3) measured a range of settings for adolescents and adults; 4) did not skew results of high performers in terms of ceiling effects. Other instruments that Duckworth et al. found that measured persistence did not meet all four of these required components.

The author of the present study decided to use the original 12-item Grit Scale for the study since it has a high internal consistency of $\alpha=.85$. When respondents take the Grit Scale, it asks them if the subsequent statements apply to the respondent or not. The respondent then chooses one of the checkboxes indicating that the statement is very much like them, mostly like them, somewhat like them, not much like them, or not like them at all. Some examples of those questions are the following: "I have overcome setbacks to conquer an important challenge." "My interests change from year to year." "I have been obsessed with a certain idea or project for a short time but later lost interest."

The scoring sheet was not sent out with the questionnaires because the researcher did not want respondents to know their grit score to protect from them being swayed by social desirability (Spector, 2004). There are no specific numbers to show high or low grit; instead the authors say the maximum number 5 denotes the grittiest individuals and 1 denotes someone who is not at all gritty. By implication, a score of 2.5 would be a medium grit score.

A letter of introduction, a demographic survey, and the Grit Scale were emailed to participants. A basic eighteen question demographic survey was created by the researcher using the Qualtrics software. Questions on the demographic survey were asked to elicit the respondent's gender, hearing status, marital status, Deaf family members, educational level, etc. (see Appendix A). About halfway through the survey, a question was asked whether the respondent was still currently working as an interpreter. If the person filling out the survey was still in the profession, s/he was asked seventeen questions total. If the person answered they had gotten out of the profession, through skip logic, the survey asked the respondent a different set of seventeen questions more geared to why they were not still working as an ASL/English interpreter. Regardless of whether the person was still working as an interpreter, s/he was presented with Duckworth et al.'s (2007) 12-item grit questionnaire, which is Likert-type self-reporting. This demographic survey was sent to participants, along with the Grit Scale. The scoring guide to the Grit Scale was not included. The researcher did not want respondents to see how the grit test was scored, for fear they would answer more geared to social desirability (Spector, 2004).

Demographic information collected in the survey included factors, such as gender, hearing and marital status, the presence of Deaf family members, ethnicity, educational level, past and present certifications, reasons for choosing interpreting as a profession, and whether the respondent was an active interpreting practitioner. Respondents were asked about their years of interpreting experience; why they left the profession (if applicable); if they were satisfied with the

profession; and whether they had another vocation or field of study with which they are currently engaging. They were also asked if they had ever failed a test of interpreting knowledge or performance (such as those offered by the RID to candidates applying for interpreter certification). Finally, they were asked if they were the sole income provider for their family. If respondents said that they were still working in the profession, the survey asked for their years of experience; what motivated them to work as an interpreter; and what percentage of their total family income came from their interpreting work. If interpreters were active, they had to answer 18 questions. If an interpreter was inactive, they had 17 questions due to skip logic within in survey.

Procedure: The demographic survey and the Grit Scale were sent to all of the interpreters in the state found on the database as residents of the US Midwest state, which included 403 current and former working interpreters. Most interpreters who are actively practising in the profession are members of RID, as well as the state branch of RID. If participants were not listed as active members on the database, it was deduced that they were possibly inactive interpreters, although there may have been other reasons for not being current members of RID.

The email addresses were collected using the state branch of the Registry of Interpreters for the Deaf membership records for ten years prior to the study. The researcher had copies of these records from another publication. The intention was to capture active practitioners, as well as those who ostensibly had left the profession within that period of time. By definition, grit requires that people stick to a task, even when that task, job, or endeavour is fraught with problems (Duckworth et al., 2007). The researcher wanted to find people who may have left the profession due to low levels of grit. This would allow a comparison of the grit levels of inactive practitioners with the grit measures displayed by those who remained in the profession.

The demographic survey and the Grit Scale were sent to email addresses using Qualtrics, a software programme where researchers can set up quantitative studies and then extract and use data. Once respondents were completed with the Grit assessment, the author scored the Grit Scales of respondents using the scoring guide developed by Duckworth et al. Qualtrics keeps track of the data. Data were scrubbed and analyses were run using SPSS, a statistical data program.

Respondents were not offered an incentive for their participation. They were offered a copy of the results, as well as the opportunity to hear about the study if they attended a workshop where the researcher was one of the presenters.

Out of the 403 emailed surveys, a total of 48 surveys were returned due to invalid email addresses. Out of the 355 surveys opened, 104 were completed. Although 104 participants completed the demographic section of the survey, only 100 people proceeded further with the survey and completed the Grit Scale. The final total response rate for complete surveys was 100 participants. This is a response rate of 28.2%, which is considered by some to be an acceptable level of return in social survey research. Lipka (2011) stated that 20% would be acceptable, but many other authors struggle to come up with an acceptable threshold. Gillham (2000) suggested 30% response would be appropriate for an impersonal survey of this type. The National Research Council (2013) warns that social science researchers struggle with survey response rates and they seem to be steadily declining. The researcher did as many things as possible to increase the

return rate, including giving the link directly to respondents, giving adequate time to complete the survey, reminders, assurance that their results would be used and that the results would be kept anonymous, and the survey was brief (Nulty, 2008).

All of the 100 respondents were hearing ASL/English Interpreters. Sixty-nine were married; twenty-two were single; four were separated; and eight were divorced. Twenty-two respondents had Deaf family members. Ninety-seven respondents were white; one was black; one was Hispanic; and one listed his or her ethnicity as being other (Asian or Pacific Islander, Filipino, American Indian/ Alaskan Native were listen, but not chosen. The largest number of respondents in terms of years of experience was the 11-15 years (n= 22). An equal number of respondents answered from the 16-20 years category and the 21-25 year category (n=16). This was followed by the 6-10 year category (n=15). Responses fell off from there with less than 10 occupying other categories.

In the current study, ninety females answered the survey resulting in an 86.5% female response rate and thirteen males responded totalling 12.5%. The demographics from Cokely's (1981) study included 76.2% females and 23.8% males. Stauffer, Burch, and Boone (1999) discuss their interpreter demographics, stating that 78.6% were female and 21.4% were males. This study had a higher female response rate and a lower male response rate than both the Cokely study and the Stauffer, Burch, and Boone study. One reason for that may have been that both of those surveys were both conducted at national interpreter conferences and, therefore, employed convenience sampling.

Both this study and Seal's (2004) study paralleled the response rate and demographics of the general membership which the Registry of Interpreters for the Deaf (RID) conducted in 2004. The response rate for males in this study (7.92%) was lower than Seal's (2004) study where the male response rate was 14.3%. The female response rate (86.5%), however, was closer to Seal's study (85.7%). The final response rate for this study was 28.2% (*n*=100). This is a typical response rate in the interpreting literature, especially one dealing with individuals who had gotten out of the profession. A low response rate is to be expected with this type of data collection.

Results

Ninety-one of the participants were still working as sign language interpreters, while nine were not. Many demographic questions were asked in this studying dealing with gender, the presence of Deaf family members, ethnicity, education level, active or inactive status, satisfaction with the profession, level of income received from interpreting, and so on.

No significant correlation was found in relation to grit regarding gender, marital status, ethnicity, the presence of Deaf family members, ethnicity, education level, certifications (RID, NAD, or EIPA certification), satisfaction, and/or family income. Males had a lower grit score than females overall, but it was not significant due to the low number of males who participated in the survey (n=13). Signed language interpreting is still regarded as a gendered profession (Bontempo et al. (2014); Litosseliti & Leadbeater, 2013; MacDougall, 2012), so it is not uncommon that more females would take the survey, given the gender profile of the broader interpreting pool. Similar survey response rates and gender patterns appear in other signed language interpreting studies (See Bontempo &

Napier, 2007; Brien, Brown, & Collins, 2002; Cokely, 1981; Schein & Yarwood; 1990; Seal, 2004).

Table 2. Noteworthy responses

Demographic Information	(N = 104)		
Characteristic		n	%
Gender (n=103)	Male	13	12.6
	Female	90	87.4
Deaf Family Members (n = 103)	Yes	22	21.4
	No	81	78.6
Ethnicity (n =103)	White, not Hispanic	100	97.1
	Black, not Hispanic	1	1
	Hispanic	1	1
	Other	1	1
Highest Educational Level (n = 103)	High School Graduate	1	1
	Some college	8	7.8
	Associate's degree	30	29.1
	Bachelor's degree	37	35.9
	Master's degree	22	21.4
	Doctorate	2	1.9
	Other	3	2.9
Simplified 3-Tier Education (n = 91)	Associate's degree	30	33
	Bachelor's degree	37	40.7
	Master's degree or Doctorate	24	26.4
Still in the Profession (n = 100)	Yes	91	91
	No	9	9
Satisfaction (n= 100)	Extremely satisfied	28	28
	Satisfied	39	39
	Somewhat satisfied	24	24
	Not very satisfied	9	9
Level of income from Interpreting (n = 90)	0-25%	21	23.3
	26-50%	20	22.2
	51-75%	21	22.2
	76-100%	29	32.2

Respondents who were not actively practising interpreters were asked how many years they were in the field before leaving. Out of the nine who indicated they had left the field, three respondents stated they left the field during 0-5 years. Two respondents each selected the 11-15 and 21-25 years category. One respondent each also chose the 6-10 years and the 16-20 years categories. Three people left to care for their family; one person left due to illness; two people had been offered a new job; two went back to study, with one of the two also

indicating burnout from educational interpreting. One participant clicked a button erroneously and was channelled into the wrong section of the survey, as the respondent in fact had not left the profession. Based on the findings of this study, the grit score for individuals who had left the profession was almost the same as those who were currently working in the profession (3.62, SD= .44 vs. 3.59, SD= .82). The results were not statistically significant.

Table 3 displays participants' highest educational level broken down by whether they were currently working as an interpreter or not.

Table 3. Highest educational level and activity status

Highest Education Level Displayed by Active and Inactive Interpreters	Currently Working as an Interpreter	
	Yes	No
High School Diploma	0	1
Some College	7	0
Associate's Degree	26	3
Bachelor's Degree	32	4
Master's Degree	22	0
Doctorate	1	1
Other	3	0

Table 4 below lists the certification held by active and inactive interpreters. Most interpreters in this study (n=38) had the current joint NAD-RID certification, NIC, at any level. The second highest category of certification was the most recent inactive certification, the CI and CT (n=26). Regarding certification from the National Association of the Deaf (NAD), six people indicated they had National Association of the Deaf certification- NAD III; twelve had NAD IV, and 6 had NAD V. Seventy-six indicated they were never certified with NAD. Twelve people responded that they had the Educational Interpreter Performance Assessment (EIPA) certification; one person stated their certification had lapsed; and 87 indicated they never had EIPA certification.

Table 5 below lists the years of experience, number of respondents, and mean grit scores. Of the 92 respondents who answered this question, it seemed that Grit Score seemed to be high at the beginning and ending of one's career, but dropped a little in the middle. In this study, entry level and advanced interpreters had higher grit scores than those in the mid-years, such as 21-30. A question on the demographic survey enquired as to the percentage of the family's income that came from the respondent. The number was 76-100% (n=29), followed by an equal amount between the 0-25% and the 51-75% categories (n= 21). That category was closely followed by those who chose the 26-50% category (n=20). This question was only shown if respondents stated they were still in the profession.

Of the total pool of 100 respondents, thirty-two people indicated they currently worked in another vocation. Because this question was asked of the whole sample, some of those people also were currently working as an ASL/English interpreter, while some were individuals who had gotten out of the profession. These individuals were ones who had sought employment in another profession/ vocation. Regarding level of satisfaction with the profession, nine said

they were not very satisfied; twenty-four were somewhat satisfied; thirty-nine were satisfied; and twenty-eight were extremely satisfied.

Table 4. Certification level and activity status

Certification[3] Displayed by Active and Inactive Interpreters	Currently Working as an Interpreter	
	Yes	*No*
CSC (Comprehensive Skills Certificate)*	9	0
IC/TC (Interpretation Certificate/ Transliteration Certificate)*	6	0
IC (Interpretation Certificate)*	0	0
TC (Transliteration Certificate)*	1	1
RSC (Reverse Skills Certificate)*	0	0
MCSC (Master Comprehensive Skills Certificate)*	1	0
CI (Certificate of Interpretation)*	26	3
CT (Certificate of Transliteration)*	26	3
NIC- any level (National Interpretation Certificate)	38	1
SC:L (Specialist Certificate: Legal)	5	0
OIC (Oral Interpretation Certificate)	0	0
CDI (Certified Deaf Interpreter)	0	0
Lapsed RID Certification	1	0
Never certified with RID	18	5
NAD III (Generalist) National Association of the Deaf)*	5	1
NAD IV (Advanced)*	12	0
NAD V (Master)*	4	2
Never Certified with NAD	70	6
EIPA Certification (Educational Interpreter Performance Assessment)	11	1
Never Certified with EIPA	79	8
Lapsed EIPA Certification	1	0

Respondents were asked if they had ever failed a knowledge test, or certification test. Thirty-three responded that they had. A final question asked if respondents were the sole income provider for their family; thirty-one indicated they were.

There were two significant findings: when education was grouped in three-tiers: 1) an Associate's Degree; 2) a Bachelor's Degree; 3) a Master's Degree/ terminal degree as the highest achieved level of education and when predicting grit with people who have the NAD III certification.

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[3] The certifications with an asterisk have been inactivated by the Registry of Interpreters for the Deaf and superseded with ones that the organization felt were more in line with best practices and a clearer understanding on the part of consumers. It is feasible that an active interpreter could hold one or more inactive certifications. They also may hold more current certification.

Table 5. Grit score by years of experience

Grit score by experience, number of respondents, and mean grit scores (N = 92)		
	N	*Mean Score*
0-5 years	3	3.08
6-10 years	15	3.64
11-15 years	22	3.7
16-20 years	16	3.72
21-25 years	16	3.37
26-30 years	5	2.87
31-35 years	9	3.9
36-40 years	3	3
41-45 years	2	4.25
46-50 years	1	4

Table 6. Grit score and educational level

Grit score by group (N = 104)			
Characteristic		*M*	*SD*
Simplified 3-Tier Education (*n*= 91)	Associate's degree	3.38	0.75
	Bachelor's degree	3.43	0.97
	Master's degree or Doctorate	3.99	0.38

Table 6 shows the results of education grouped in three-tiers. Analysis of variance determined the significance: $f(2,90)=4.93$, $p<01$.

When the data was analysed to see if any certification test predicted grit score, analysis of variance determined a significant result for NAD III certification only: $f(26,77)= 2.37$, $p<.01$.

There were two qualitative questions in the study. Participants were asked why they originally chose the interpreting profession and what motivated them to remain in the profession. The answers are summarised in Table 7 below.

The second qualitative question asked respondents what motivated them to work as sign language interpreters. Acting as a language link seemed to provide the biggest motivation for people as it was the most common response (n=28). Money was the second biggest motivator (n=18); the Deaf community was the third most common response (n=17). The variety of interpreting was the motivation (n=10). Other responses were respondents' coworkers/ students (n=6); the challenge of the job (n=5); social justice profession and flexibility (both n=2); and two respondents indicated that there was no motivation for them to continue in the profession.

Table 7. Reasons for initially choosing the interpreting profession

Reasons Respondents Initially Chose the Profession	#
Fell in love with the language and culture	41
Deaf people encouraged	12
Add on to first job	7
"Fell into it"	5
Want to help Deaf people	5
Financial	5
Challenge	3
Other	3
Deaf parents/ siblings	3
Church	3
Fascinated by an interpreter	2
Flexible schedule	2
Someone in the family needed ASL for speech/ speech disorders	2
Just interested	2
Interpreter family member	1

These free-form text responses were grouped according to reason and then further analysed based on the following categories: extrinsic and intrinsic; intellectual, familial, societal, and monetary. Extrinsic reasons were pressures or desires that came from outside the individual, while intrinsic reasons were motivations that were prompted by the individual themselves. Intellectual reasons were comments that consisted of an impetus to work based on a feeling of intelligence. Some examples were the following comments: "I love sign language and was good at it," "I find it fascinating and challenging," and "It's something I enjoy." Familial reasons meant that the individual mentioned that s/he had a deaf/Deaf person in his or her family. Some examples of societal reasons were the following: "I wanted to be in this social justice profession," "My Deaf friends encouraged me to do it," and "The profession chose me," Monetary reasons were when the individual mentioned that they either chose the profession or were motivated to continue in the profession because of the money. Undoubtedly, there could have been overlap between categories.

ANOVA tests demonstrated that there were no differences between groups, nor was there difference between intrinsic and extrinsic motivation scores and their prediction of grit. When looked at on a case by case basis through the use of a non-parametric test (Wilcoxon Signed Ranks Test), neither extrinsic nor intrinsic values changed for the reason people chose the profession and their later motivation for remaining in the profession. Familial reasons were also not significant. There was, however, a significant finding in each of the following categories: intellectual, societal, and monetary.

While 40 respondents initially chose interpreting because they felt it would be an intellectually stimulating profession, less than half (16) of those same individuals listed it as the reason that they were still motivated to continue within the profession ($p<.01$). While 49 respondents initially chose the profession

because of societal reasons, 70 respondents gave that as the reason they were still motivated to continue in the profession (p<.01). Finally, while monetary reasons were given by 3 respondents for initially choosing the profession, 19 respondents listed monetary gain as the reason they were motivated to continue in the profession (p<.01). Results are in Table 8.

Table 8. Reasons for choosing the profession and motivation for continuing

Qualitative Results About Why Respondents Initially Chose the Profession and Why They are Motivated to Continue	# Initially Chose	# Motivated to Continue	p value
Intellectually stimulating	40	16	p<.01
Societal reasons	49	70	p<.01
Monetary reasons	3	19	p<.01

Discussion

To answer the research questions, there are a few variables that can predict grit. A low or high grit score does not seem to be the reason that some interpreters remain in the profession, as individuals who had left the profession had comparable grit scores. The mean score for current ASL/English interpreters was 3.59 and the score for inactive interpreters was 3.63. In this study, there were two significant results: if the individual had a Master's or doctorate level education, and if the individual held NAD III certification. These factors were strongly correlated with grit.

It seems that the longer an individual is willing to be persistent within the profession of ASL/English Interpreting, the more advanced college degrees they could obtain. This could also be interpreted in the converse sense. People who have gone through graduate school know that it takes a certain measure of persistence in order to complete their degree. It could be that they do have a high grit score and, thus, continue their schooling because of it.

There was a significant correlation between individuals who had the NAD III certification test and grit. Five individuals in this sample had an NAD III certification. Out of those five, one had a CT (Certificate of Transliteration), and two had both their CI (Certificate of Interpretation) and CT certifications, and two had an additional NIC (National Interpreter Certification). Because the National Association of the Deaf collaborated with RID to develop their joint certification test (NAD-RID National Interpreter Certification), the NAD certification was phased out in late 2002 (RID, 2015a). Additionally, the CI and CT tests were phased out in 2005 to make way for the joint NAD-RID National Interpreter Certification (RID, 2015b). The fact that these five individuals went on to obtain more current certifications suggests that they were sufficiently gritty to do so. It could be that these individuals really were high in grit, scored poorly on the NAD III, and then came back for subsequent certifications. The NAD III was not known as an advanced certification, but one of a generalist type since there were two higher certifications (NAD IV and NAD V) (RID, 2015c).

Some competing factors identified by the researcher that interpreters may encounter that would either keep them in the field or take them out of the

profession consisted of the following: another vocation, another income, and d/Deaf family members. These competing factors – identified by the researcher based on the understanding of the profession and its practitioners – needed to be ruled out, so that true estimates of grit could be ascertained.

For example, if a person was in the profession because they were single and needed a job to support him or herself, this would be considered as competing against grit, even if at face value it would appear that their persistence should predict a high score. By definition, a person who is high in grit does not tend to quit activities or his/her job when things become difficult. Effectively, if a person simply needs to retain his or her employment, then perhaps perseverance in that activity relates less to grit than to a lack of other options. Another potential competing factor against grit was commitment of a personal rather than a professional nature, such as if a person had a Deaf family member. If the interpreter were still in the profession, that continued involvement might be due to some sense of loyalty to his or her family member. From another perspective however, these scenarios can be interpreted favourably for persistence: for an individual who is single and has to work, it takes grit to do so day in and day out in order to support him or herself and/ or a family; similarly, if a respondent was interested in the profession, learned to sign, had taken a certification test and failed, but was still current in the profession, then that would also speak to his or her true level of grit.

In this study, entry level and advanced interpreters had higher grit scores than those in the mid-years, such as 21-30. Although not statistically significant, grit scores were highest in interpreters who had many years of experience. The findings seem to suggest that the longer an interpreter is in the profession, the higher grit score they have.

The majority of participants did not have Deaf family members. This is to be expected since as Zannirato (2008) contends that spoken language interpreting students now are more likely to be those who have taken a foreign language class and gotten into the profession that way, as opposed to those who are second language learners, rather than native users of the target language. This trend was seen in this study, too. This method of entry into the profession differs considerably from the older profile of signed language interpreters, who previously tended to be drawn from the Deaf community, for example, due to having Deaf parents or other family members. This is important because we are not seeing family members pursue the interpreting profession as much any longer just because they happen to have a Deaf family member. This used to be quite the contrary, since the first interpreters were those who had Deaf family members (Brunson, 2004; Humphrey & Alcorn, 2007).

Regarding the qualitative aspect to this study, the increase between those who originally chose the profession due to societal reasons (49), versus how many listed that as a reason that they were motivated to continue in the profession (70), is heartening. In this study, some examples of societal reasons were those dealing with a love for the Deaf community, an encouragement from deaf friends to continue, a desire to be involved with a social justice profession, and wanting to help interpret in one's religious services. Recently, with the popularity of the Deaf-Heart Movement (Colonomos, 2013; Decker, 2015), it was thought that practitioners had lost their concern for Deaf people to achieve equal status. The Deaf-Heart Movement has surfaced in recent years as a way for Deaf people to discuss what an interpreter needs to do in order to be successful within the

ASL/English Interpreting profession. If an interpreter is not successful or well-received, this tends to be the reason that Deaf people will give: the interpreter did not have DEAF-HEART.[4] This means that the interpreter had no concept of the Deaf experience; was not mindful of what Deaf people need in order to communicate; was not an ally to the Deaf community, and so on. This occurs because current interpreters and interpreter preparation programme students do not socialize as much as they used to in the early days of the profession. They erroneously think they will be able to learn enough about the language and culture of Deaf people in their classes. Although interpreters will never fully understand the Deaf experience (Bridges, 2015; Suggs, 2014), it seems in the current study that they still felt very strongly that societal reasons motivated them to remain in the profession.

Limitations
When taking any survey, there is an inclination to respond in a way that the respondent feels is right or will give the researcher the answers they are seeking. This social desirability limits the validity of any study (Bontempo et al., 2014).

A limitation with the Grit Scale is that some questions are asked in the present tense. As individuals face different tasks in life and take the grit scale, they would not necessarily score the same. The wording of the questions does not allow people to take inventory of their life on a broad scope.

A better way to conduct the study would be to find out where participants live and mail the survey to their home in a self-addressed stamped envelope. When people get out of a profession, they often do not update their information on websites dedicated to that respective profession; therefore, current contact information is needed. Face to face interviews would be the best way to ensure a high response rate.

Another limitation was the sample size, especially relating to finding those ASL/English interpreters who had gotten out of the profession. This affects the generalizability of the results.

Some questions on the demographic lacked specific information, such as the question which asked how long the respondent had been in the profession, but not the actual age of the respondent. This prohibits the researcher from making inferences. For instance, someone could have pursued this profession later in life and had 5 years in the profession before leaving it, but be 50 years old.

Suggestions for Future Research
Although Duckworth et al. (2007) did a confirmatory factor analysis on samples of adults for their research (Duckworth & Quinn, 2009), it has never been conducted on this population of ASL/English interpreters. That would be helpful in norming the test for this population of individuals. It would be beneficial to include a question regarding participants' age on the demographic survey, which this study did not do. The demographic survey enquired as to the respondents' year of experience, but no actual question about age was asked.

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[4] This convention of writing out words in all capital letters is the way that glossing in American Sign Language is done. This means that there are signs for each of these words and the words function as a compound, meaning that the two signs work together to mean one thing.

What researchers do know about grit is that it is something people are typically born with. People tend to have certain levels of grit, but those levels can fluctuate depending on situational factors and other life events of the individuals. Researchers also know from Dweck's (2006) growth mindset that people can change, as long as others encourage them in the process. How can this study inform future training of signed language and spoken language interpreters? It may be an area for future research to pair up students after their grit score is assessed. If a person with high grit were paired with someone with low grit, perhaps it would assist in retention rates of students. Although it would be helpful to know the scores, it would not be appropriate to solely use the level of grit to allow or disallow a student entry into an interpreter preparation program. It is an essential piece of the puzzle when it comes to looking at the whole student.

It was not borne out in this study that ASL/English interpreters who leave the profession do so due to low grit. By definition, people who are gritty tend to stay in difficult situations, even when faced with trials. Sign language interpreters are leaving the profession, but appear to have grit scores that rival active interpreters. Accordingly there must be other factors in play, but unfortunately there were not enough inactive interpreters in the current study to draw any conclusions. Perhaps other studies could be undertaken to further inform the profession. Qualitative studies may reveal a broader picture of the situation.

This study attempted to introduce the construct of grit to the signed and spoken language literature. No studies had been conducted until this point in time dealing with grit, as defined by Duckworth et al. (2007). Both grit and personality can incorporate traits such as persistence, perseverance, and motivation. Because of that, the two are highly intertwined. This study is not proposing that someone with a low level of grit cannot be successful. It may, however, allow the student to remain in training or the profession when hardships come, instead of succumbing to burnout.

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