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# Deliberate Practice in Professional Speaking Expertise

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The University of San Francisco

DELIBERATE PRACTICE IN PROFESSIONAL SPEAKING EXPERTISE

A Dissertation Presented to  
The Faculty of the School of Education  
Learning and Instruction Department

In Partial Fulfillment  
of the Requirement for the Degree  
Doctor of Education

By  
Helen Lie  
San Francisco  
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THE UNIVERSITY OF SAN FRANCISCO

Dissertation Abstract

Deliberate Practice in Professional Speaking Expertise

The purpose of this study was to explore expertise development in professional speaking from the perspective of deliberate practice. A convenience sample of 10 elite and 12 experienced professional members of the National Speakers Association participated in 30-60 minute phone interviews in which they described behaviors and activities that contributed to their skill development in speaking and what factors motivated them to pursue excellence in their craft. The group of elite subjects averaged 62.9 years of age ( $SD = 8.03$ ) and 34.9 years ( $SD = 7.78$ ) of professional speaking experience. The experienced group had an average age of 53.3 years ( $SD = 13.14$  years), and an average of 22 years ( $SD = 12.42$ ) of professional speaking experience. Interviews were recorded and transcribed.

Bricolage analysis of the interview data resulted in the identification of 16 potential deliberate practice activities and 9 factors that motivated professional speakers to engage in skill development activities. A follow-up questionnaire with a total of 65 items was administered in order to obtain measures for frequency of engagement, perceived relevance to expertise development, and perceived effort required to engage in each of the 16 activities. The questionnaire also included 9 items on motivation, a 5-item life-

satisfaction scale, and 3 biographic questions. Eighteen participants completed the follow-up questionnaire (response rate of 82%).

Five themes emerged from the data that are indicative of deliberate practice in professional speaking: community, attitudes, self-development and learning, experience and repetition, and self-monitoring and feedback. Four types of motivational factors appeared to support deliberate practice engagement among professional speakers: passion, temperament, supportive environment, and practical necessity. No statistically significant differences were observed between experienced and elite professional speakers in their deliberate practice behaviors, motivation for deliberate practice, and life satisfaction ratings. The frequency, relevance and effort scales in the questionnaire instrument possessed strong reliability measures (Cronbach's alpha = .85, .86, and .84, respectively). Implications for deliberate practice research and public speaking pedagogy are discussed.

This dissertation, written under the direction of the candidate's dissertation committee and approved by members of the committee, has been presented to and accepted by the Faculty of the School of Education in partial fulfillment of the requirements for the degree of Doctor of Education. The content and research methodologies presented in this work represent the work of the candidate alone.

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-Helen Lie

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## CHAPTER I

### STATEMENT OF THE PROBLEM

Nearly half a million college students enroll in a public speaking or oral communication course every year (Pearson, Child & Kahl, 2006). The basic oral communication course is a staple of communication departments (Goulden, 2002; Morreale, Hanna, Berko, & Gibson, 1999), considered to be foundational to the overall success of the department program (Sawyer & Behnke, 2001). The basic course serves as a gateway to the discipline, introducing undergraduates to communication skills and theories (Morreale, Hugenberg, & Worley, 2006). Research indicates that students who complete the basic course have increased perceptions of self-esteem and communication effectiveness, reduced speech anxiety and improved grades (Dwyer, Carlson, & Kahre, 2002; Dwyer & Fus, 2002; Morreale, Hackman, & Neer, 1995, 1998).

A main objective of the basic course is to further students along their journey towards expertise in public speaking (Finn, Sawyer & Schrod, 2009), but there is limited research on what public speaking expertise is to guide effective pedagogy (Levasseur, Dean & Pfaff, 2004). Several studies have explored the speech preparation process of students in the basic course and have shed some light on what factors may be associated with higher speech grades (Menzel & Carrell, 1994; Pearson, et al., 2006), the role of speech anxiety in speech preparation (Ayres, 1996; Daly, Vangelisti, & Weber, 1995), the effect of practice on speech grades (Smith & Frymier, 2006) and anxiety (Ayres & Schliesman, 1998). Only one study investigated the instructional methods of teachers of

advanced public speaking (Levasseur, Dean & Pfaff, 2004). More research is needed to explore the nature of public speaking expertise and how it is developed.

Ericsson's concept of deliberate practice may provide a useful framework in which to study the phenomenon of public speaking expertise development. Deliberate practice generally refers to personalized and structured training, often designed by a teacher or coach, that facilitates improvement in performance (see Ericsson & Charness, 1994, p.739). Whereas routine practice may involve practicing what one already knows to do well, deliberate practice involves identifying weaknesses or areas of improvement and practicing until those areas are strengthened. Upholding the generally accepted rule that ten years or 10,000 hours is the minimum amount of experience necessary to attain expertise in a complex domain (Ericsson, Roring, & Nandagopal, 2007; Simon & Chase, 1973; Chi, Glaser & Farr, 1988; Ericsson & Charness, 1994), Ericsson asserts that a person's ultimate level of performance in a skill is directly related to the amount of deliberate practice a person engages in consistently over time (Ericsson and Tesch-Romer, 1993).

In a study comparing the activities of expert and non-expert violinists and pianists who were similar in age and years of experience, Ericsson, Krampe, and Tesch-Romer (1993) observed that elite performers practiced significantly more than their less accomplished counterparts. The researchers concluded that expert performance was not an automatic result of accumulated experience, but rather the fruit of deliberate efforts to improve performance over time. Referred to as deliberate practice, these effortful activities have several characteristics: a) well-defined tasks; b) at an appropriate level of

difficulty for the learner; c) specifically designed to improve performance; d) with feedback; and e) opportunities to repeat and correct any errors (de Bruin, Smits, Rikers, & Schmidt, 2008; Ericsson & Charness, 1994; Ericsson et al., 2007; Williams, Farmer, & Manwaring, 2008).

Deliberate practice has been applied to numerous domains. Table 1 identifies the ways deliberate practice has been defined or described across different domains in six studies. Although the operational definitions of an expert vary in the literature, the research generally indicates that expert performers engage in some form of extended effortful practice, compared to their less exemplary peers, and that the amount of deliberate practice is positively related to performance measures. A primary issue addressed in the literature on deliberate practice is what constitutes deliberate practice in a given domain. In other words, what effortful activities do experts in a particular field engage in for the purpose of improving performance? In addition, how often do experts engage in these activities? Research on the structure of deliberate practice can help inform training and instruction in those fields (Ericsson, 2002).

In studies of expertise in chess, music and sports performance, experts were identified according to achievement or rankings in national or international level competitions (Campitelli & Gobet, 2008; Charness, Tuffiash, Krampe, Reingold, & Vasyukova, 2005; de Bruin, Smits, Rikers, & Schmidt, 2008; Ford, Ward, Hodges, & Mark Williams, 2009); raw performance scores (Hodges, Kerr, Starkes, Weir, & Nananidou, 2004; Keith & Ericsson, 2007); or by membership in elite performance groups (Ericsson et al., 1993; Krampe & Ericsson, 1996; Ward et al., 2007).

Table 1

*Examples of Deliberate Practice Activities Across Domains*

Domain	Deliberate Practice Activities	Citation
Chess	Total cumulative hours of group practice and individual practice	Campitelli & Gobet (2008)
Piano	Average time spent in solo practice per week	Meinz & Hambrick, 2010
Soccer	Average hours per year of soccer practice, time spent practicing technical skills and strategic decision-making activities	Ward et al. 2007; Ford et al. 2009.
Teaching	Preparing materials, mental planning, evaluation of written work, informal evaluation	Dunn & Shriner, 1999
Medical Student Achievement	Hours of self-directed study and study-related activities, number of books owned, number of articles read per month.	Moulaert et al. 2004
Insurance Agent Sales	Preparation, mental stimulation, asking for feedback, consulting colleagues, concluding and assessing	Sonnentag & Kleine, 2000

Deliberate practice has also been studied in professional work settings. In these studies, experts were defined according to years of experience (Dunn & Shriner, 1999; van de Wiel et al. 2004) or job performance ratings of supervisors (Sonnentag & Kleine, 2000). In the professional domain of teaching, for example, Dunn and Shriner (1999) found that preparing instructional materials, mental planning, student evaluation activities and written planning were deliberate practice activities for teachers when these activities were performed with a) a conscious goal to improve student learning and b) monitoring



and reflection as to what was and was not working. Teachers varied in the frequency and amount of time they spent in these activities. In another study, Van de Wiel, Szegedi, and Weggeman (2004) found that asking expert colleagues for advice and evaluating assignments were the most commonly reported deliberate practice activities for expert organizational consultants.

The present study applied deliberate practice to the domain of professional speaking. Public speaking is a skill that can become one's profession; i.e., a skilled speaker may receive pay for giving a speech and thereby make his or her living. The National Speakers Association is a professional association for speakers that provides resources, education and guidelines to develop the skills of its members and promote the field of professional speaking. Prior to this study, there had been no empirical research on expertise development of professional speakers. This study aimed to address the need for more communication research on the nature of public speaking expertise (Goulden, 2002). By investigating what professional speakers have done to develop their skill, the researcher hoped to identify behaviors, exercises, or other factors that may be pedagogically useful in the public speaking classroom.

#### Purpose of the Study

The four-fold purpose of the study was to: a) assess whether deliberate practice exists in professional speaking; b) generate detailed descriptions of deliberate practice in professional speaking; c) examine what motivates professional speakers to engage in deliberate practice; and d) compare deliberate practice behaviors and motivations of elite and experienced professional speakers. The fourth purpose was consistent with past

studies on deliberate practice that have compared deliberate practice behaviors of expert and non-expert groups to identify any skill-level differences in the structure of deliberate practice (de Bruin et al., 2008; Duffy, Baluch & Ericsson, 2004; Dunn & Shriner, 1999; Ericsson et al., 1993; Ford et al., 2009; Krampe & Ericsson, 1996; Sonnentag & Kleine, 2000; van de Wiel et al., 2004; Ward et al., 2007). Structure of deliberate practice referred to the specific activities that individuals do during their practice time and the frequency of these activities (Ward et al., 2007).

To complete this study, 10 elite and 12 experienced professional speakers were interviewed to investigate the structure of deliberate practice in their profession and what motivated them to engage in deliberate practice. The group of elite subjects was a convenience sample of 10 members of the National Speakers Association (NSA) who had earned the CPAE award and CSP designation. The CPAE award is an elite recognition for lifetime achievement in professional speaking awarded by the NSA to up to five members per year. The CSP is an internationally recognized designation conferred by the NSA to those who demonstrate exceptional competence in professional speaking skills (National Speakers Association, n.d.). CSP's are considered to represent the top ten percent of the professional speaking community. Earning the CSP designation is a five-year process.

Given the generally accepted rule that expertise development takes ten years or 10,000 hours, and the use of the ten-year minimum as a guideline to identify experts in a previous study (Dunn & Shriner, 1999), another criteria for the elite speaker group was that participants had to have at least ten years of professional speaking experience.

Professional speaking experience was defined for the purpose of the study as the number of years since the person's first paid speech, or the number of years in which the person held a paid position in which their primary role was giving speeches or presentations.

Please note, insofar as the CPAE award was a lifetime achievement award, CPAE award recipients typically possess well over ten years of professional speaking experience.

Initial access to the elites was attained through a senior NSA member who was a personal contact of the researcher.

The experienced speakers in the study were a convenience sample of 12 NSA members who had at least ten years of professional speaking experience, and had not received the CPAE award, nor obtained Certified Speaking Professional (CSP) status. By defining the second group as experienced NSA members who are non-CSP and non-CPAE award recipients, I attempted to identify a sample of professional, experienced speakers who, for whatever reason, had not pursued or obtained a particular status in their domain. The lack of CSP status or a CPAE award may not necessarily mean the NSA member did not have outstanding speaking ability, but for practical matters I defined the elite group according to a select, exclusive designation that was conferred by peers in the industry.

Approximately 30-60 minute interviews were conducted using a semi-structured interview protocol over the phone. Interviews were audio-recorded with participant consent and transcribed for data analysis. After initial analysis of interview data, a follow-up questionnaire was administered identifying potential deliberate practice activities and asking respondents to rank each activity for frequency of engagement,

effort required, and relevance to expertise development. In addition, the questionnaire included items relating to motivational factors for deliberate practice engagement, and degree of life-satisfaction.

### Significance of the Study

This study was important for three reasons. First, the study addressed the need for more communication research that explores the development of public speaking expertise, particularly at elite and experienced professional levels of skill. By applying the deliberate practice concept to the domain of professional speaking for the first time, the study also responded to the call for more research on the structure of effective practice in various domains (Ericsson, 2009; van de Wiel et al., 2004; van Gog, Ericsson, Rikers & Paas, 2005).

Second, the study addressed the need for a different methodology in deliberate practice research to elicit more detailed descriptions of deliberate practice. With the exception of one study (Dunn & Shriner, 1999), studies on deliberate practice in the professions have typically used a structured interview or questionnaire approach. Researchers presented participants with a pre-selected list of activities to which participants reported the frequency and duration of their engagement in each activity, and ratings for relevance, effort and enjoyment of each activity. This study used qualitative interviews to investigate deliberate practice in order to shed more light on the microstructure of practice, which has been under-researched (Ward et al., 2007).

Third, this study contributed to research that examined what motivates individuals to engage in deliberate practice. What factors predispose individuals to commit

themselves to deliberate practice over a long period of time may be keys to explaining individual differences in performance (Ericsson & Charness, 1994). Several studies examined this question of motivational factors that underlie deliberate practice engagement (Ford et al., 2007; Vallerand, Salvy, Mageau, Elliot, Denis, Grouzet, & Blanchard, 2007; Vallerand, Mageau, Elliot, Dumais, Demers, & Rousseau, 2008; Ward et al., 2007). More research was needed to confirm the findings of these previous studies as well as bring to light additional motivational factors that contribute to deliberate practice engagement in professional speaking.

### Theoretical Framework

Ericsson's concept of deliberate practice provided the theoretical framework for this study. Deliberate practice was defined as "those activities that have been found most effective in improving performance" (Ericsson et al., 1993, p.367). According to Ericsson, a deliberate practice activity satisfies four conditions for optimal learning: a) the subject must be motivated to improve and diligently engage in the activity; b) the activity must be designed to address the specific learning needs of the subject, taking into account his or her pre-existing knowledge; c) immediate and helpful feedback must be provided to the subject regarding the results of his or her performance; and d) the subject should be able to repeat the task or similar tasks several times.

The extent to which researchers have upheld these conditions in defining deliberate practice has varied. Some have adhered closely to Ericsson's original definition in studying deliberate practice in a domain (Krampe & Ericsson, 1996; McKinney & Davis, 2003; Ward et al., 2007). Most have applied the concept of

deliberate practice generally (Campitelli & Gobet, 2008; Charness et al., 2005; de Bruin, et al. 2008; Dunn & Shriner, 1999; Ford et al., 2009; Hodges et al., 2004; Moulaert et al., 2004; Sonnentag & Kleine, 2000, van de Wiel et al., 2004), choosing to investigate those activities that are engaged in for the purpose of improving performance, but not necessarily verifying the fulfillment of all four conditions that were stipulated by Ericsson and colleagues (1993). In this study, deliberate practice was defined generally as activities that speakers engage in for the purpose of developing or maintaining their speaking skills. Notwithstanding, the activities that emerged in the study collectively confirmed Ericsson's criteria: the need for motivation, the ability to repeat an activity and receive helpful feedback, and the need to tailor the activity to the needs of the learner.

Where Ericsson's original framework does not fit the domain of professional speaking is in the matter of distinguishing deliberate practice from work and play. In professional speaking, speakers may be practicing, i.e., honing their skills, improving their craft, while also receiving pay, recognition and other external rewards. Moreover, a professional speaker may find inherent pleasure in performing a speech for an audience.

Ericsson and colleagues (1993) distinguished deliberate practice as separate from work and play. Work was defined as those activities that a person does for pay or other external rewards, such as public performance. Play was characterized as inherently enjoyable activities that are done without any explicit goal in mind other than to have fun. Deliberate practice, in contrast, was characterized as activities that are not inherently enjoyable, although they may be (Ward et al., 2007), and are done with the explicit goal

of improving one's performance. The differences between these three activities are described in Table 2.

Table 2

*Ericsson's Distinctions Between Work, Play and Deliberate Practice and Where Professional Speaking Fits In*

	Work	Play	Deliberate Practice
Goal	For pay, external rewards	For pleasure, inherently enjoyable activities	For skill improvement
Examples	Competitions, public performance	A pick-up game, jamming session	Speed drills, monitored practice with feedback
Professional Speaking	Speaker receives pay or promotion by giving a speech	Speaker derives pleasure and satisfaction from giving a speech	Speaker strives for refinement, reflects, receives feedback that leads to ongoing improvement

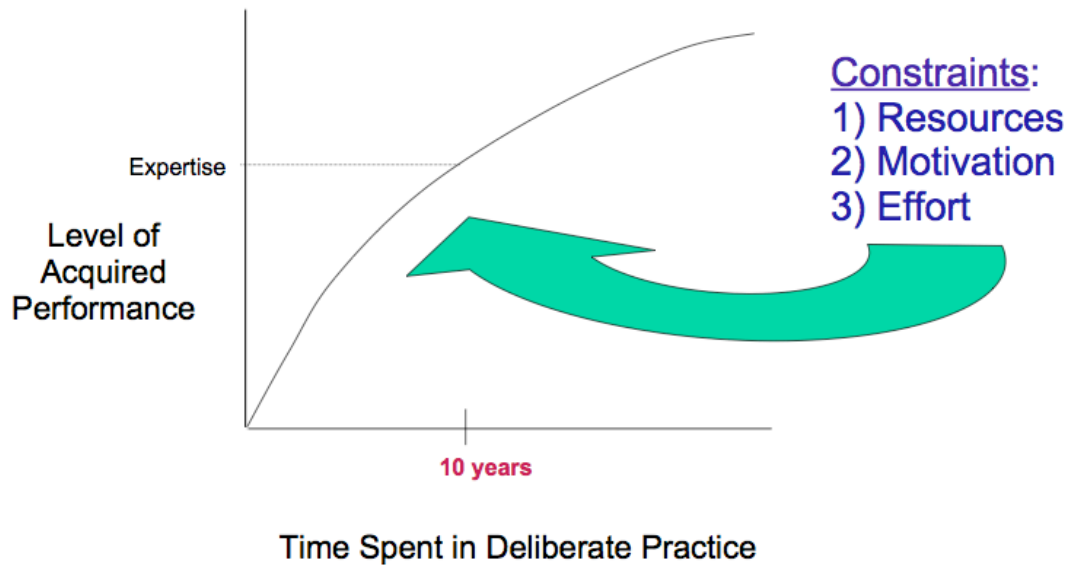
In professional speaking, each time a speaker delivers a speech to an audience, whether it is for pay or no pay, he or she may be improving his or her craft, and receiving some external reward, such as the admiration of the audience, which brings the speaker enjoyment from the activity. Thus, the act of delivering a speech itself may have aspects of work, play and deliberate practice. Table 2 also identifies the ways in which professional speaking concomitantly has characteristics of work, play and practice. Of course, when a speech does not go well, (e.g., the speaker gets negative feedback from the audience,) the act of giving a speech may then have stronger characteristics of deliberate practice more than play, for example. The point is that Ericsson's distinction

between work, play and deliberate practice may not be as applicable in the domain of professional speaking for the reasons just explained.

Ericsson's deliberate practice theory asserts that over a ten-year period, individuals who engage in more deliberate practice will outperform their peers who possess comparable years of experience. A primary tenet of Ericsson's deliberate practice concept is the monotonic benefits assumption shown in Figure 1 (Ericsson, Krampe & Tesch-Romer, 1993). This assumption states that an individual's current level of performance is directly related to the cumulative time spent in deliberate practice. Ten years or 10,000 hours of experience in a domain with deliberate practice are generally required to achieve expert levels of performance. Once expert levels are attained, continued improvements in performance can be accomplished through ongoing deliberate practice.

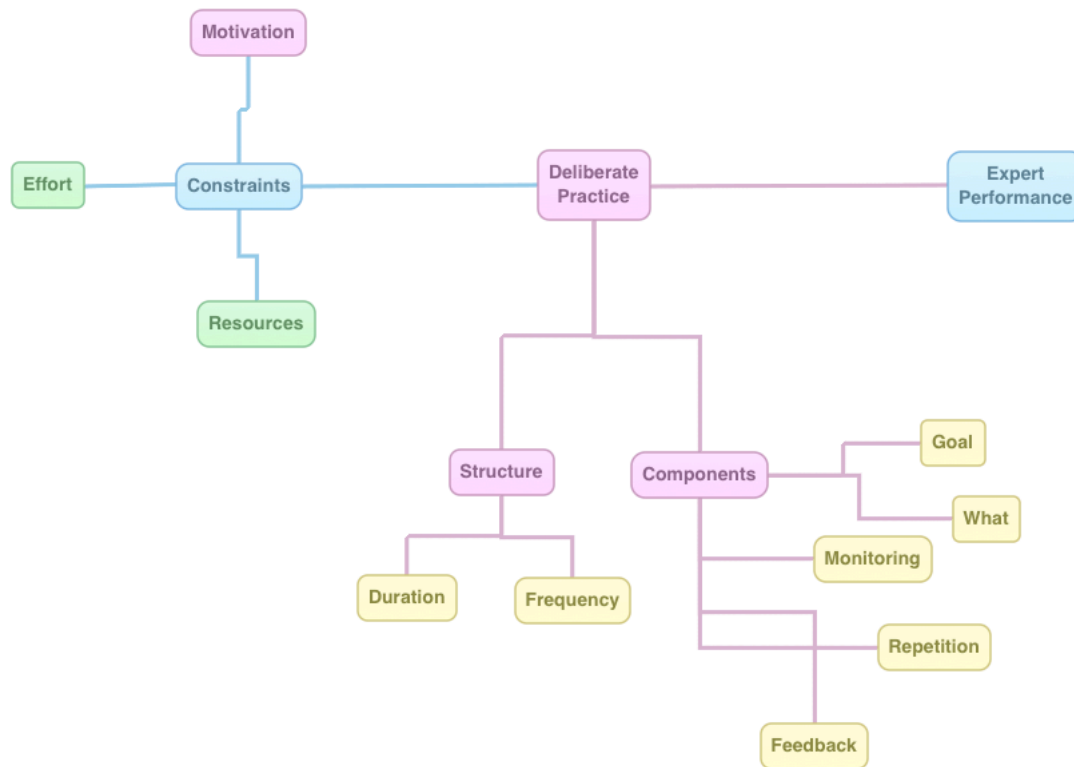
It is important to note that not everyone can engage in deliberate practice. According to Ericsson's model, an individual who engages in deliberate practice must be able to negotiate three constraints, which are identified in Figure 1: a) the need for motivation to engage in deliberate practice when such practice is not inherently enjoyable, b) the need for access to resources such as time, energy, good teachers, and practice facilities; and c) the need to avoid exhaustion and give time for periods of recovery. When you narrow the group to those who meet these criteria and control for factors such as years of experience, Ericsson predicts that the amount of deliberate practice will be the variable that explains individual differences in performance (Ericsson et al., 1993).





*Figure 1.* Ericsson's Monotonic Benefits Assumption. Adapted from "The Role of Deliberate Practice in the Acquisition of Expert Performance," by K.A. Ericsson, R. Krampe, & C. Tesch-Romer, 1993, *Psychological Review*, 100.

The deliberate practice framework is depicted in Figure 2 below. The chief claim is that deliberate practice over time leads to expert performance. Deliberate practice can be understood in terms of structure and components. Structure refers to the duration of an activity and the frequency with which it is done. The components of deliberate practice refer to the actual tasks involved and may include monitoring, feedback, repetition, and goal setting. The three constraints of deliberate practice are depicted on the left side of the figure.



*Figure 2.* Deliberate Practice Over Time Leads to Expert Performance.

Of particular interest to this study were deliberate practice and the motivational constraints that are overcome to engage in deliberate practice. Motivation for deliberate practice has been addressed in several studies (Ford et al., 2009; Vallerand, Salvy, Mageau, Elliot, Denis, Grouzet, & Blanchard, 2007; Ward et al., 2007). Some explanations of motivation for deliberate practice have been the presence of influential others (Ward et al., 2007), passion (Vallerand et al., 2007), and performance-avoidance goals (Bonneville-Roussy, 2011). These explanations from the literature helped to inform the interpretation of the interview data in the present study.

In addition to probing for motivational factors that supported deliberate practice,

this study's interview questions sought to elicit examples and descriptions from participants of practice activities. After analysis of interview data, a list of 16 possible deliberate practice activities were identified. Follow-up questionnaires were administered to get information from participants as to the frequency of their participation in each activity, their perceived relevance of each activity to their skill development, and the degree of effort required to participate in each activity. The follow-up questionnaire also had participants rank their agreement as to the extent that motivational factors that emerged in the interviews did contribute to their

### Background and Need

The public speaking course generally teaches students how to prepare and deliver speeches, in order to become more effective oral communicators. There has been a substantial body of research in communication education spanning 30 years that has examined methods to reduce fear of public speaking in the basic course (Finn, Sawyer & Schrodt, 2009). But when it comes to examining public speaking expertise and methods to teach it, the research is very limited (Levasseur, Dean, & Pfaff, 2004).

I conducted several searches in the *Communication and Mass Media* database, limiting results to peer-reviewed articles published in academic journals in the years 1990 to the present in order to focus on more recently published articles. Using various combinations of the search terms "public speaking," "speech," "preparation," "practice," "skill," and "expertise," I found 11 relevant studies, which are identified in Table 3 below. In a subsequent search of the same database using the same terms for articles published prior to 1990 yielded zero empirical studies.

Table 3

Communication Studies Published Between 1990-2011 on Public Speaking Skill,  
Practice, Preparation

Author(s) (Year of Publication)	Title
Ayres (1996)	Speech preparation processes and speech apprehension.
Ayres & Schliesman (1998)	Practice makes perfect but does it reduce communication apprehension?
Christenfeld (1995)	Does it hurt to say um?
Daly, Vangelisti, & Weber(1995)	Speech anxiety affects how people prepare speeches: A protocol analysis of the preparation processes of speakers
Levasseur, Dean, & Pfaff (2004)	Speech pedagogy beyond the basics: a study of instructional methods in the advanced public speaking course
Menzel & Carrell (1994)	The relationship between preparation and performance in public speaking.
Mitchell & Nelson (2007)	Don't drink and speak: The relationships among alcohol use, practice, motivation, anxiety and speech performance.
Pearson, Child & Kahl (2006)	Preparation meeting opportunity: How do college students prepare for public speeches?
Smith and Frymier (2006)	Get 'real': Does practicing speeches before an audience improve performance?
Taylor (1990)	How do speech teachers prepare their speeches?
Thomas, Tymon Jr., & Thomas (1994)	Communication apprehension, interpretive styles, preparation and performance in oral briefing

The topics of the studies listed in Table 3 above are diverse. A handful of studies have looked at what student speech preparation behaviors are associated with higher speech grades (Pearson, Child & Kahl, 2006; Menzel & Carrell, 1994; Mitchell & Nelson, 2007), and how anxiety affects speech preparation and delivery scores for undergraduate students in the basic course (Ayres, 1996; Daly, Vangelisti & Weber, 1995; Mitchell & Nelson, 2007).

Two studies have examined the benefits of practice on performance (Smith & Frymier, 2006) and speech anxiety (Ayres & Schliesman, 1998) in the basic course. One interesting study by Christenfeld (1995) examined the influence of verbal disfluencies on audience perceptions of the speaker. Two studies that addressed pedagogical issues were by Taylor (1990) on how speech teachers prepare speeches (Taylor, 1990) and by Levasseur, Dean and Pfaff (2004) on instructional methods used in advanced speaking courses.

With the exception of the Levasseur et al. (2004) study, it appeared there had been no research in communication that attempts to explore the nature of speaking expertise and how it is obtained, particularly from the perspective of professional public speakers. This study filled this gap by studying public speaking expertise from the perspective of deliberate practice. Before explaining what deliberate practice is and why the theory is relevant to the study of public speaking expertise, I provide a context for the theory itself.

Four decades of expertise research have resulted in a consensus around some general characteristics of expertise. These characteristics of expertise are that it is domain-specific and does not transfer to other areas (Chi, 2006; Feltovich, Prietula, &

Ericsson, 2006); experts organize and store their knowledge in chunks of information (Chase & Simon, 1973; Feltovich et al., 2006), experts perform basic processes automatically (Schneider, 1985; Feltovich et al., 2006); experts' mental representation of a problem is more principled and less rule bound than novices (Chi, Glaser, & Farr, 1988; Chi, 2006); experts are more self-aware than novices when they make mistakes (Chi, 2006); experts reflect on their performance and processes (Feltovich et al., 2006); and expertise is an adaptation of mental and even physical processes (Chi et al., 1988; Ericsson & Ward, 2007; Feltovich et al., 2006).

Notwithstanding agreement around the general characteristics of expertise, there are competing views and theories of what factors lead to expertise development (Rikers & Paas, 2005). Traditional views emphasize the role of innate abilities such as talent and intelligence on the development of expertise (Ericsson, 2004). This view leads to judgments of expertise based on a person's performance in interviews or on standardized tests. Traditional theories of expertise emphasize the importance of experience and training, which lead to judgments of expertise based on the number of years a person has worked in a field, his/her credentials, or other subjective social indicators, such as peer group nominations (Ericsson & Charness, 1994).

Ericsson's deliberate practice theory emerged as a persuasive alternative to traditional theories and has gained prominence in the literature (Ericsson, Krampe & Tesch-Romer, 1993; Ericsson & Charness, 1994). Deliberate practice theory posits those who outperform their peers are those who have engaged in purposeful, targeted, and ongoing practice, which enables them to continuously improve their performance

(Ericsson & Charness, 1994). Ericsson stated that it is not talent or innate abilities, but deliberate practice that best explains achievement (Ericsson et al., 1993; Ericsson et al., 2007).

In their pioneering set of studies, Ericsson, Krampe and Tesch-Romer (1993) used structured interviews and diaries to compare the current and cumulative amounts of practice among expert and less accomplished violinists and pianists. The researchers collected detailed biographical information, including how many music teachers the participants had, number of competitions, at what age participants had started playing their instruments, and how many hours they had practiced each week of each year since the time they started. Participants also rated activities for relevance to skill improvement, effort needed for practice engagement, and enjoyment of the practice activity itself. Through these procedures, the researchers found that practicing alone received the highest rating for relevance to skill improvement. Other activities that were identified as highly relevant to skill improvement were studying music theory, listening to music and sleeping. The researchers also learned that the more accomplished violinists spent 3 times more time practicing than the less accomplished group.

When comparing expert and amateur pianists, Ericsson and colleagues (1993) found more pronounced differences in both starting age and time spent in practice. Expert pianists started on average 4 years earlier than amateurs and experts' current hours spent practicing exceeded that of amateurs by ten times. The researchers also had the pianists perform a battery of musical, nonmusical, and skill-related tasks. Three successive hierarchical regression models were used to analyze measures of performance

in skill-related tasks, with skill-level factor entered first and accumulated practice entered as a second step. Skill-level was removed in the third step in order to analyze the degree to which amount of cumulative practice alone could account for differences in performance. The researchers found that cumulative hours of practice explained 42 - 75% of variance in performance on six skill-related tasks [ $R^2 = .42 - .75$ ,  $p < .001$ ].

The significant relationship between amount of practice and skill level has been confirmed in other studies of deliberate practice in the domains of chess (Campitelli & Gobet, 2008; Charness et al., 2005; deBruin et al., 2008); dart throwing (Duffy et al., 2004); soccer (Ford et al., 2009; Ward et al., 2007); swimming (Hodges et al., 2004); medical student achievement (Moulaert et al., 2004); and typing (Keith & Ericsson, 2007). In these studies, skill level was based on a performance test (Keith and Ericsson, 2007; Hodges et al., 2004; Moulaert et al., 2004), a skill rating (Campitelli & Gobet, 2008; Charness et al., 2005; de Bruin et al., 2008), or attainment of professional or elite standing (Ericsson et al., 1993; Ford et al., 2009; Ward et al., 2007). Data collection procedures were similar to the Ericsson et al. (1993) study, using one or a combination of the following: questionnaires, semi-structured or structured interviews, and diaries.

The concept of deliberate practice has been applied to professional domains where measures of performance are less concrete than numerical ratings, test scores, or achievement in elite competitions. In work settings, such as teaching (Dunn & Shriner, 1999), insurance sales (Sonntag & Kleine, 2000), and organizational consulting (van de Wiel et al., 2004), researchers have investigated what activities professionals in these domains engage in to improve their competence or remain competitive in their fields.



The objective of this research was to identify what may constitute deliberate practice in a profession, and whether there is a relationship between amount of deliberate practice engagement and professional achievement or performance.

The study of deliberate practice in professional domains suggested the theory may be applicable to the study of expertise in public speaking. As stated earlier, there appeared to be very limited research on expertise development in public speaking. This study attempted to address this gap by testing the usefulness of deliberate practice as a framework to describe expertise development in public speaking.

Due to difficulties identifying objective measures of public speaking performance, this study did not examine the relationship between amount of deliberate practice and measures of performance, as other studies have done (Campitelli & Gobet, 2008; de Bruin et al., 2008; Duffy et al., 2004; Hodges et al., 2004; Keith and Ericsson, 2007; Meinz & Hambrick, 2010; Moulaert et al., 2004; Sonnentag & Kleine, 2000). This study focused on assessing whether deliberate practice theory applies to the domain of public speaking, and if so obtaining descriptions of deliberate practice in public speaking.

To the extent that deliberate practice was found to exist in public speaking, this study also examined what motivated public speakers to engage in this type of practice. Ericsson's deliberate practice theory presumes the individual has sufficient motivation to engage continuously in diligent practice (Ericsson et al., 1993). There are several possible sources of motivation to engage in deliberate practice. For example, some may possess a passion for a particular activity that motivates them to devote their time and energies to master a skill (Ericsson et al. 2007; Ward et al., 2007; Vallerand et al., 2007),

some may display a talent (Ericsson et al., 1993), or certain individuals may possess a temperament that is more pre-disposed to effort and perseverance (Ericsson & Charness, 1994). One's environment and support system may also be tied to motivation (Ericsson & Charness, 1994). The present study sought to identify motivational factors that lead to deliberate practice engagement among professional speakers.

### Research Questions

This study addressed four research questions:

RQ1: Does deliberate practice exist in professional speaking?

RQ2: If so, what does deliberate practice in professional speaking look like?

RQ3: What motivates professional speakers to engage in deliberate practice?

RQ4: How do deliberate practice behaviors and motivational factors differ among elite experienced professional speakers?

### Definition of Terms

Deliberate practice was defined as any activity that met the following four criteria: a) had a goal of performance or competence improvement; b) was maintained with some frequency for at least one year; c) was considered relevant to performance or competence improvement.

Elements of deliberate practice may have included a description of the activity, the goal of the activity, the frequency with which the activity was engaged, the time spent on the activity, the type of monitoring and feedback that accompanied the activity, and the extent to which the activity was repeated.

Elite Professional Speakers were defined as professional members of the National Speakers Association (NSA) who had at least ten years of experience, earned Certified Speaking Professional (CSP) status, and had been awarded the Council of Peers Award for Excellence (CPAE). The National Speakers Association is the leading association for professional speakers. The CSP certification is the highest designation for speaking competence awarded by the NSA and the International Federation for Professional Speakers (National Speakers Association, n.d.). The CPAE is a life-time achievement award conferred to up to five members of the NSA per year who have been approved by committee vote based on several criteria, including the speaker's style, delivery, professionalism, and communication ability (Rebecca Morgan, personal communication, May 18, 2011). The CPAE award is also known as the Speakers Hall of Fame.

Experienced professional speakers were defined as professional members of the NSA who had: a) ten years or more of professional speaking experience and b) had neither received the CPAE award, nor earned Certified Speaking Professional (CSP) status.

Professional speaker was defined as a person who held a paid position in which their primary task was to give speeches.

Motivation in this study referred to any reason cited by a participant in the study as supporting his or her initial and continuous deliberate practice engagement.

Years of speaking experience was defined as the number of years a person had held a paid position in which their major function was to give speeches and presentations.

## CHAPTER II

### REVIEW OF THE LITERATURE

This chapter is organized into four sections. The first section presents communication research related to speech preparation, practice, and pedagogy. The second section discusses the concept of deliberate practice in detail. The third section presents the research on deliberate practice. The final section summarizes the literature review, highlighting areas of need in the literature the present study seeks to address.

#### Studies Related to Speech Practice, Preparation, and Pedagogy

A number of studies in communication have addressed topics of speech practice and preparation of students, and a few studies have addressed issues relating to the teaching of public speaking. One study by Levasseur, Dean and Pfaff (2004) explored expertise development in public speaking by investigating the content and instructional practices of advanced public speaking instructors. No known studies have investigated the practice behaviors or expertise development path of professional public speakers. In this section, the studies on speech preparation and practice, followed by studies relating to public speaking pedagogy are reviewed. This discussion provides a necessary survey of the content of communication research in public speaking and establishes the need for further research on public speaking expertise.

#### *Studies on Speech Preparation and Practice*

A study by Thomas, Tymon, and Thomas (1994) examined the role of interpretive styles as an influence on speech anxiety, as well as the relationship between communication anxiety, performance and preparation. Interpretive styles referred to the

process by which people draw conclusions about themselves in relation to the outcome of a task they have performed. Interpretive styles influence a person's level of stress and job satisfaction. The interpretive styles include *deficiency focusing*, which involves preoccupation with what did not go well in a performance, and attributing wrong to oneself; *skill recognition*, which is when people attribute success to their abilities; *envisioning success*, which refers to having optimistic beliefs about future outcomes; and *necessitating*, which refers to the degree in which persons perceive a task as something they "have to do" versus something they "want to do." Deficiency focusing and necessitating are believed to add to a person's stress and lower job satisfaction, whereas skill recognition and envisioning success are believed to reduce stress levels and lead to higher job satisfaction.

The participants in the study were 93 graduate students in a managerial communication course. The graduate students were experienced U.S. Naval Officers, average age 32 years old, with an average of 4 to 16 years of managerial experience. Participants completed a series of questionnaires assessing their trait communication apprehension, state communication apprehension, interpretive style, the amount of time spent preparing the speech, and the number of times the speech was practiced out loud. Trait communication apprehension refers to the degree of anxiety experienced by an individual in one-to-one, small group, and public speaking situations. State communication apprehension refers to the degree of anxiety a person feels at a particular time; i.e., during a speech performance. Performance measures were based on speech ratings given by the professors in the course.

Correlations among the variables indicated that preparation time and amount of practice were unrelated to performance. Not surprisingly, performance was negatively related to trait anxiety, or the degree of nervousness felt by the speaker at the time of the speech ( $r = -.25, p < .01$ ). Amount of practice and preparation were unrelated to interpretive styles. But interpretive styles were related to both trait and state communication anxiety. For example, deficiency focusing was positively related to trait anxiety ( $r = .36, p < .001$ ), and skill recognition and envisioning success were negatively related to trait anxiety ( $r = -.29, -.27; p < .01$ ).

The Thomas et al. (1994) study confirmed the impact of communication anxiety on performance and by implication, the value of addressing speech anxiety in public speaking courses. The finding that amount of preparation time was unrelated to performance may be due to the fact that individuals with high anxiety may spend more time preparing but are thereby unable to overcome anxiety that negatively affects performance. The finding that number of times practicing was also unrelated to performance outcomes suggests that simply practicing a speech out loud may not be all there is to effective practice, particularly when dealing with negative interpretive styles and communication anxiety.

A study by Menzel and Carrell (1994) looked at the relationship between student preparation time, prior speaking experience, speech anxiety, and self-reported grade point average and ratings of speech performance. The participants in the study were 119 undergraduates at two universities, across 12 sections of the public speaking class, taught by six instructors. The participants were videotaped giving a speech and subsequently

completed a survey in which they indicated the amount of time they spent in various speech preparation activities, including: talking to the instructor, conducting research, engaging in audience analysis, adapting their speech content to the audience, preparing speaking notes, preparing visual aids, rehearsing their speech silently and out loud, rehearsing with and without an audience. The participants reported their cumulative GPA and prior public speaking training and experience. Finally, the participants completed a survey that measured their state and trait speech anxiety. State anxiety referred to the degree of nervousness a person feels at a particular time, e.g., when presenting a speech. Trait speech anxiety referred to the discomfort a person feels in general towards an anticipated speech situation. The researchers evaluated the videotaped speeches, issued a content score, speech delivery score, and a total score to each participant.

Total preparation time correlated slightly with the total speech score ( $r = .25$ ,  $p < .05$ ). Among the individual preparation activities, only preparation of the visual aid and out loud rehearsal correlated significantly with the total speech score ( $r = .25$  and  $.19$ , respectively). Rehearsals in front of an audience were related to the speech delivery score ( $r = .25$ ,  $p < .05$ ) but not with the overall speech score. Cumulative grade point average had the strongest relationship with total speech score ( $r = .28$ ,  $p < .05$ ) among the variables studied.

With regard to past speaking experience, participants who had reported taking a prior college course in public speaking had a statistically significant two to three point deficit on delivery, content and total scores. Participants who had received public

speaking training through a professional organization had statistically significantly higher scores by an average of 2-3 points in the thought-content and total speech categories.

Trait anxiety was not related to speech performance scores. State anxiety was negatively correlated with speech delivery scores ( $r = -.25, p < .05$ ), but was not related to the overall speech quality score.

The researchers used regression analysis to identify what factors predicted higher speech scores. Rehearsing for an audience, state anxiety, and GPA were the three highest predictors for delivery scores, explaining 16% of the variance. Total preparation time and GPA explained 10% of the variance for the thought-content scores. GPA and total preparation time explained 8% and 4% respectively of the total speech scores. Post-hoc analysis revealed no significant relationship between GPA and total preparation time.

Menzel and Carrell (1994) concluded tentatively that preparation time is related to better speech performance. However, they did not control for anxiety. It is possible that controlling for anxiety may affect the relationship between total prep time and speech scores. The researchers did find that trait anxiety was correlated with total preparation time ( $r = .28, p < .05$ ). This correlation suggests that the higher the student's trait anxiety, the more time he or she spent in speech preparation activities. The researchers did not disclose in their report which activities high anxiety students were likely to engage in specifically. Additionally, low state anxiety predicted higher delivery scores. The researchers suggested that more research should be done on the relationship between performance and a speaker's inner dialogue, which is connected to anxiety.



Regarding the negative relationship between speech quality and prior experience in a public speaking course, the researchers reasoned that students who had taken a speech course in the past might have had above average difficulties with public speaking. Post-hoc analyses revealed no statistically significant differences among these students in trait or state anxiety, which eliminated anxiety as a plausible explanation. Regarding the positive relationship between speech quality and prior participation in professional speaking programs, the researchers explained that participants who had this type of training likely had more public speaking experience outside the classroom. The researchers suggested that future studies examine more specifically the quality of preparation time; for example, the specific activities students engage in when conducting research and when rehearsing the speech.

In a study by Pearson, Child, and Kahl (2006), 95 undergraduate students enrolled in five sections of a public speaking course completed journals throughout the semester documenting what speech preparation activities they had engaged in for speech assignments and the amount of time they spent in those activities. The participants' prior experience in public speaking varied from none (15.8%), a little (55.4%), to considerable speaking experience (28.3%). A total of 2,471 open-ended responses were coded by the researchers according to five categories: 1) generating ideas, researching and gathering materials; 2) organizing and informally outlining the speech; 3) writing the formal speech outline; 4) revising, editing the formal outline; and 5) practicing, creating visual aids, creating speaking notes. The inter-coder reliability was  $\alpha = .91$ .

The researchers also recorded the amount of time spent in each activity category per week. The researchers reported a reliability of  $\alpha = .91$  for the measure of time. The average time spent by students on the four speech assignments was 1224.5 minutes (SD = 591), or 20.4 hours (SD = 9.85 hours). The average weekly time students spent preparing for a speech assignment was 87.5 minutes (SD = 42). The dependent measure was the average speech grade across four speech assignments. The overall speech grade average of the participants was a B (M = 86.10, SD = 4.44).

The participants spent the most time writing the formal speech outline (37% of total time), followed by practicing, creating notes and visual aids (25%), and generating ideas and researching their speech (20.6%). Students spent less time organizing their speech in an informal outline (9%) and revising their formal outline (8.27%). Standard multiple regression indicated that only time spent practicing, creating speaking notes and visual aids predicted higher speech grade averages. The researchers therefore concluded that more time spent preparing for speeches led to higher grades.

It should be noted that the researchers did not record how long the speech assignments were; i.e., whether the students were preparing for a 3-5 minute speech, or a ten minute speech. The amount of preparation time documented in the study was an average time across the four speech assignments.

Daly, Vangelisti, and Weber (1995) studied the speech preparation process of public speaking students. Fifty-one students were asked to prepare a speech for an audience, were given 20 minutes to do so, and also presented their speech to a group of students. During the preparation time, the students were asked to think aloud. Their

responses were transcribed into units of thought and coded according to a scheme of 14 categories and 45 sub-categories. The main categories included goal setting, audience concerns, presentation concerns, speech constraints (e.g., time and equipment), preparation constraints, text generation, organizing, evaluating and revising. The audience provided evaluative ratings for each participant's speech.

Public speaking anxiety was negatively correlated with the number of units of thought each participant produced ( $r = -.26$ ,  $p = .03$ ). The researchers controlled for these differences by using proportions of the thought categories instead of total frequency numbers.

The study confirmed that speech anxiety negatively affects speech performance. Speech anxiety was inversely correlated with the average performance rating ( $r = -.47$ ,  $p = .0001$ ). Anxiety was also negatively correlated with text generation ( $r = -.32$ ,  $p = .01$ ). That is, the higher the anxiety, the smaller the proportion of spoken thoughts relating to speech composition. Anxiety was also significantly correlated with searching for concepts and information ( $r = .32$ ,  $p = .01$ ), characterized by phrases including disfluencies like "um;" and concerns for accuracy ( $r = .29$ ,  $p = .02$ ). Anxiety was also moderately correlated with thoughts categorized as blocking, e.g., expressing nervousness and doubts about one's speaking abilities ( $r = .32$ ,  $p = .01$ ).

The study also revealed a relationship between performance and audience concerns ( $r = .26$ ,  $p = .04$ ). In other words, the more students thought about the relevance of their speech to their listeners or considered the types of individuals who would comprise the audience, the higher their speech evaluation scores. Performance was also

negatively correlated with expressing self-doubt,  $r = -.26$ ,  $p = .03$ . Apparently the less a student made negative self-evaluations, the higher his/her speech evaluation rating.

Concerns about topic selection was also negatively associated with performance,  $r = -.33$ ,  $p = .01$ ; as was structuring the topic into sub-topics,  $r = -.24$ ,  $p = .05$ ; and searching for concepts or information,  $r = -.29$ ,  $p = .02$ .

Multiple regression analyses revealed that goal setting ( $\beta = 1.14$ ), text generation ( $\beta = 2.93$ ), organization ( $\beta = .52$ ), searching ( $\beta = 1.57$ ), reviewing ( $\beta = 1.7$ ), evaluating ( $\beta = .61$ ), revising ( $\beta = .65$ ), and blocking ( $\beta = .97$ ) were related to speech performance ratings ( $p \leq .05$ ).

When anxiety was statistically controlled, only text generation ( $r = -.27$ ,  $p = .03$ ), and expressing concerns about topic selection ( $r = -.30$ ,  $p = .02$ ) remained significantly related to performance rating. Audience concerns and expressing self-doubts were no longer related to performance evaluation rating, although the subcategory of expletives, i.e., using exclamatory phrases like “shoot,” emerged as positively related to speech performance ( $r = .27$ ,  $p = .03$ ).

Ayres (1996) studied the role of anxiety in speech preparation. Students in 32 sections of a public speaking course completed a questionnaire and measures of state and trait communication anxiety upon completing a speech assignment. The data from students who scored one standard deviation above and one standard deviation below the mean on measures of speech anxiety were the focus of this study. Thus, two groups of students-- those with high and low public speaking anxiety-- participated in this study ( $N = 190$ ). In the questionnaire, the respondents provided demographic information and

provided estimates of how much time they spent in various speech preparation activities—the same used in the Menzell and Carrell (1994) study.

In spite of the fact that high anxiety students spent more time preparing their speeches than low anxiety students,  $F(1, 186) = 11.34, p < .05$ , high anxiety students had lower speech grades,  $F(1, 186) = 7.21, p < .05$ . The results also indicated that high anxiety students had spent proportionately less time analyzing the audience ( $M=10\%$ ,  $SD = .13$ ), rehearsing silently ( $M = 6\%$ ,  $SD = .06$ ) and rehearsing out loud without an audience ( $M = 6\%$ ,  $SD = .06$ ) than low anxiety students [ $M = 19\%$ ,  $SD = .27$ ;  $M=13\%$ ,  $SD = .26$ ;  $M = 13\%$ ,  $SD = .09$ , respectively.] Looking at the percentages indicates that low anxiety students had spent proportionately twice as much time on these activities than high anxiety students. High anxiety participants spent triple the percentage of time ( $M= 28\%$ ,  $SD = .15$ ) than low anxiety participants ( $M = 9\%$ ,  $SD = .12$ ) on preparing speaking notes. Ayres' study indicates that the amount of time spent preparing speeches, particularly for high anxiety students, does not necessarily correlate with higher speech grades. Rather the use of the preparation time and the types of activities engaged in during this time is important. More qualitative research would bring these activities to light.

Ayres and Schliesman (1998) investigated the extent to which practicing a speech in class had any effect on students' trait communication apprehension, public speaking anxiety, perceptions of speaking competence, and willingness communicate. The participants in the study were 166 students with high public speaking anxiety (PSA) across 27 sections of a public speaking class. Just before and immediately after their first

informative speech, the students completed several instruments that measured the four dependent variables mentioned above. The length of time between the pre- and post-tests was three to four weeks. Nine randomly assigned sections of the public speaking class participated in a control condition, nine in a placebo condition, and nine in the treatment condition. In the control condition, students gave an introduction speech and an informative speech later in the semester. In the placebo condition, students participated in a small group exercise in which they discussed principles of informative speaking. In the treatment condition, the students practiced their assigned speeches in class in front of a small group of 4 or 5 peers.

The researchers used multiple analysis of covariance (MANCOVA) to detect overall differences. Where significant differences emerged, the researchers applied ANCOVA and Tukey's post hoc tests to the dependent variables. ANCOVA for trait public speaking anxiety was significant ( $F[2, 162] = 12.92, p < .001, \text{omega squared} = .12$ ). Subsequent Tukey tests indicated that students in treatment condition felt less anxiety about the speech than students in the control or placebo groups. Similar results with ANCOVA and Tukey tests on state communication anxiety indicated that students in the treatment group also experienced less anxiety during the speech than students in the control and placebo conditions ( $F[2, 162] = 9.23, p < .001$ ).

ANCOVA applied to willingness to communicate was also statistically significant ( $F[2, 162] = 3.64, p < .05$ ). The Tukey test results suggested that students in the treatment condition expressed more willingness to communicate than the control group, but the difference between the treatment group and placebo group was insignificant.

Perhaps this was because discussing material in a small group, as was the case in the placebo condition, helped students become more familiar with their audience, in the same way rehearsing in a small group would. ANCOVA analysis on self-perceived competence in communication produced insignificant results. In other words, neither the treatment or placebo conditions appeared to have any impact compared to the control group on students perceptions of their ability to communicate. The researchers explained this could have been due to the fact that there was not time in the treatment condition to receive peer feedback from the practice session, which may have helped increase perceptions of communication competence.

The results of the Ayres and Schliesman (1998) study support the maxim that practicing speeches out loud for a small group is effective in reducing speaking anxiety. Particularly when students who have high public speaking anxiety are able to practice in front of a few members of the class audience, this practice strategy appears quite effective not only in lowering speaking fears but increasing willingness to speak. It would have been interesting if Ayres and Schliesman (1998) also included a performance measure, to see whether the treatment or placebo had any significant impact on the speech grade.

Smith and Frymier (2006) sought to understand the relative effectiveness of different approaches to practicing speeches. The different approaches explored were practicing speeches before a large audience, a small audience, no audience, and practicing several times. Smith and Frymier (2006) also investigated the impact of communication anxiety and public speaking anxiety on practice methods, as the impact of practice on student reports of confidence and grade expectation. The participants in the study were

220 undergraduates across 18 sections of a basic public speaking course. At the time of the study, the students had presented two videotaped speeches, and for the study were assigned to give an oral interpretation speech.

All participants completed standard instruments measuring communication apprehension and public speaking anxiety (PRCA-24 and PRPSA-34). One week later, on the day they were to deliver their oral interpretation speech, the students were administered a 9-item questionnaire on the different ways and number of times they had practiced their speeches. Students reported practicing in the following ways: out loud in front of a mirror ( $M = 2.57$  times,  $SD = 3.36$ ), silently in their heads ( $M = 10.74$  times,  $SD = 11.03$ ), quietly aloud in a secluded area ( $M = 6.81$ ,  $SD = 8.77$ ), video or audio-taping themselves ( $M = .07$ ,  $SD = .74$ ), in front of a small audience of one to three people ( $M = 1.99$ ,  $SD = 2.25$ ), and in front of larger audiences of four or more people ( $M = .15$ ,  $SD = .58$ ). The researchers also asked participants what grade they expected to receive on a four-point grade scale. The average response for expected speech grade was  $M = 3.43$ ,  $SD = 5.45$ . It seems students on average expected to receive a B or B+; the standard deviation reported by the researchers seems odd, as 5.45 would go completely off the 4.0 scale. This may have been a typo. Finally, the researchers asked students to rate their confidence level according to one five-point Likert-type item. The average response for confidence level was  $M = 3.65$ ,  $SD = 0.69$ . The performance evaluation scores ranged from a value of 10 to 50 points.

Correlations between speech practice methods and performance indicated that only one practice method was significantly related to the speech grade: practicing aloud



in front of a mirror ( $r = .27, p < .005$ ). Independent samples t-tests were conducted to compare the effectiveness of the different practice methods. Practicing a speech in front of an audience resulted in higher performance grades ( $M = 38.02, SD = 5.42$ ) than practicing with no audience ( $M = 35.56, SD = 6.34$ ),  $t[189] = 2.83, p < .001$ . Moreover, practicing a speech with an audience of four or more people ( $M = 40.2, SD = 3.12$ ) resulted in significantly higher speech scores than practicing with an audience of one to three people ( $M = 37.72, SD = 5.61$ ),  $t[28.63] = 2.55, p < .005$ . The number of times participants practiced their speech was not related to their speech performance grade.

Regarding the relationship between practice methods used and degree of communication anxiety and public speaking anxiety, there was only one method that was negatively correlated with public speaking anxiety: practicing before a large group audience ( $r = -.16, p < .05$ ). In other words, the higher a student's public speaking anxiety, the less likely he or she elected to rehearse his or her speech in front of an audience of four or more people. Lastly, the researchers found that amount of practice had no significant bearing on confidence levels or grade expectations.

Smith and Frymier's (2006) study gave support for one particular method-- practicing aloud in front of a mirror, as being associated with a higher speech grade. It is somewhat of a surprise that practicing in front of an audience did not emerge as significantly related to speech grade. Nevertheless, the data did show that students who practiced in front of an audience scored significantly higher than those who did not. Of note was the fact that number of times of rehearsing a speech was not related to speech performance. Speech teachers generally recognize that too much rehearsal can actually

be a detriment to speech performance. How speakers can recognize when enough is enough in the repetition and rehearsal process; i.e., when it is time to rest from practice to allow the material to stay fresh and not become robotic, would be an interesting question to research.

Mitchell and Nelson (2007) investigated the relationship between general motivation, trait speech anxiety, practice, alcohol consumption, and speech performance. Motivation was defined generally as the drive to achieve success and excellence, and was measured with seven-point bipolar adjective scales (e.g., involved/uninvolved, interested/uninterested) in relation to speech preparation or presentation, with seven representing the highest degree of motivation. Trait speech anxiety referred to an innate level of fear associated with having to speak in public. Performance was measured by the speech grade. The study participants were 207 undergraduate students enrolled in a public speaking class. Participants kept a diary for the five days leading up to a speech presentation, in which they answered questions concerning their motivation, how many minutes they practiced their speech, how many drinks they had that day, and their level of trait speech anxiety.

The results indicated that motivation to prepare and present the speech one day prior to the speech was slightly correlated with the speech grade ( $r = .149, p < .05$ ). Motivation two to five days before the speech was unrelated to speech performance. Practice was unrelated to speech performance. Trait speech anxiety was unrelated to performance, and negatively correlated with motivation ( $r$  values ranged from  $r = -.138, p < .05$  to  $r = -.207, p < .01$ ) over the five days leading up to the speech. Not surprisingly,

total alcohol use was negatively related to speech grade ( $r = -.229, p < .001$ ). Alcohol use was not significantly related to the variables motivation, practice, or trait speech anxiety.

Means and standard deviations for motivation, practice and alcohol use indicated that motivation to prepare the speech was highest one day prior to the speech ( $M = 15.79, SD = 4.44$ , compared to  $M = 12.61, SD = 4.56$  four days prior to speech); time spent practicing was highest one day prior to the speech ( $M = 36.01$  minutes,  $SD = 52.86$  minutes, compared to  $M = 2.84, SD = 11.17$  five days prior to speech); and alcohol consumption was lowest the day before the speech ( $M = .39$  drinks,  $SD = 1.69$ ; compared to  $1.24$  drinks,  $SD 2.57$  three days prior to speech). ANOVA analyses indicated that these increases in motivation and practice over time were significant, as was the decrease in alcohol consumption leading up to the speech day. Regression analyses revealed that of all the variables in the study, only alcohol use emerged as a negative predictor of performance ( $\beta = -.228, p < .001$ ).

The highlight of the study by Mitchell and Nelson (2007) as it may relate to the present study was the finding that motivation and practice were significantly, although modestly related on four out of the five days leading up to the speech. Also significant was the finding that practice was not related to the speech grade, which suggests that practice methods used by the students, or the quality of the practice time were not effective.

Communication studies on speech preparation have examined the relationship between preparation time, practice time, and performance, with the role of speech anxiety as a particular variable of interest. Research has consistently found that speech anxiety

had a negative impact on either total speech score or speech delivery scores (Ayres, 1996; Daly et al., 1995; Menzel & Carrell, 1994; Smith & Frymier, 2006; Thomas et al., 1994). Some studies found no relationship between amount of preparation time and performance scores (Ayres, 1996; Thomas et al., 1994), because high anxiety students' preparation time did not correlate with higher speech grades. Other studies found a weak but positive relationship between speech preparation time and performance (Menzell & Carrell, 1994; Pearson et al., 2006). Research has also examined what specific preparation behaviors of students are positively related to speech scores (Ayres, 1996; Daly et al., 1995; Menzell & Carrell, 1994; Pearson et al., 2006), and the relationship between different practice strategies on anxiety and speech scores (Ayres & Schliesman, 1998; Smith & Frymier, 2006). One study (Mitchell & Nelson, 2007) examined the relationships between student motivation to prepare, practice time, and speech scores. In the next section, studies examining teaching behaviors and methods in public speaking classes are reviewed.

#### *Studies Related to Public Speaking Pedagogy*

Taylor (1990) surveyed speech teachers to investigate the relationship between public speaking class content on effective speech preparation and the actual speech preparation behaviors of teachers. Out of 465 surveys mailed, Taylor received 227 responses (49% response rate). The majority (73.6%) of respondents were four-year college or university teachers, followed by community college instructors (15.4%), high school teachers (7.5%) and graduate teaching assistants (2.6%). The sample included both full-time teachers (88.1%) and part-time instructors (8.4%). A sizable percentage of

the sample (30.8%) was not teaching public speaking or the basic course at the time of completing the survey.

Over 90% of respondents reported encouraging students to deliver extemporaneous speeches (95%), use visual aids (98%), cite credible sources (99.6%), speak from an outline (91%), include an introduction and conclusion in the speech (99%), develop confidence (97%), analyze the audience (97%), deliver at least one informative speech (97%), and deliver at least one persuasive speech (98%). Other instructional practices included encouraging students to submit an outline (78%), use a podium or lectern (69%), deliver at least one ceremonial speech (52%), read a speech from a manuscript (14%), and present a memorized speech (4%).

Regarding the actual speech preparation behaviors of speech teachers, an overwhelming majority reported that they usually used introductions and conclusions (97%), analyzed their audiences (92%), prepared an outline (83%), used extemporaneous delivery (82%), and cited credible sources (82%) when they had occasion to give a speech. Only 38% of respondents usually used visual aids; 51% used visual aid some of the time, and 11% said they seldom used visual aids when giving speeches. Regarding the type of speeches instructors typically give, 56% of respondents said they usually give informative speeches, 24% said they usually give persuasive speeches. Only 6% of respondents said they usually deliver ceremonial speeches, although 51% said they sometimes do. Over half (52%) of respondents said they sometimes experience nervousness. Taylor (1990) also asked speech teachers how many speeches they had

given in the past year. The responses ranged from 0 (7.5%) to 90 (.9%), with a mean of 8, a median of 5, and the mode was 3.

The results of the Taylor (1990) study on the content of public speaking courses appears very consistent with public speaking instruction today, and is evidence of recent observations by communication scholars that public speaking pedagogy has remained virtually unchanged for decades (Goulden, 2002; Pearson, Child & Kahl, 2006). Taylor concluded that speech teachers do not always do as they say, and the results supported that conclusion. Notwithstanding, several key behaviors that are emphasized in the basic course, such as using extemporaneous delivery, citing sources, having an introduction and conclusion, and preparing speeches with an outline, were reported as usual speech preparation behavior by a strong majority of teachers. The basic speech course is tailored to present information to novice speakers in a structured manner that covers a breadth of information and a variety of topics in a single semester. Behaviors taught in the basic course such as using visuals, delivering informative, persuasive and ceremonial speeches, may not have been reported by a majority of teachers as usual behaviors simply because of the more limited scope of speaking opportunities a speech teacher may have had over the course of the year. Further research may investigate as to why speech teachers, outside the classroom, may not employ certain behaviors that are taught in the basic course. The reason may be lack of opportunity, or it may have to do with differences in behaviors at higher levels of expertise.

Nicholas Christenfeld (1995) published an interesting study on the use of the word “um” in speeches. Christenfeld noted that public speaking texts and teachers

generally discourage the use of ums because it creates a negative impression of the speaker to audiences, but research on this disfluency have indicated that ums are not associated with anxiety, nor are they necessarily a sign of being unprepared or unknowledgeable on the topic. Rather, the presence of ums is related to the degree of abstractness of the topic, and ums are also associated with a large vocabulary.

Christenfeld therefore conducted two studies investigating the perceptions of ums among undergraduates, and whether the presence or absence of ums makes a difference in audience impressions.

In the first study, Christenfeld (1995) had 21 undergraduate students completed a short questionnaire measuring what they thought about speakers who used filler words, such as “um,” “er” and “uh.” Fifteen adjectives, such as fluent, nervous, educated, confident, were presented in five-point Likert scales: e.g., “very disfluent, slightly disfluent, average, slightly fluent, very fluent.” The participants also indicated on a 7 - point Likert scale how often they believed their impression of a speaker was influenced by the speaker’s ums.

Results indicated that the students thought of ummers in a negative light. Out of a five point scale, with five being very high on the trait, the participants rated ummers a 4.10 (SD = .54,  $p < .0001$ ) for nervous, and a 2.0 (SD = .65,  $p < .0001$ ) for confident. The average response for how often the participants’ impression of a speaker was affected by ums was 5.0 out of 7, with 7 representing “always.”

In study 2, Christenfeld investigated the actual effect of ums on audience impressions under various conditions. The researcher prepared three versions of an audio

recording of a radio talk show caller presenting an argument on a public policy issue that was being discussed. The first version was the original version, in which the caller had an um rate of 25 ums in 167 seconds, lasting a total of 9 seconds. The second version was edited to have silent pauses where the original ums were. The third version was edited to eliminate the vocalized pauses completely, resulting in the tape being 9 seconds shorter.

Each version of the tape was presented to two or three different introductory psychology classes, involving a total of 1067 students. In addition to varying the amount of ums in the tape, the researcher also manipulated the conditions under which participants listened to the tape. Specifically, the researcher either gave no instructions to the class in listening to the tape, directed the class to listen for the content of the speaker's message, or instructed the class to listen for the speaker's style and eloquence. Each class listened to one version of the tape, under a different listening condition, and completed a two-page questionnaire asking the listener to rate the speaker on 15 adjectives using a seven-point Likert scale, as in the first study. The listeners were also asked to estimate how many ums the speaker used, and to rate the speaker's use of ums compared to the average speaker.

The researcher analyzed the data with a 3 x 3 ANOVA, with version of tape and instruction type as the independent variables, and ratings of the speaker as the dependent variable. ANOVA analysis revealed main effects for version of the tape,  $F(2, 1011) = 6.41, p < .005$ ; and main effects for focus instructions,  $F(2, 1011) = 3.05, p < .05$ . Groups that listened to the original version of the tape with ums estimated there were



more ums than the groups that listened to the other two versions of the tape that had no ums. The groups that received instructions to focus on content of the message perceived fewer ums than the other groups. There was also a significant interaction between the tape version and the focus instruction,  $F(4, 1011) = 4.26, p < .005$ . When subjects were instructed to focus on the content, the subjects' rating of the speaker on the tape with ums was not significantly different than for the other two versions. When subjects were instructed to focus on the speaker's style, the subjects' ratings of the speaker differed significantly,  $F(1, 1011) = 26.42, p < .0001$ , with the tape with ums receiving significantly lower ratings than the versions with no ums.

This study (Christenfeld, 1995) demonstrated that listeners who tend to notice ums are those who pay attention to the speaker's style. Listeners who are more attentive to the substance of a speaker's message are less likely to notice ums. Having no ums or pauses versus having ums and pauses generally gives the audience the impression that the speaker is more eloquent. Apparently, ums in and of themselves are not necessarily damaging to a speaker's credibility, but noticing ums can be, if the speaker lacks good content. This research suggests that there is no hard and fast rule about umming. In general, speech teachers would do well to encourage students to prepare good content, in which case umming would be forgiven if noticed at all by the audience. That being said, the complete elimination of ums and pauses in speaking does improve audience impressions of speaker eloquence.

Levasseur, Dean and Pfaff (2004) conducted semi-structured, qualitative interviews of 23 college advanced public speaking instructors to investigate the

instructors' goals, course content, and classroom activities and identify how advanced public speaking classes differ from the basic speech course. Interviews were audio recorded, transcribed, and analyzed using thematic analysis. The researchers identified six major themes, emerging in at least five interviews, identifying techniques teachers used in advanced public speaking courses. The first theme, present in 20 out of the 23 interviews, was an emphasis on continuous speaking and critiquing. Feedback from instructor and classmates play a much more central role in the advanced course than in the basic course.

The second theme, which emerged in 19 interviews, was exposing students to diverse speech genres that are typically not covered in the basic course; namely, ceremonial speaking, business or professional speaking, limited preparation time speaking, narrative speeches and debates. The third theme, identified in 17 interviews, was covering advanced theory on the art of public speaking. The main topic covered was language style, including the use of classical rhetorical figures. Other topics included the use of multimedia technology, construction and delivery of manuscript speeches, question and answer sessions, and basic rhetorical criticism.

The fourth theme--presenting students with model speakers and speeches--emerged in 15 out of the 23 interviews. Whereas the basic course may make occasional use of a model speech, watching model speeches was a primary activity in the advanced speaking course. Most model speeches were student speeches from a videotaped collection, rather than videos of eminent speakers.

The fifth theme, having students engage in self-analyses, emerged in 10 interviews. The most common method used was videotaping student presentations and assigning self-reflection and critique papers throughout the course to enable the student to note his or her progress. In the basic course, students may be videotaped and complete general reflection questions. In the advanced course, the self-critiques are more in depths and students may even be asked to create portfolios that demonstrate their growth in speaking skills at the end of the semester.

The sixth theme was requiring students to engage in more sophisticated speech planning processes. This theme was identified in six of the 23 interviews. Types of assignments in this category may be a “strategy report” or “speaking plan” in which students must identify for each presentation the purpose, intended tone, organizational pattern, analysis of the audience, and overall strategy of what they are trying to say and how they will support their ideas; or participating in a discussion board with other classmates to get input on the development of the speech.

Communication research on public speaking preparation, practice, and performance has primarily focused on the behaviors of undergraduate students enrolled in a public speaking course, and the role of speech anxiety in speech preparation and performance. Studies on the effects of practicing speeches prompt more questions about what types and amount of practice are effective, and what motivates students to practice. Levasseur et al. (2004) called for more research on the nature of speaking expertise at higher levels of speaking competence. The present study attempts to study expertise development of professional speakers within the theoretical framework of deliberate

practice. The definition of deliberate practice and related research are the focal points of the next two sub-sections, respectively.

### What is Deliberate Practice?

Traditionally, explanations of exceptional performance and achievement, be it in athletics or the arts, have pointed to talent or some innate, genetic endowment as the source (Ericsson & Charness, 1994). But Ericsson (Ericsson et al., 1993; Ericsson & Charness, 1994) argued that individual differences in performance are not due to innate, uncontrollable factors, but rather to extensive deliberate practice through which stellar performers have developed characteristics that mediate their performance. While Ericsson and colleagues did not discount the role of talent in skill acquisition, they denied that talent or genes plays any direct role in achieving exceptional performance as an adult. An early display of giftedness or potential may determine an individual's entry into a field, but in and of itself, talent does not lead to superior performance (Ericsson et al., 1993).

Ericsson asserts that superior expert performance is acquired, as opposed to a given, genetic or natural ability or talent. Expert performance first requires years of domain-related experience. Simon and Chase (1973), through their study of the development and training of international chess masters, were the first to suggest that acquiring expertise requires a minimum of ten years or 10,000 hours of experience. Ericsson, Krampe and Tesch-Romer (1993) confirmed the ten-year rule in the fields of sports, music, science and arts. Subsequent summaries of research on expertise have presented the 10-year rule as well-established (Ericsson, 2002; Chi, Glaser & Farr, 1988).

But experience alone is not the sole requirement. Ericsson discourages the presumption of expertise based upon years of experience, social titles, or credentials. When the performance of so-called experts has been examined empirically, it has been found that experts are not always better than novices (Ericsson, 2002; Ericsson et al., 2007). The correlation between amount of experience and level of performance is low (Ericsson, 2004). In addition to experience, the necessary and distinguishing factor to achieve expert performance levels is extensive hours of deliberate practice (Ericsson, 2002).

Deliberate practice is by definition, activities that are specifically designed to improve performance, includes feedback that compares actual performance to desired performance, and provides opportunity for repetition until the goal is achieved (Ericsson, 2002). The opposite of deliberate practice may be mechanical repetition (Ericsson, 2002), or recreational play, in which there is no specific goal or effort made toward improvement. Ericsson quotes Emil Sauer, a renown violin teacher and performer, “One hour of concentrated practice with the mind fresh and the body rested is better than four hours of dissipated practice with the mind stale and the body tired” (Ericsson, 2002, p. 30).

In contrast to other activities a person may perform in a domain, such as compensated work, observing others, and recreational interactions, deliberate practice is focused on improving a specific skill and achieving higher levels of performance. A key assumption called the “monotonic benefits assumption,” is that the more an individual engages in deliberate practice, the more the individual will improve his or her

performance (Ericsson et al., 1993). That being said, deliberate practice is an effortful activity, and thus can be engaged in for a limited amount of time per day in order to for the subject to recover and avoid exhaustion (Ericsson et al., 1993).

Deliberate practice is conceptualized to be different from everyday skill acquisition (Ericsson, 2009). Traditional theories of skill acquisition characterize expertise development as a process in which an individual goes through stages of associative learning, develops proficiency, and ultimately reaches a stage where he/she can perform a task automatically (Anderson, 1982; Sternberg, Grigorenko, & Ferrari, 2002). In this last stage, performers allegedly lose conscious control over the performance of the skill, and typically reach a plateau of performance. For everyday skills such as driving and typing, less than 50 hours of training and experience are required to develop this stage of proficiency (Ericsson, 2004). For more complex tasks involved in sports, chess and the professions, acquiring high-level skills beyond proficiency requires at least ten years or 10,000 hours, and in some cases, decades of experience and education (Ericsson et al., 1993). Like Simon and Chase's chunking theory, these skill acquisition models assume skill increases with continued experience (Feltovich et al., 2006). According to traditional models, expertise development is a progression from novice to intermediate to expert through instruction, training and experience.

Traditional models conceptualize the end of skill acquisition as a stage of automated proficiency, what Ericsson (2006) referred to as arrested development. In contrast, Ericsson and colleagues (1993) asserted that experts overcome arrested

development through conscious, effortful, deliberate practice. Ericsson pointed out that the concept of arrested development reflected Galton's characterization of expertise development as ultimately limited by talent (Ericsson, 2006). Citing unfruitful efforts to predict adult achievement from measurements of young adults' basic mental and motor skills (Ericsson, 2004), Ericsson opposed traditional beliefs that attribute expertise development to talent and innate abilities. Ericsson and colleagues (Ericsson et al., 2007) went as far as to say that individual differences that mediate superior performance in sports or music are not due to giftedness, but are explained by physiological or physical adaptations produced by deliberate practice activities.

#### The Research on Deliberate Practice

In this subsection, I discuss the first deliberate practice study by Ericsson and colleagues (1993), provide an overview of deliberate practice research, summarize the methodology used in the research, highlight studies on deliberate practice in competitive sports, typing and decision-making, and in the professions; and examine the research on motivation in deliberate practice.

#### *The First Deliberate Practice Study*

In their pioneering study, Ericsson and colleagues (1993) interviewed accomplished and less-accomplished violinists and pianists, comparing current and past amounts of practice. In the first of two studies, the researchers interviewed 3 groups of violinists: one "best" group of violin students who were identified by their music professors as having the most potential to succeed as professional soloists. The second, "good" group, were also nominated by their music professors from the same music

department. The third group, “music teachers, ” was comprised of students in the music education department who specialized in violin. Participants in this first study had at least ten years of practice with their instrument, and were similar in age and musical background. There were ten participants in each group, or a total of 30 participants.

The researchers initially identified what activities constituted deliberate practice for the musicians, identified how deliberate practice was organized in terms of duration and other factors, and then compared this organization for the accomplished and less-accomplished groups. The subjects participated in three interviews. During the first interview, information such as when the subject started to practice, history of music teachers, estimated weekly hours of solo practice per week, and participation in music competitions was obtained. In addition, the participants looked at a taxonomy of ten everyday activities, and twelve music-related activities. The participants reported estimates of how much time they spent per week on each activity. The participants also gave a ranking (1-10) of each activity according to relevance to improving musical performance, enjoyment, and effort required.

During the second interview session, the participants were asked to recall all their activities in the previous day, using a detailed diary sheet that covered the entire 24-hour period. The participants encoded each activity according to the taxonomy of everyday and music-related activities. The participants then maintained a diary for a full week of activities, and encoded each activity using the taxonomy. During the third interview session, the participants had time to meet with the researcher about their encoding of their diaries, and they also answered questions concerning their life goals.



The accomplished and less-accomplished musicians did not differ significantly in their ratings of the different activities in terms of relevance to skill improvement, enjoyment and effort. Solitary practice was perceived by all subjects as the most relevant to improving performance. The expert musicians described their practice sessions as involving intense concentration and improving targeted aspects of their performance. Master teachers helped them identify these target areas (Ericsson et al., 1993; Ericsson et al., 2007). Based on the diary data, the researchers found that the “best” and “good” violinists did not differ significantly and averaged 24.3 hours per week. The music teacher group, in contrast, practiced on average 9.3 hours per week, which was reliably less than the “best” and “good” groups [ $F(1,27) = 44.05, p < .001$ ]. Post-hoc analyses revealed that the music teacher violinists practiced across the day, whereas the “best” and “good” violinists tended to practice more between 10:00 a.m. and 2:00 p.m. The main effect of time of day was significant at the .001 level [ $F(4,108) = 6.09, p < .001$ ].

In terms of frequency of practice, the two more accomplished violinist groups did not differ significantly and had an average of 19.5 practice sessions per week, compared to an average of 7.1 weekly practice sessions for the music teachers,  $F(1,27) = 22.40, p < .001$ . However, based on the participants’ retrospective estimates of average number of practice hours per week each year since they started playing violin, significant differences emerged in total amount of practice. The researchers analyzed the total amount of practice by age 18 for each of the participants. The best violinist group had an average of 7,410 hours, which was significantly higher than the 5,301 average hours for the good violinists,  $F(1,27)=4.59, p < .05$ . The average cumulative hours for the best and

good violinists was significantly higher than the average of music teachers, which was 3,420 hours by age 18,  $F(1,27) = 11.86$ ,  $p < .01$ . This finding confirmed the deliberate practice framework insofar as accumulated practice hours corresponded to the skill level of the groups.

Returning to the week-long diary data, of additional interest was that the weekly amount of sleep averaged 60 hours for the “best” and “good” violinists, which was significantly more sleep than the amount of music teachers, which was 54.6 hours,  $F(1,27) = 5.02$ ,  $p < .05$ . Apparently, the more accomplished violinists practiced more and also slept more than the less accomplished violinists. Moreover, the best and good violinist groups averaged 2.8 hours per week of napping, which was significantly higher than napping for music teachers, which averaged 0.9 hours per week,  $F(1,27) = 5.92$ ,  $p < .05$ .

When it came to leisure activities, the best violinists spent significantly less time, 3.5 hours per day, than the good violinists, who spent 4.7 hours per day on pleasurable activities,  $F(1,27) = 4.27$ ,  $p < .05$ . Music teachers spent on average 4.0 hours per day on leisure activities, which was not significantly different from the 4.1 hour/per day average for best and good violinists. The finding that best violinists spent significantly less time on leisure activities was noteworthy as it may reflect a willingness to forego inherently enjoyable activities, i.e., leisure, in order to engage in deliberate practice.

In the second study by Ericsson and colleagues (1993), the researchers compared a group of 12 expert pianists with 12 amateur pianists who were equated with the expert group in sex and age. Experts had more than 14 years of piano experience and started at

an average of 5.8 years of age, whereas the amateurs ranged between 5 and 20 years of experience, and started playing piano at an average of 9.9 years of age. The groups differed significantly in number of years of formal instruction, 19.1 years for experts, 9.9 years for amateurs,  $F(1,22) = 29.36$ ,  $p < .001$ , and number of teachers, 4.7 teachers for experts, 3 teachers for amateurs,  $F(1, 22) = 10.00$ ,  $p < .01$ .

The participants completed week-long diaries of their activities. The experts spent 57.75 average hours on music-related activities, versus 7.02 hours by amateurs,  $F(1,22) = 348$ ,  $p < .001$ . Experts spent 26.71 average hours per week in solitary practice, versus 1.88 hours for amateurs,  $F(1,22) = 93.98$ ,  $p < .001$ . The weekly amount of sleep and napping did not differ between the two groups ( $M = 56.86$  hours per week of sleep and  $M = .63$  hours per week for napping). The groups also did not differ significantly in amount of leisure time spent per week, which averaged 4.66 hours per day.

Based on the participants' retrospective estimates of their weekly hours of practice throughout their musical development, the researchers found that expert pianists showed a linear increase in the amount of weekly practice up to age 20, whereas the amateur group showed little change. By age 18, expert pianists had a total of 7,606 hours of practice, which was significantly higher than the 1,606 hours of practice accumulated by amateurs,  $F(1,22) = 26.29$ ,  $p < .001$ .

The study by Ericsson and colleagues (1993) was significant for a few reasons. One, it confirmed the prevailing view that ten years of preparation was a minimum requirement for developing expertise. Two, the study challenged the dominant view that innate abilities accounts for differences in ultimate achievement. The researchers argued

that the physical abilities of elite performers were not the direct result of stable genetic traits, but rather obtained gradually over many years as the body responded and adapted to rigorous effort and training. Height was the only exception to this claim. Third, this study opened up a research program that examined goal-directed and extended practice activities in different domains, the amount of time individuals spend in such activities, and the effects of these activities on performance.

### *Overview of Deliberate Practice Research*

Since the study by Ericsson and colleagues (1993), deliberate practice has been examined in diverse domains, including sports (Duffy, Baluch, & Ericsson, 2004; Hodges, Starkes, Kerr, Weir, & Naanadou, 2004; Johnson, Tenenbaum, & Edmonds, 2006), chess (Charness, Tuffiash, Krampe, Reingold, & Vasyukova, 2005; Campitelli & Gobet, 2008), crisis decision-making (McKinney & Davis, 2003), medicine (Ericsson, 2007; Moulaert, Verwijnen, Rikers, & Scherpbier, 2004), studying (Plant, Hill, Ericsson & Asberg, 2005), typing (Keith & Ericsson, 2007), insurance sales (Sonntag & Kleine, 2000), teaching (Dunn & Shriner, 1999), and organizational consulting (van de Wiel, Szegedi, & Weggeman, 2004).

In general, research on deliberate practice has explored two primary themes: the relationship between amount of deliberate practice and measures of performance or achievement (Campitelli and Gobet, 2008; Charness et al., 2005; de Bruin et al., 2008; Duffy et al., 2004; Ford et al., 2009; Hodges et al., 2004; Keith & Ericsson, 2007; Krampe & Ericsson, 1996; McKinney & Davis, 2003; Moulaert et al., 2004; Plant et al., 2005; Sonntag & Kleine, 2000; van de Wiel et al., 2004; Ward et al., 2007); and the

structure of deliberate practice activities in a domain (Campitelli & Gobet, 2008; Dunn & Shriner, 1999; Guo, 2006; Plant et al., 2005; Ward et al., 2007). Several studies have found that when measures of ability, gender and/or years of experience are controlled, amount of deliberate practice is the leading predictor of achievement (Hodges et al., 2004; Plant et al., 2005; Ruthsatz, Detterman, Griscom, & Cirullo, 2008).

At least three studies have attempted to challenge Ericsson's claim that deliberate practice is the only distinguishing factor that predicts expert performance (Johnson, Tenenbaum, & Edmonds, 2006; Meinz & Hambrick, 2010; Ruthsatz et al., 2007).

Johnson, Tenenbaum, and Edmonds (2006) tested whether deliberate practice was a sufficient factor to explain differences in achievement among swimmers. Nineteen competitive swimmers, one parent of each swimmer, and coaches of the swimmers were interviewed. A total of 41 people participated in the study. Among the 19 swimmers were 8 elite, and 11 sub-elite. The elite swimmers were top-ranking in the world and had received at least one Olympic or world championship gold medal. The sub-elite swimmers had qualified for national championship, but had not achieved a gold medal nor ranked in the top-five in the world. The researchers used responses of the parents and coaches to confirm and improve validity of interview data obtained by the swimmers.

Results indicated that every participant varied in the age at which they a) started competitive swimming; b) achieved state, national, and international levels of performance; c) decided to become an elite swimmer; and d) began non-swimming activities for the purpose of improving their swimming performance. Examples of non-swimming activities to improve swimming were engaging in physical therapy, weights,

spinning, running, working with stretch cords, yoga, Pilates, and abdominal exercises.

Two participants reported engaging in zero non-swimming activities to improve performance. The participants also varied in the types of non-swimming activities they engaged in that were not related to improving performance. Examples of non-swimming related activities included other sports activities, such as synchronized swimming, soccer, golf, basketball, skiing, gymnastics, tennis, running; music activities, such as playing violin, piano, drums, clarinet, cello; as well as dance, cheerleading, and cooking.

Sub-elite swimmers spent on average 690 more hours (9.7%) than elite swimmers in deliberate practice of swimming in the time prior to their highest accomplishment. Sub-elite swimmers also had spent on average 298 hours (3.3%) more than elite swimmers in deliberate practice in non-swimming activities. No information was provided on whether these mean differences were statistically significant. Furthermore, the researchers did not control for age or years of experience in comparing the groups.

Johnson et al. (2007) found that all the participants, regardless of skill level, differed in the number of hours spent in deliberate practice, the amount and types of activities they engaged in, and the age at which they began engaging in these activities. The age at which elite swimmers earned their first swimming achievement ranged from age 16-22 (means and standard deviations were not reported); the cumulative hours these elite swimmers had spent on deliberate practice in swimming ranged from 2, 956 to 10,099 hours at the time of their first swimming achievement. This finding may indicate there are exceptions to the general rule that ten years or 10,000 hours of experience are required in a domain to attain expertise. However, the reported hours were deliberate

practice hours, and did not include hours spent swimming in general. Notwithstanding, two of the swimmers in the study started competitive swimming at ages 15 and 16 and achieved international levels of swimming performance within 7 and 3 years, respectively.

A within-group comparison revealed greater differences among the individual swimmers in each skill-level than across the groups. For example, at age 20, elite swimmers' deliberate practice hours ranged from 4,156 to 12,048 hours. Yet the swimmers who reported the low and high end of deliberate practice hours had both achieved gold medals. Three swimmers in the study were brothers who had trained at the same site, grown up in the same environment, had participated in essentially the same activities, and swam under the direction of the same coach. Only one of the brothers had achieved a gold medal; the other two brothers had not achieved elite status.

The researchers concluded that there must be other factors involved in achieving exceptional performance in swimming besides the deliberate practice. However, the data showed the elite swimmer had 10,099 hours of deliberate practice in competitive swimming by the age of 21, whereas the sub-elite swimmers had 8,622 and 8,253 hours by the ages of 19 and 20, respectively. At face value, it appears more deliberate practice hours explains the difference in swimming status among these three brothers. Unfortunately, the researchers did not report whether the differences in deliberate practice hours, adjusted for age, were statistically significant.

All 41 participants in the study thought that talent was a factor in succeeding at elite levels of competitive swimming. The researchers presented a 4-factor model

identifying the factors believed to be necessary and sufficient to attain expert performance in athletics: talent, deliberate practice, supportive environment, and coping mechanisms. This model is not unlike Ericsson's original framework, insofar as having a supportive environment and coping mechanisms are comparable to what Ericsson and colleagues (1993) identified as the motivation, resource and effort constraints.

Ruthsatz, Detterman, Griscom, and Cirullo (2007) challenged deliberate practice theory's reductionist claim that hours of deliberate practice is the only factor that differentiates experts from lower-level musicians. The researchers tested their Summation Theory, which posits that musical achievement is influenced by general intelligence, domain-specific skills and practice. The Summation Theory predicts that only individuals who are bright, highly skilled and motivated will achieve expert levels of performance in their field.

The participants in the Ruthsatz et al. (2007) two-prong study were high school band students and members of a conservatory orchestra. The researchers predicted that the expert musicians (i.e., conservatory musicians) would surpass the high school band students in measures of general intelligence, domain-specific skills, and deliberate practice.

In study one, 178 high school band members completed an intelligence test, a musical aptitude test, and a questionnaire about their history of musical instruction and practice time. Audition scores of band members and their rank order in the band were used as measures of music achievement. Rank was related to IQ ( $r = .25$ ), musical ability ( $r = .22$ ) and practice ( $r = .34$ ) at the .01 level. IQ and musical ability were also related



( $r = .20$ ,  $p < .01$ ). The researchers noted that this finding did not support Gardner's theory of multiple intelligences, which posits that musical ability is independent of general intelligence. Practice time and general intelligence were not related,  $r = .06$ ,  $p > .05$ , which indicates that these two factors are independent.

In the second study by Ruthsatz et al. (2008), 83 conservatory musicians completed the same intelligence test, musical aptitude test, and deliberate practice questionnaire as in the first Ruthsatz et al. study. Musicians' audition and subsequent ranking scores were used as the measure of musical achievement. The results showed that rank was not significantly related to IQ. Domain-specific skills was also not significantly related to rank. Practice was significantly related to rank at the .01 level,  $r = .31$ . Apparently, IQ measures and musical aptitude measures failed to discriminate among the conservatory level musicians, as was the case at the high school band level. The Summation Theory's prediction that higher ability musicians will have higher scores for IQ, musical aptitude and deliberate practice was upheld. But these two groups were not equivalent in age or experience, so the comparison does not seem to indicate much.

The researchers concluded that Ericsson's claim that practice is the only mediating factor seems to hold true at higher levels of expertise, or in groups where general intelligence and musical ability are more or less constant. Ruthsatz et al. (2008) maintain that intelligence and musical ability must account for achievement along with practice; that not every individual who starts at a young age and practices diligently can achieve high levels of performance.

Meinz and Hambrick (2010) investigated the role of working memory capacity in expert performance, and whether deliberate practice eliminated the effects of basic abilities on domain-relevant performance. The sample was comprised of 57 pianists, ranging in 1-57 years of experience, with cumulative hours of deliberate practice ranging from 260 hours to 31,000 hours. The median amount of deliberate practice was 4,160 hours. Participants completed a questionnaire and participated in a structured interview to gather information about their experience and collect estimates of deliberate practice, which was defined as solo practice. Participants also took a sight reading test that involved performing music of low, medium, and high difficulty. The sight reading test performances were audio-recorded. Two expert raters evaluated the tests and gave a ranking of 1 to 7, with 7 being highest for technicality, musicality, and overall performance. Working memory capacity (WMC) was measured by four tasks that involved a decision and memory component. Participants earned one point per task component when they had correct recall and correct judgment.

Deliberate practice and sight reading performance had a strong positive relationship ( $r = .67, p < .01$ ). The correlation between working memory capacity and performance was also significant ( $r = .28, p < .05$ ), and increased when controlling for deliberate practice ( $r = .37, p < .01$ ). The researchers performed hierarchical regression analysis predicting sight-reading performance. Deliberate practice accounted for 45.1% of the variance in sight reading. Working memory capacity accounted for 7.4% of variance in piano sight reading ability, above and beyond amount of deliberate practice. Regardless of the amount of deliberate practice in sight-reading, higher levels of WMC

predicted superior sight-reading performance. The Mainz and Hambrick (2010) study confirmed that deliberate practice is a strong predictor of performance, but also identified an additional factor that explains individual differences in sight-reading performance: working memory capacity.

#### *Methodology used in Deliberate Practice Studies*

Following the approach used by Ericsson and colleagues (1993), researchers have compared experts and amateurs (Duffy et al., 2004; Krampe & Ericsson, 1996); experts and non-expert experienced professionals (van de Wiel et al., 2004); elite and sub-elite groups (Johnson, Tenenbaum, & Edmonds, 2006); elite and ex-elite groups (de Bruin et al., 2008; Ward et al., 2007); amateurs, elite and ex-elite groups (Ford et al., 2009). In all these studies, researchers found significant group effects for amount of deliberate practice.

In order to measure performance, researchers have used domain achievement scores and ratings (Campitelli & Gobet, 2008; Charness et al., 2005; de Bruin et al., 2008; Duffy et al., 2004; Moulaert et al., 2004; Plant et al., 2005; Sonnentag & Kleine, 2000) and administered ability tests (Keith & Ericsson, 2007; Krampe & Ericsson, 1996; Mainz & Hambrick, 2010). Where measures of performance were not available or germane to the study, researchers identified experts according to years of experience (Dunn & Shriner, 1999), industry recommendations (van de Wiel et al., 2004), or elite group membership (Ward et al., 2007).

In order to identify deliberate practice activities, assess the amount of time spent in and frequency of deliberate practice engagement, and ratings of relevance and

enjoyment of deliberate practice, researchers have used questionnaires (Campitelli & Gobet, 2008; Charness et al., 2005; de Bruin et al., 2008; Dunn & Shriner, 1999; Ford et al., 2009; Hodges et al., 2004; Meinz & Hambrick, 2010; Moulaert et al., 2004; Plant et al., 2005); interviews (Duffy et al., 2004; Dunn & Shriner, 1999; Guo, 2007; Keith & Ericsson, 2007; Meinz & Hambrick, 2010; Sonnentag & Kleine, 2000; van de Wiel et al., 2004), and diaries (de Bruin et al., 2008; Dunn & Shriner, 1999; Hodges et al., 2004; Krampe & Ericsson, 1996).

Figure 3 is a sample of a questionnaire taken directly from the study by Campitelli and Gobet (2008) of chess expertise. This questionnaire represents the typical set of questions that have been used in past structured approaches in deliberate practice research; namely, questions concerning participant age, age at which training commenced, performance rating, participation in a pre-determined list of activities, and hours spent in practice activities. Please note that Elo rating is a measure of relative skill level of a player used in chess. Neither the interview guide nor the questionnaire for the present study was modeled after the Campitelli and Gobet (2008) questionnaire per se. Notwithstanding, the factors that were salient on this questionnaire (e.g., age, ranking, age at which serious training commenced, types of chess activities) influenced the types of questions on the instruments for the present study. In other words, of interest in deliberate practice research is the number of years of active engagement in a domain, indicators of effectiveness, and types of activities used to develop mastery in a domain.

(English translation from Spanish)

Answer all the questions, please. Leave a blank space only if you do not possess the ratings requested. If you do not know your rating/ratings you can ask the secretary for it/them. Alternatively, you can write down your name to allow us to look up your ratings. Moreover, fill out the form of hours of study and practice in chess following the instructions. Thank you for your participation.

- 1) How old are you?
- 2) What is your profession?
- 3) What is your national Elo rating?
- 4) What is your speed chess rating?
- 5) What is your category?
- 6) What is your international Elo rating?
- 7) Do you have any title (GM, IM, FM)? Which one?
- 8) At what age did you learn how to play chess?
- 9) At what age did you start playing chess seriously?
- 10) How many hours per week (on average) have you studied alone during the current year?
- 11) How many hours per week (on average) have you studied or practiced chess with other chess players (including tournament games) during the current year?
- 12) Have you ever joined a chess club? If yes, at what age for the first time?
- 13) Have you ever received formal chess instruction from a chess coach?  
Individual coaching: from (age) \_\_\_\_\_ to (age) \_\_\_\_\_ Group  
coaching: from (age) \_\_\_\_\_ to (age) \_\_\_\_\_
- 14) How many books do you have? (excluding chess journals)
- 15) Do you play blindfold chess?
- 16) Do you reproduce chess games from journals without using the chess board?
- 17) Do you use any computer database to study chess?
- 18) Do you play games against chess software?
- 19) Do you play speed chess games? How many per week?

*Figure 3. Chess questionnaire.* Reproduced from Campitelli, G. & Gobet, F. (2008). The role of practice in chess: A longitudinal study. *Learning and Individual Differences*, 18, 446-458.

Figure 4 below provides a list of response items used in the Dunn and Shriner (1999) study of teachers. The respondents were instructed to rank on a nine-point scale how much each activity has helped him or her become a more effective teacher. Effective was defined as the teacher's "ability to implement instructional activities which result in the student outcomes you desire" (Dunn and Shriner, 1999, p.648). The range of responses included not helpful (1-3), somewhat helpful (4-6), and very helpful (7-9). By reviewing the response items, one may observe the types of activities that were tested as potential deliberate practice behaviors in teaching.

1. Reading educational literature and books
2. Attending workshops or inservice meetings
3. Serving on school or district committees
4. Professional discussions with other teachers
5. Professional discussions with resource personnel such as a counselor
6. Professional discussions with administrators
7. Observing others teach or interact with children
8. Discussing your teaching with an experienced professional with the intention of improving your teaching
9. Completing written lesson plans to guide daily activities
10. Mentally planning and developing instructional strategies and activities
11. Organizing and preparing teaching materials
12. Evaluating student performance and understanding through the use of graded written work and projects
13. Evaluating student performance and understanding through the use of tests you develop yourself
14. Evaluating student performance and understanding through the use of tests provided by publishers
15. Evaluating student performance and understanding through informal observations of student behaviors and non-graded performances.

*Figure 4. Activities Listed in Deliberate Practice Questionnaire by Dunn and Shriner (1999).*

In the present study, I first interviewed the participants to generate a list of possible deliberate practice behaviors from the respondents. Then I developed a questionnaire, identifying 16 potential deliberate practice activities that emerged from the interview data. Similar to Dunn and Shriner (1999), I asked participants to rank each activity for relevance to improving their skill on 5-point scale.

Keith and Ericsson (2007) used a semi-structured interview to assess amount of typing experience, deliberate practice per week, and ratings of how much typing speed was a goal for the subject. The interviews lasted one hour and had three parts, which are described in Figure 5 below. In part 1, the researchers' questions were geared toward eliciting estimates from respondents of the amount of typical typing in a week. The number of text lines typed per week was considered a measure of typing experience. In part 2, the researchers' questions were designed to elicit estimates of the total amount of typing done by a respondent in his or her lifetime. In part 3, the researchers' questions were designed to identify subjects' deliberate attempts to improve their typing proficiency. Based on the responses, the researchers decided to define attending a typing class as an indicator of deliberate practice only if at least 80% of the class content was comprised of speed and accuracy drills and exercises.

Keith and Ericsson's (2007) interview protocol informed some of the interview and questionnaire items that were developed for the present study; namely, questions that aimed to elicit what participants did to learn or develop their speaking skills, questions that encouraged participants to share about significant milestones or events in their

development as speakers, and one question regarding the number of speeches given in a typical year, to assess the intensity of a speaker's experience.

#### Part 1. Assessing Typing Experience.

- 1) What documents have you typed in the past 4-6 weeks?
- 2) How many documents have you typed in the past week?
- 3) How many text lines have you produced when typing these documents?
- 4) On a scale of 1-10, how important was typing with speed to you when you typed each document?
- 5) Was the past week representative of a typical week? If atypical, please answer questions 1-5 again for a more typical week.

#### Part 2: Assessing Past Typing Habits

- 1) Which of the following events that influence a person's typing habits occurred in your personal typing history, and if so, at what age? Having a computer in the home, getting your own computer, getting internet access, having an email account.
- 2) For each event above, please indicate whether the event changed your typing habits significantly.
- 3) Can you think of any other event that we did not mention that may have changed your typing habits significantly?
- 4) We have marked the significant events you mentioned on a time line ranging from 10 years to your present age. Please tell us what materials you have typed between these events and estimate the number of text lines you typed for each document.

#### Part 3: Deliberate Attempts to Improve Typing Performance

- 1) Have you attended a typing class? If yes, what was the content of the typing class?
- 2) Did you deliberately teach yourself how to type? If so, what did you do to teach yourself?

*Figure 5. Semi-structured Interview Described by Keith and Ericsson (2007).*



*Deliberate Practice Studies in Competitive Sports*

In a study of dart players (Duffy, Baluch & Ericsson, 2004), researchers found a positive relationship between dart averages and the number of hours spent in deliberate practice activities ( $r = .33$ ,  $p < .05$ ). Deliberate practice was defined as goal-directed solitary practice and goal-directed practice with a partner. Moreover, the researchers found that the strength of the correlation between deliberate practice and dart averages increased over time as the career of the players progressed from three years to fifteen years ( $r = .33$ ,  $p < .05$  at year 3 to  $r = .53$ ,  $p < .001$  at year 15). There was also a significant interaction effect between total deliberate practice hours and level of expertise in dart playing (amateur vs. professional).

The sample in the study by Duffy and colleagues (2004) consisted of 12 professional dart players and 12 amateur dart players, both males and females. The professional level players had won several international competitions, and were ranked in the top 16 of world dart players for 75% or more of their playing careers. Amateur dart players had a minimum of 15 years of experience and no international level achievements. Each player's dart performance was measured by his or her single dart average, which is updated by the sports governing body and used as a reflection of a player's current standing.

Data for the Duffy et al. (2004) study was collected through personal interviews modeled after the Ericsson et al. (1993) study. Subjects were asked to rate on a scale of 0 – 10, 0 being lowest and 10 being highest, the extent to which they considered practice to be enjoyable, to require concentration, and physical effort. No significant differences

based on level of expertise were found in the rankings of practice for enjoyment, concentration and physical effort.

The subjects also completed an activity chart modeled after the one developed by Ericsson et al. (1993), on which the subject recorded the number of hours per week they engaged in the following dart-related activities: playing in competitions, playing recreationally, playing in a league, solitary practice, practicing with a partner, and total deliberate practice—at four distinct points in their careers: at years 3, 5, 10 and 15. Total deliberate practice time was based upon the total time reported for solitary practice and practicing with a partner.

There were no significant main effects between expertise level and a) total hours spent in competition, or b) total hours playing for fun. Single dart averages were not significantly related to hours spent in competition and hours spent playing for fun. Number of hours spent playing in a league was negatively related to single dart average at year 3,  $r = -.39$ ,  $p < .05$ ; year 5,  $r = -.35$ ,  $p < .05$ ; and year 10,  $r = -.35$ ,  $p < .05$ . That is, the more a player's darting average increased, the less time the player spent in leagues, presumably to play professionally instead.

Regarding deliberate practice hours, there was a significant main effect for skill level,  $F(4,29) = 5.36$ ,  $p < .01$ . Post-hoc analysis indicated that professional players reported significantly more hours of deliberate practice at year 10,  $F(1,30) = 12.21$ ,  $p < .001$ . At year ten of playing the sport, professional male dart players averaged 8,366.83 hours ( $SD=4,906.82$ ) of practice and amateur male dart players averaged 2,331.33 hours ( $SD=3,202.97$ ). Professional female dart players averaged 5,009.33 hours

(SD = 2,701.13) of deliberate practice at year ten, compared to 1,282.67 hours (SD=1,121.40) for amateur female dart players.

Single dart averages were significantly and positively related to total deliberate practice hours at all four points of time, with the correlation growing stronger with each subsequent time period. At year 3,  $r = .33$ ,  $p < .005$ ; year 5,  $r = .38$ ,  $p < .05$ , year 10,  $r = .48$ ,  $p < .01$ , and year 15,  $r = .53$ ,  $p < .001$ . The researchers concluded that deliberate practice was the primary determinant that leads to professional level attainment in dart throwing.

In a study of expert chess players (Charness, Tuffiash, Krampe, Reingold, & Vasyukova, 2005), the researchers investigated the relative importance of individual study, time in chess competitions, and private or group chess instruction to chess skill. Two samples of chess players (combined  $N = 375$ ) who ranged in age and skill level completed a pen-and-pencil survey that covered each participant's demographic information, chess accomplishments, cumulative chess activities and current chess activities. Linear regression analyses examined chess play, instruction and study activities as predictors of current and peak chess skill. Total hours of individual study ( $\beta = .39$ ,  $p < .001$ ) was the top predictor of a player's peak chess rating in the combined sample. Time spent in individual study was interpreted by the researchers as equivalent to deliberate practice in chess. Total hours of individual study ( $\beta = .36$ ,  $p < .001$ ) was also the strongest predictor of current chess skill rating for the combined sample, with total years private instruction ( $\beta = .15$ ,  $p < .001$ ), current hours per week

in individual study ( $\beta = .12, p < .001$ ) and current time spent in tournament play ( $\beta = .13, p < .001$ ) as additional significant predictors.

When looking just at the second sample, in which there was a minimum age requirement of 18 and a minimum skill level requirement, total hours of individual study was the only significant predictor of current chess skill ( $\beta = .38, p < .001$ ). This finding regarding the second sample appears to confirm Ericsson's theory that given a certain minimum requirement of experience, the factor that best explains differences in achievement is the amount of deliberate practice. Charness and colleagues performed additional analyses, by grouping the total sample into two age groups--those under 40 and those over 40, and running the same linear regression analysis on the various chess activities. Individual study was the only predictor of current chess skill for the older group, whereas cumulative practice, play in competitions, and years of private instruction were significant predictors for the younger group. The 40 year-old cut off age was chosen based on research that had suggested peak expertise in chess is achieved in the mid to late thirties. The finding concerning the over 40 group vs. the younger group also confirms Ericsson's assertion that amount of deliberate practice is what best explains differences in achievement once a certain level of experience is attained.

Another study of chess players by Campitelli and Gobet (2008) involved 104 chess players in Argentina, with varying levels of achievement, from 17 masters who had achieved international titles, to 35 experts with international ranking but with no title, and 31 intermediate level players who had no international ranking. Participants completed a questionnaire, which covered biographical, chess training and achievement questions, and

a practice grid on which the participants were to record the number of hours per week they had spent in individual practice and group practice at each age since they started playing chess. Correlations between national rating and total cumulative hours of individual practice revealed a significant positive relationship,  $r = .42$ ,  $p < .0001$ . The correlation between cumulative group practice and current national rating was even stronger, at  $r = .54$ ,  $p < .0001$ .

The researchers were interested in whether there were any differences between the more accomplished players and the less accomplished players in the amount of time spent and type of practice. Campitelli and Gobet thus used a 2 (practice type) x 3 (level of achievement) ANOVA with group versus individual practice as a within-subjects independent variable. The level of achievement (masters, experts and intermediate) was the between-subjects independent variable. The dependent variable was time spent in weekly practice. Not surprisingly, the researchers found main effects for chess level, indicating that more accomplished players practiced more than weaker players. Less expected was a main effect for type of practice, with group practice having a stronger relationship to achievement than individual practice. Multiple regression showed that number of books, the presence of a coach, and number of speed games all significantly contributed to chess skill rating. Number of books was considered to be a measure of time spent in individual practice or study. Coaching and log speed games were group practice activities.

Campitelli and Gobet (2008) also investigated the specific activities involved with group and individual practice in their questionnaire. Group practice activities included

coaching, playing blindfold chess, and playing speed chess games. Solo practice involved using chess programs, using databases, and log number of chess books. The researchers computed correlations between these group and individual practice activities with national skill rating. There were significant correlations at the  $p < .05$  level between skill and log number of books ( $r = .44$ ), having a coach ( $r = .35$ ), using databases ( $r = .32$ ), and playing speed chess ( $r = .27$ ). Stepwise regression analyses, with all the activities associated with individual and group practice entered as variables, revealed that log number of chess books, having a coach, and log number of speed chess games were significant predictors of national rating. Reading chess books, indicated by log number of chess books, was the strongest predictor of chess skill ( $B = 158.8$ ,  $SE = 34.7$ ,  $Beta = 4.58$ ,  $p < .0001$ ,  $95\% CI = 89.9, 227.8$ ).

In a study by Ward et al. (2007), over 200 elite and sub-elite soccer players aged 8 to 18 years of age completed a questionnaire in which they reported retrospectively their practice history in soccer, and how they rated those activities in terms of perceived relevance to improving their soccer performance, effort required, and enjoyment. The purpose of the study was to examine the role of an individual's participation in domain-specific practice and play to expert performance, and to look at the specific structure of practice. Elite soccer players reported receiving enjoyment from activities reflecting their dedication, commitment and practice in this study. Deliberate practice may not necessarily be devoid of enjoyment, as Ericsson originally posited. Enjoyment and team practice (as opposed to individual practice) may be factors of motivation in developing expertise in soccer--referred to as "rage to master."

Ford, Ward, Hodges and Mark-Williams (2009) investigated the influence of type of developmental activity engaged in by young soccer players on subsequent entrance into professional status. The purpose of the study was to test two alternative theories of skill acquisition within the Developmental Model of Sport Participation (DMSP). The early diversification pathway would predict that elite athletes would spend more time at play across sports between ages 6-12 than non-elite athletes. An alternative theory known as the early specialization pathway, predicts that elite athletes would spend more time in deliberate practice in their primary sport, and less play-time in other sports, than their non-elite counterparts.

The participants in this study were a subset of participants in an earlier study (Ward et al., 2007) and included a still-elite group of players, an ex-elite group, and a recreational-level group. Questionnaire data from the first study (Ward et al., 2007) on the subjects' sports participation history was re-examined. The types of soccer activities the researchers examined were deliberate practice, competition and play. Deliberate practice included both individual and group activities that were intended for skill improvement. Competition referred to games played against other teams. Play referred to unstructured soccer games that were engaged in for fun. Number of hours spent playing other sports between the ages of 6-12 was also examined.

Number of hours in competition did not differentiate the groups. Time spent in soccer-play activities between the ages of 6-12 years of age did differentiate the still-elite group ( $M = 338$  hours,  $SD = 308$ ) from the ex-elite group ( $M=148$  hours,  $SD = 114$ ),  $P < .05$ ,  $d = 0.8$ . The time spent in soccer play by recreational-level players ( $M = 158$  hours,

SD = 104) was not significantly different from that spent by the two elite groups together (M= 243 hours, SD = 247,  $p > .05$ ). The age at which the participants started playing other sports (M = 9.3 years, SD = 2.2) did not distinguish the groups. The number of other sports participants played between ages 6-12 (M = 1.5, SD = 1.3) also did not differentiate the groups.

Ford et al. (2009) concluded that their findings did not entirely support either the early diversification or early specialization pathways. The early diversification pathway predicts that play time in other sports is important for skill acquisition in the primary sport. Ford and colleagues found that play-time in the primary sport differentiated still-elite from ex-elite players. Still-elite players had double the amount of time (300 hours) in soccer play activity between ages 6-12 than the ex-elite group (150 hours). Involvement and play in other sports did not distinguish the groups. The early specialization pathway predicts that future elite athletes will spend more time in deliberate practice in their primary sport in the early years.

In this study (Ford et al., 2009), amount of deliberate practice distinguished the recreational-level group from the two expert groups, but did not distinguish the still-elite from the ex-elite groups. In fact, the ex-elite group spent more time in deliberate practice (M= 259 hours, SD = 115) than the still-elite group (M= 212 hours, SD = 121), although this difference was not statistically significant. The still-elite group spent significantly more time in soccer play activity (M = 338 hours, SD = 308) than the ex-elite group (M = 148 hours, SD = 114,  $p < .05$ ,  $d = 0.8$ ).



Based on these findings, Ford et al. (2009) proposed an alternative hypothesis called the early engagement pathway, which predicts that future expert athletes will spend more time playing and practicing their primary sport with minimal diversification. The researchers explained that playing for fun in a primary sport in the early stages can foster the motivation and willingness to engage in more disciplined activity. Many hours of deliberate practice, coupled with many hours of play in the primary sport, contributes to expert performance.

### *Deliberate Practice in Typing and Decisionmaking*

In a study by Keith and Ericsson (2007), 60 undergraduate students were assessed for cognitive, perceptual and finger motor speed ability using SAT scores, a digit-substitution test, and a finger tapping test, respectively. The subjects also participated in a semi-structured interview to assess typing experience and performed various typing tasks with a computer typing tutor. Typing performance was measured by a net words-per-minute average score on 12 computer typing tasks, which included the typing of nonsense material and material with meaningful content. The researchers defined deliberate practice in typing as having taken a typing class in which 80% or more of the class was spent on typing drills, speed tests, and other activities that aimed at improving speed and accuracy.

The researchers examined the effects of ability on typing performance using a model with typing performance on nonsense versus meaningful content as a within-participant factor, and with SAT score, digit-substitution score and tapping speed as between-participants continuous predictors. A main effect for the within-participant

factor was found, which meant that all typists performed better with meaningful content than with nonsense material. Of all the ability measures, only the SAT score predicted performance on meaningful text ( $\beta = .27$ )  $t(56) = 2.07, p < .05$ , but not on nonsense material (not significant).

The researchers then examined the effects of typing experience on typing performance using a model with typing performance on nonsense versus meaningful content as a within-participant factor, and with typical amount of typing in one week and total amount of typing as between-participants continuous predictors. Total amount of typing interacted with the within-participant factor of meaningful vs. nonsense material. Total amount of typing predicted typing performance scores for meaningful text ( $\beta = .37$ ),  $t(57) = 2.96, p < .01$ ; but not for nonsense text (not significant).

Last, the researchers examined the effects of deliberate practice on typing performance using a similar model, with taking a typing class and having a subjective speed goal as between-participant predictors. The researchers were also interested in the combined effect of taking a typing class and valuing speed in typing on typing performance. The researchers therefore included in their analysis model the interaction of taking a typing class and the subjective speed goal. Subjective speed goal had a significant main effect on performance. Taking a typing class did not have a significant main effect but did interact with subjective speed goal. The highest performance scores were obtained by subjects who had taken a typing class and at the same time valued speed in typing.

The study by Keith and Ericsson (2007) confirmed deliberate practice theory

insofar as highest performance on typing was associated with indicators of deliberate practice (i.e., taking a typing class and having a speed goal). The researchers downplayed the finding that SAT scores predicted typing performance. They surmised that verbal abilities only rather than a global intelligence factor per se, as measured by verbal and math SAT scores, may contribute to typing performance.

McKinney and Davis (2003) addressed whether deliberate practice benefits performance on tasks that have not been specifically covered in practice sessions. The context of the study was pilots' decision-making in crisis flight situations. McKinney and Davis looked at the effects of deliberate practice in wholly-practiced scenarios, in which a malfunction that occurred had been deliberately practiced by pilots in their training, and in partially-practiced scenarios, in which the aircraft malfunction that occurred had not been specifically practiced, although every other aspect of the situation had been practiced.

McKinney and Davis collected data on 173 reports of U.S. air force aircraft mechanical malfunctions that occurred between 1980-1990. The malfunctions that occurred were both deliberately practiced and unpracticed. A panel of experienced judges rated the decisions made by the pilots in these malfunction scenarios as either effective or ineffective. For ineffective decision cases, another panel of judges identified in which phase of decision-making the error had been made. The researchers characterized the decision-making process as comprising two phases: assessment and choice of action. Deliberate practice was measured for each pilot according to the pilot's number of flying hours in the aircraft that had malfunctioned, and the pilot's total number of military

aircraft flying hours. Flying time was considered a reasonable measure of deliberate practice because of the high standards, requirements to fly in crisis conditions, and periodic evaluation that characterizes air force pilot flying time.

Deliberate practice was associated with effective decision-making in the wholly-practiced scenarios. Pilots who had made effective decisions in the malfunction had significantly higher hours in their aircraft (708 hours) and total flight hours (2221) than pilots who had made ineffective decisions (393 hours in malfunctioned aircraft and 1480 total flight hours). In partially-practiced scenarios in which the malfunction that occurred was not practiced, there was no relationship between deliberate practice and decision-making performance.

In cases where the malfunction was not practiced, deliberate practice had a different relationship to decision-making performance depending on the phase of decision-making. Pilots who made errors during the assessment phase of decision-making averaged 478 hours in the aircraft compared with 810 hours for pilots who had made effective decisions. For the assessment phase, then, it appears that deliberate practice is associated with better decision-making. However, the opposite is the case for the course-of-action phase. Pilots who made action phase errors averaged 1355 hours in the aircraft, compared to 810 hours for pilots who did not make decision errors. These differences were significant at the  $p < .05$  level. The researchers concluded that for scenarios that involve novel elements, deliberate practice benefits pilots in the assessment phase more than the choice of action phase.

Deliberate practice research in sports, chess, typing and decision-making has consistently shown moderately strong correlations between amount of deliberate practice and domain achievement measures. Some studies confirmed the monotonic benefits assumption insofar as the correlation between amount of deliberate practice and achievement became stronger in later years of an individual's career (Charness et al., 2005; Duffy et al., 2004). Studies also showed significant group effects for deliberate practice, with elite groups spending more time in deliberate practice than non-elite groups (Duffy et al., 2004; Ford et al., 2009; Ward et al., 2007). Where hierarchical regression was used, researchers found that amount of deliberate practice accounted for 38% (Hodges et al., 2004) to 45.1% (Meinz & Hambrick, 2010) of variance in performance scores. Less understood in the research are the motivational factors that promote and sustain an individual's deliberate practice engagement.

#### *Deliberate Practice Research in Professional Domains*

Dunn and Shriner (1999) were among the first to apply the deliberate practice concept to a professional domain: teaching. In music and sports, there are standard or objective measures of performance. A musician can readily observe improvements in performance as a result of practice. A runner can objectively measure improvements in speed and distance as a result of practice. But Dunn and Shriner (1999) explained that in teaching, defining improvement goals is not a straightforward task because improvements are difficult to measure. Consequently, deliberate practice in teaching would not resemble the activities of musicians and athletes. Rather, Dunn and Shriner (1999)

focused on the deliberate practice concept as those activities that provide opportunity for learning and improvement.

In the first of two studies, the researchers surveyed kindergarten through 8<sup>th</sup> grade classroom teachers in 14 private elementary schools in Ohio and Michigan (N = 136, response rate 70%). The questionnaire listed 15 specific activities that were related to teaching, including planning, preparation, evaluation, interaction with colleagues and continuing education. The researchers developed the questionnaire items through discussion with experienced teachers and teacher trainers. The participants were asked to rate each activity item across four deliberate practice characteristics: relevance to teaching, effort, enjoyment, and frequency. The top 3 items for relevance were preparing materials (M = 8.22; 9 being the highest), mental planning (M = 8.04), and discussions with colleagues (M = 7.87). The top 3 items for effort were committee work (M = 7.08; 9 = highest), evaluating students from self-made tests (M = 6.69), and preparing materials (M = 6.43). Since Ericsson originally posited that deliberate practice was not inherently enjoyable, the lowest ranking items on the enjoyment scale will be reported: committee work (M = 3.98, 9 = highest enjoyment); evaluation from prepared tests (M = 4.1), and written planning (M = 4.36). The activities that received the highest average frequency ratings were preparing materials (M = 4.65; 5 = daily); mental planning (M = 4.45) and student evaluation through written work (M = 4.26).

To identify the deliberate practice activities of teachers, the researchers rank-ordered the activities by number of teachers who gave high ratings for relevance, effort and frequency. The top five activities were: preparing instructional materials (n = 71),

mental planning (n = 47), student evaluation through written work (n = 46), informally evaluating students through observations (n = 35), and written planning (n = 23).

Dunn and Shriner conducted a second study to investigate how much time teachers spent on the alleged deliberate practice activities, and to find any additional support for the claim that these activities constituted deliberate practice for teaching. This time, the researchers selected subjects who had at least 10 years of teaching experience. This experience requirement would help eliminate the inclusion of novice teachers in the sample, and focus on those teachers who may have higher levels of competence. Eight elementary school teachers, with an average of 18 years of teaching experience, participated in this study. Each teacher kept a log of his or her daily activities in 15-minute increments for 14 consecutive days. Both activities inside and outside the classroom were included in the logs. The researchers' coding scheme included four categories: planning and preparation, classroom, everyday unrelated to teaching, and activities supporting instruction. Each recorded activity was assigned one, two or three category codes, and total time for each category was noted.

Follow up interviews allowed the researchers to ask the teachers specifically about three activities identified in the first study (mental planning, formal and informal evaluation)—i.e., what the activities meant to them, how much time they gave to these activities, and to what extent these activities resulted in improvements in teaching. The interviews were recorded and transcribed for analysis. In general, the range of time spent in a particular activity varied greatly. For example, the average time spent in school teaching, directing learning activities was 177 minutes per day, but the range was 0 -345.

For mental planning, the average time spent in school was 4, with a range of 0 – 90 minutes. Average time informally evaluating students by observation in the classroom was 29 minutes, with a range of 0 – 158. For a few activities, the time indicated in the logs did not match the interview responses. For example, time spent in discussion with teachers was among the lowest ranking activities in terms of time spent, yet this activity was frequently mentioned in interviews as being particularly valuable for ideas, feedback, and teaching improvement. Interview responses to questions concerning mental planning also suggested that the teachers spent more time in mental planning than was indicated in the time logs. The researchers did not have any means to determine the reliability of the time logs.

The researchers (Dunn & Shriener, 1999) focused on investigating whether teachers perceived the planning and evaluation activities as giving them opportunities for teaching improvement. But what emerged from the interview data was a recurring emphasis on observing the child-- a concern for improving the students' learning. The goal of improving student learning did not initially seem self-focused, but Dunn and Shriener reasoned that this goal was nevertheless related to improving teaching performance. In other words, deliberate practice for teachers may be identified in part by having the characteristic of a goal for improved student learning.

Another conclusion of the study was that deliberate practice in teaching may be activities that are considered a regular part of teaching, such as formal and informal evaluation and mental planning, but engaged in more mindfully. That is, with more



monitoring and reflection of what is working, what is not working and what adjustments can be made to optimize learning in the classroom.

Unfortunately, Dunn and Shriner (1999) did not design their study to identify whether teachers' mental planning and evaluation activities actually resulted in changes or improvements in teaching. Notwithstanding, Dunn and Shriner's work represents a creative application of the deliberate practice concept to an ill-structured profession, and a first-step towards identifying what may constitute deliberate practice in teaching, based on perceptions of experienced teachers.

Sonnentag and Kleine (2000) applied the deliberate practice concept to the work setting, studying what may constitute deliberate practice in the context of insurance sales, and whether deliberate practice is related to work performance. The researchers characterized deliberate practice as activities that: a) had an explicit goal to improve work performance, b) focused on current competence deficits, c) provided opportunities for improving important job-related skills, and d) were pursued regularly and continuously with effort.

Just as Dunn and Shriner (1999) concluded that deliberate practice activities for teachers may appear as those activities that teachers regularly engage in to accomplish the task of teaching, but with more mindfulness, Sonnentag and Kleine (2000) were careful to distinguish job-supportive tasks that incorporated deliberate practice principles from general supportive activities that were strictly for the purpose of task accomplishment. A task-oriented activity such as contacting a colleague to problem-

solve could be considered a deliberate practice activity when it was performed frequently for the purpose of improving one's work performance.

Sonnentag and Kleine (2000) looked at both current and cumulative deliberate practice (Charness et al., 1996), and assumed that both would be positively related to work performance. Reasoning that a large amount of deliberate practice might be the result of being assigned a large number of tasks, or number of years on the job, the researchers controlled for the amount of work accomplished and years of experience. One hundred insurance sales agents participated in the study, years of experience averaged 11.7 years ( $SD = 9.4$ ), average age was 40.4 years ( $SD = 9.4$ ). Ninety-six percent of the participants were male, 55% were freelance agents, and 46% worked for insurance companies.

The researchers (Sonntag & Kleine, 2000) conducted a structured interview to identify each participant's work activities, goals for each activity, and current and cumulative time spent in the activities. Based on pilot interviews, the researchers identified 10 job-related activities that might also constitute deliberate practice. The activities met the following criteria: a) the activity could improve job performance; b) the activity involved aspects of practice and improving competence; c) the activity could be performed regularly at work; d) the activity is optional and goes beyond what the job requires; and e) the activity is not directly tied to financial reward. The ten activities were: preparation, mental simulation, new strategy exploration, post-case assessment, soliciting feedback, talking to colleagues, talking to experts, formal meetings, informal meetings, private conversations.

During the structured interview, the subjects identified how much current and cumulative time they spent on each supportive activity, regardless of goal and frequency for engagement. The subjects then indicated their goals for each activity, which were coded as either a) goal of improving competence; b) any other goal not related to improving competence; or c) no goal. To be considered a deliberate practice activity, the subject had to engage in the activity with the goal of improving competence and with a minimum frequency of once a week. Current time spent on supportive and deliberate practice activities referred to the weekly amount of time spent in the two categories. Cumulative time spent on supportive and deliberate practice activities was a retrospective measure based on the participant's perceived time spent over the career span.

To establish validity of the interview data, the researchers (Sonntag & Kleine, 2000) obtained a week-long diary of activities from 69 participants. The correlation between the diary data and the interview data on current time spent on supporting activities was  $r = .35, p < .01$ . The researchers reasoned that this low correlation might be due to the fact that several activities may not be performed on a weekly basis. The researchers then excluded diary data from participants who reported performing four or more activities less than once a week. The subsequent correlation between the diary and interview data increased to  $r = .57, p < .01, N = 32$ , which the researchers considered to be satisfactory.

Out of the ten supportive activities examined, the two activities that emerged as deliberate practice (engaged in at least once a week with the goal of improving competence) were mental simulation (26%) and asking for feedback (20%). Mental

simulation referred to imagining a challenging case with a client and thinking through various ways of handling the situation. Preparation (16%), post-case assessment (11%) and talking to colleagues (11%) were the next highest in terms of percentage of insurance agents performing the activity as deliberate practice. Sixty-two percent of insurance agents reported performing any one of the ten activities on a weekly basis for competence improvement. The researchers concluded that insurance agents are engaged in deliberate practice activities, but that there are no standard deliberate practice activities per se. Rather, the types of activities insurance agents might engage in as deliberate practice varies according to the individual and the work situation.

Likert-scale work performance ratings were obtained from agent supervisors with respect to meeting sales goals and generating new business. In addition, data on each insurance agents' years of professional experience and number of cases handled per day was obtained during the interview. Regression analysis revealed that years of experience was not a predictor of performance. The number of cases handled, however, was a significant predictor, accounting for 16% ( $p < .05$ ) of variance in performance rating. In other words, the higher number of cases an insurance agent worked on, the higher the performance rating.

The current time spent on supportive activities did not explain variance in performance, but the amount of current time spent on deliberate practice activities explained 6% of the variance in performance rating ( $p < .05$ ). This indicates that the more time an insurance agent spent on deliberate practice activities above handling cases and performing regular supportive activities, the higher their performance rating.

When cumulative time spent on deliberate practice was analyzed by multiple regression, this factor did not emerge as a significant predictor of performance. This finding suggests that current time spent honing one's skill and staying abreast of the industry is more important to continued success than past seasons of diligence. Unlike the domains of music and chess, in which cumulative time spent on deliberate practice was found to be a predictor of achievement (Charness et al., 1996, Ericsson et al., 1993), insurance sales performance may not be as critically tied to cumulative deliberate practice. This may be due to changes in the nature of the business, such as new rules and procedures, which renders previously acquired knowledge and skills obsolete. The researchers also noted, however, that retrospective estimates by participants may not be valid measures for cumulative time spent on deliberate practice.

The researchers elicited performance ratings from the insurance agents' supervisors. Sonnentag and Kleine (2000) claimed that current deliberate practice activities had a low-moderate correlation with performance, but no information was provided on whether the correlation was statistically significant. The researchers also ran multiple regression analyses on the following factors: years of experience, number of cases handled, cumulative and current time on deliberate practice activities. The latter accounted for 6% of variance on performance ratings ( $p < .05$ ). This finding supports deliberate practice as a predictor of stronger performance.

Van de Wiel, Szegedi and Weggeman (2004) studied expertise development among strategic and organizational consultants from a self-regulated learning and deliberate practice perspective. The researchers' main question was whether top-level

professionals spent more time in deliberate practice and self-regulated learning activities than lower-achieving professionals with equal experience. Twenty-three strategic and organizational consultants participated in a structured interview. The sample was selected by using an industry publication. From this list, the researchers asked customers and industry colleagues to name those they considered to: a) have the most knowledge and experience, b) be an active contributor to the field, and c) motivate customers to be involved. Subsequent to this inquiry, 11 volunteer experts were recruited for the study. These experts in turn referred the researchers to individuals who had the same number of years of experience, but who had not yet achieved the elite status in the profession. Through this process, 12 non-experts volunteered to participate in the study.

The researchers conducted semi-structured interviews modeled after the Sonnentag and Kleine study (2000). The interviews consisted of 16 questions relating to general use of time, work-related activities, activities relating to keeping abreast of their field, activities toward achieving long-term professional goals. Questions 1-4 and 16 dealt with age, years of experience, work hours, travel time, and activities during traveling. Questions 5-12 dealt with work-related activities that were considered deliberate practice and self-regulation activities by the researchers: preparation, making a proposal, revising the proposal, help-seeking from a peer, help-seeking from an expert, assessment, and choosing a new strategy. The participants identified the activities they engaged in, described those activities, why they engaged in them, and for how long.

In the remaining questions, the participants identified the extent to which they had engaged in activities to stay abreast of their field, such as going to a conference, taking a

course, reading the newspaper, reading the professional or research literature in their field, or contributing to their field (e.g., by publishing an article or book, conducting research); and if so, with what type of goal in mind. The researchers also asked the participants which activities were most vital to their professional development or performance improvement, and whether they kept long-term professional goals in mind.

Participant responses concerning reasons for engaging in particular activities was coded as a mastery goal, performance goal, or a professional goal. Mastery goal was assigned when the participant engaged in an activity primarily for the sake of learning; performance goal was assigned when the participant expressed engaging in the activity in order to be better than others or to avoid failure; professional goal was assigned when the participant said an activity was done because it was expected, necessary, or part of the job. Deliberate practice activities were by necessity activities that were performed with a mastery goal in mind.

Van de Wiel and colleagues (2004) found that top-level professionals were significantly older, [ $M = 53.1$ ,  $SD = 9.2$  vs.  $M = 44.6$ ,  $SD = 7.6$ ,  $t(19) = 2.26$ ,  $p < .05$ ]; worked more hours per week, [ $M = 59.2$ ,  $SD = 8$  vs.  $M = 49.1$ ,  $SD = 7.9$ ,  $t(19) = 2.91$ ,  $p < .01$ ]; and spent double the amount of time in activities to keep abreast of their fields than experienced professionals. There were no significant differences between the groups in terms of number of work-related activities or having mastery, performance or professional goals. Out of 105 work-related activities, 22 (21%) were pursued with a mastery goal and thus classified as deliberate practice activities. The most commonly reported deliberate practice activities were asking expert colleagues for advice and

evaluating assignments. Talking with colleagues and reflecting were the two most frequently reported activities by experts and non-experts as contributing most to their professional development. Top professionals tended to engage in adjusting a proposal, asking help from colleague-experts, and making assessments more than non-expert professionals. Top professionals also spent more time preparing client visits, wrote more extensive proposals, and spent more time reading scientific literature than non-expert professionals.

The specific planning, preparation, evaluation, and reflection activities that are implied in deliberate practice theory were not clearly described in this study, rather generally identified. Van de Wiel and colleagues (2004) suggested that future research provide a cogent analysis of tasks that are performed in a domain in order to determine the extent of commonalities and domain-specificity of expertise development.

Deliberate practice research in professional domains has sought to identify activities that may constitute deliberate practice by asking respondents to rate certain activities according to frequency, effort and relevance to performance improvement, and to indicate their goal orientation for each activity. Sonnentag and Kleine (2000) were unique in obtaining a performance measure so that the researchers were able to use regression analysis to find that amount of current deliberate practice predicted performance. Van de Wiel and colleagues (2004) identified one specific activity--reading scientific literature-- that top-level professionals engaged in significantly more than their less-accomplished peers. The question of what motivates professionals to engage in deliberate practice remained unexamined.



### *Motivation and Deliberate Practice*

Several studies have addressed the issue of motivation for deliberate practice. Vallerand et al. (2007) devised a Dualistic Model of Passion to explain what motivates a person to engage in deliberate practice. The concept of passion was based on Deci and Ryan's (1985, 2000) Self-Determination Theory, which posits that activities that fulfill people's needs for competence, autonomy, and relatedness are internalized in an autonomous or controlled way. Vallerand et al. (2007) defined passion as "a strong inclination toward an activity that individuals like...find important, in which they invest time and energy, and which comes to be internalized with one's identity" (Vallerand et al., 2007, p.507). For example, a person who has a passion for singing or writing will think of herself as a "singer" or "writer." The Dualistic Model of Passion posits that as a person regularly engages in an enjoyable activity, that activity will become highly valued and internalized. By becoming internalized, the activity becomes part of the person's identity, which in turn promotes a passion toward that activity.

Vallerand and colleagues identified two types of passion. The first type, obsessive passion, is when the origin of internalizing the activity is social or self-inflicted pressure, caused by needs for acceptance or self-esteem. Obsessive passion may also result when the sense of pleasure derived from engaging in an activity becomes addictive. Obsessive passion leads to rigid commitment to the activity and sub-optimal functioning when the individual cannot engage in the activity. An individual with obsessive passion is psychologically dependent on the activity. He or she will feel compelled to persist in an activity despite negative emotions or damaged relationships.

The second type, harmonious passion, corresponds to autonomous internalization of an activity. An individual with harmonious passion engages in the activity as valuable without strings attached; that is, the activity is not tied to the person's self-esteem or need for social acceptance. Engagement in the activity is completely volitional, and is in harmony with other facets of the individual's life. Harmonious passion was hypothesized to facilitate more positive affect and concentration during task engagement than obsessive passion.

Passion is distinct from intrinsic motivation insofar as intrinsic motivation is not internalized into the person's identity and is more associated with short-term person-task interaction (Vallerand et al., 2007). A person can be intrinsically motivated to take digital photographs with a new camera because she finds it pleasurable, but she does not think of herself as a "photographer," whereas a person who has a passion for photography would most likely engage in this activity long-term and would think of herself as a "photographer." Passion is also distinct from extrinsic motivation, which involves doing an activity for rewards that are outside the activity itself. Extrinsic motivation, unlike passion, does not involve a liking for the activity itself.

In the first of two studies to test their model, Vallerand et al. (2007) found that both obsessive and harmonious passion predicted deliberate practice and positive performance among 143 elite theatre students. The participants completed surveys measuring the two types of passion, deliberate practice, and subjective well-being. The researchers developed their deliberate practice survey by asking acting instructors, students and actors to list five activities that actors engage in during their free time to

improve their performance. The researchers then chose the top three activities and included them in a likert-type survey. No validity information was provided for this instrument. Instructors also completed performance ratings for the participants.

Both harmonious ( $r=.40, p<.001$ ) and obsessive passion ( $r=.34, p<.001$ ) were positively related to deliberate practice. Deliberate practice had a low-moderate correlation with performance ( $r=.23, p<.01$ ). Harmonious passion ( $r=.27, p<.001$ ) and deliberate practice ( $r=.19, p<.05$ ) correlated with subjective well-being. Path analysis revealed that harmonious ( $\beta = .32, p < .05$ ) and obsessive passion ( $\beta = .21, p < .05$ ) positively predicted deliberate practice. Deliberate practice also positively predicted performance ratings of instructors ( $\beta = .29, p < .05$ ).

In their second study (Vallerand et al., 2007), the researchers looked more closely at the types of goals that may facilitate deliberate practice engagement: mastery goals (which facilitate competence or skill acquisition), performance-approach goals (which seek to outperform others), and performance-avoidance goals (which seek to avoid failing in front of others). The researchers hypothesized that harmonious passion would predict mastery goal orientation, and that obsessive passion would predict all three types of goals. Performance-approach and performance-avoidance goals, insofar as they did not concern skill acquisition, were expected to be unrelated to deliberate practice.

The participants in Study 2 were 130 elite psychology students at a university in Quebec. The performance measure was a psychology test score. The deliberate practice measure was an adaptation of two instruments that identified strategies to prepare for exams (considered short term deliberate practice) and psychology career preparation

activities (considered long term deliberate practice). Participants were asked to rank the extent to which they participated in the activities using a likert-type scale. Passion, social well-being, and achievement goals were also measured using existing instruments.

Using path analysis, the researchers found that harmonious passion positively predicted mastery goals ( $r=.48, p<.001$ ;  $\beta=.46, p<.05$ ), and was positively correlated with subjective well-being ( $r=.39, p < .001$ ). Mastery goals predicted short ( $r=.37, p < .001$ ;  $\beta = .37, p<.05$ ) and long term ( $r = .48, p <.001$ ;  $\beta = .28, p <.05$ ) deliberate practice. Both short and long term deliberate practice correlated positively with performance on a psychology exam ( $r =.32$  and  $r = .38, p <.001$ , respectively). Deliberate practice also predicted performance ( $\beta = .21$  and  $.28$  for short and long term deliberate practice, respectively,  $p < .05$ ).

Consistent with the researchers' predictions, obsessive passion correlated with mastery goals ( $r=.30, p<.001$ ), performance-avoidance goals ( $r=.28, p<.001$ ) and performance-approach goals ( $r=.25, p<.01$ ). Obsessive passion was negatively related to social well being ( $\beta = -.19, p<.05$ ). Unexpectedly, performance-approach goals had a slight correlation ( $r=.19, p<.05$ ) with long-term deliberate practice. Performance-avoidance goals were unrelated to deliberate practice, as the researchers' model predicted. Performance-avoidance goals did not have a significant negative affect on performance, as hypothesized, although a negative affect was found ( $\beta = .10, p<.10$ ).

The researchers concluded that their Dualistic Model of Passion helps explain motivational factors that underlie deliberate practice and relate to performance attainment. The Vallerand et al. (2007) study also confirmed deliberate practice as a

predictor of achievement, and that deliberate practice may be pursued in the form of short-term and long-term strategies for skill enhancement and career development.

Two additional studies investigated the role of passion as predictors of deliberate practice and performance in sports (Vallerand, Mageau, Elliot, Dumais, Demers, & Rousseau, 2008) and music (Bonneville-Roussy, Lavigne, & Vallerand, 2011). Note there have been a number of studies on the Dualistic Model of Passion (Vallerand, 2008), but for the purpose of this literature review I am focusing on passion studies that included deliberate practice as a variable.

The purpose of the study by Vallerand et al. (2008) was to test the Dualistic Model of Passion in the domain of basketball. One-hundred-eighty-four high school basketball players, average age 16 (SD = .98 years), with average experience in playing organized basketball of 3.78 years (SD = 2.14 years). The basketball players reported playing basketball 4.46 times per week (SD = 1.95) for on average 2.5 hours (SD = .95) each time. Participants completed a questionnaire comprised of assessments of harmonious and obsessive passion, and deliberate practice. The two types of passion were measured using the Passion Scale (Vallerand, Rousseau, Grouzet, Dumais, Grenier, & Blanchard, 2006), which measured harmonious and obsessive passion using four items each. Item responses consisted of a likert-type scale, with 1 representing the response of “Do not agree at all” and 7 representing the response “Very strongly agree”. An example of an item measuring harmonious passion was “Basketball is in harmony with other activities in my life.” An example of an item measuring obsessive passion was “I cannot imagine my life without basketball.”

To measure deliberate practice, the researchers first consulted basketball coaches and elite players to generate a list of activities they did in their free time for the purpose of performance improvement. The researchers selected the four most frequently reported activities and created items in the questionnaire accordingly. The four activities were related to offense in the game. An example of a deliberate practice item would be: “In my leisure time I work hard to improve techniques I find difficult.” Participants responded on a scale of 1 to 7 to reflect the strength of agreement with the statement. To measure performance, coaches rated each player for offensive performance during the first game of a tournament on a scale of 0 to 100.

The researchers (Vallerand et al., 2008) reported the means, standard deviations and correlations between harmonious passion, obsessive passion, deliberate practice, and performance. Deliberate practice had a moderately strong positive relationship with both harmonious passion ( $r = .51, p < .01$ ) and obsessive passion ( $r = .56, p < .01$ ). Performance had a low correlation with harmonious passion ( $r = .15, p < .01$ ), a moderate correlation with obsessive passion ( $r = .37, p < .01$ ), and a low-moderate correlation with deliberate practice ( $r = .29, p < .01$ ). Further analysis using a structural equation model revealed that both harmonious passion ( $\beta = .36, p < .05$ ) and obsessive passion ( $\beta = .50, p < .05$ ) predicted deliberate practice, which in turn predicted performance ( $\beta = .35, p < .05$ ). These findings supported the notion that harmonious and obsessive passion explains motivation for deliberate practice engagement, and that deliberate practice is a significant and strong predictor of performance.

The Vallerand et al. (2008) article included a second study, which sought to explore the types of achievement goals (performance-approach, performance-avoidance, and mastery goals) that mediated the passion and deliberate practice relationship, and the relationship between subjective well being and passion type. The researchers predicted that harmonious passion would be associated with mastery goals and not with either performance goal because harmonious passion involves individuals autonomously enjoying an activity without any fear of failure or the need to prove oneself as better than others. With regard to obsessive passion, the researchers predicted it would be associated with all three types of goals, because obsessive passion involves wanting to achieve mastery in order to outperform others or to avoid failing in front of others. Insofar as mastery goals relate to developing mastery in a skill, the researchers expected mastery goals to be associated with deliberate practice. Insofar as the focus of performance goals is to outperform others or avoid failure, the researchers reasoned that performance goals would not predict deliberate practice.

This second study in the Vallerand et al. (2008) article involved 67 competitive water-polo and synchronized swimming athletes. The mean age of participants was 16.1 years ( $SD = 3.98$ ), range of age was 13 to 33 years, and the average years of experience was 5.21 years ( $SD = 4.52$ ). Participants engaged in their sport on average 4.73 times per week ( $SD = 1.65$ ) for  $M = 1.84$  hours ( $SD = .60$ ). Participants completed a total of four instruments, measuring passion, social well being, achievement goal type, and deliberate practice. Passion and deliberate practice were measured using instruments similar to those in the first study. The social well being instrument was a *Satisfaction With Life*

scale created by Diener, Emmons, Larsen, and Griffin (1985). The participants completed the questionnaires assessing passion, achievement goal, and life satisfaction early in the season. Four months later, the participants completed the deliberate practice assessment. At the end of the season, the participants' coaches were asked to give a rating for performance relative to others in the same age group over the course of the whole season. This researchers used the coach's rating of the athlete as the performance measure for each participant.

Correlations revealed several significant relationships that were consistent with researcher predictions. Harmonious passion was related to mastery goals ( $r = .56, p < .001$ ), deliberate practice ( $r = .30, p < .01$ ), and subjective well-being ( $r = .36, p < .01$ ). Obsessive passion was significantly related to all three types of achievement goals: mastery ( $r = .49, p < .001$ ), performance-approach ( $r = .36, p < .01$ ), and performance-avoidance ( $r = .45, p < .001$ ). Obsessive passion and deliberate practice also had a moderate relationship ( $r = .32, p < .01$ ), but obsessive passion was unrelated to subjective well-being ( $r = .22, ns$ ). Mastery goals were significantly related to deliberate practice ( $r = .47, p < .001$ ), which was related to performance ( $r = .33, p < .01$ ).

Correlations also revealed a few other surprising relationships. Deliberate practice had no relationship to subjective well-being ( $r = .12, ns$ ), and performance had a low negative relationship with subjective well-being ( $r = -.24, p < .05$ ). These finding suggests that engagement in deliberate practice did not have significant bearing on whether the athlete reported being satisfied in life, and that athletes who had higher performance ratings were likely to have lower reports of satisfaction in life. On average,



the participants scored 5.74 out of 7 ( $SD = .76$ ) for harmonious passion and 4.53 out of 7 ( $SD = 1.37$ ) for obsessive passion. Perhaps the presence of obsessive passion for the sport affected the participants' ability to derive satisfaction in life.

Harmonious passion and obsessive passion had a strong relationship ( $r = .68$ ,  $p < .001$ ). This correlation is puzzling. Typically such a strong correlation would suggest that the more a person has harmonious passion, the more that person is likely to also have obsessive passion. Apparently, it is possible to engage in an activity with both types of passion. Unfortunately, the researchers did not address this finding in the article.

The researchers tested the Dualistic Model of Passion with path analysis (EQS; Bentler, 1995). Contrary to predictions, performance-approach goals did not predict performance; correlations also revealed performance-approach goals had a nonsignificant negative relationship with performance ( $r = -.23$ , ns). The researchers removed the performance-approach goals from the final path analysis, which subsequently revealed that harmonious passion was a strong predictor of mastery goals ( $\beta = .41$ ,  $p < .05$ ). As predicted, obsessive passion positively and significantly predicted performance-approach goals ( $\beta = .36$ ,  $p < .05$ ), performance-avoidance goals ( $\beta = .45$ ,  $p < .05$ ), and to a lesser and marginally significant extent, mastery goals ( $\beta = .22$ ,  $p < .10$ ).

Consistent with researchers' predictions, mastery goals positively predicted deliberate practice ( $\beta = .47$ ,  $p < .05$ ), which predicted performance ( $\beta = .35$ ,  $p < .05$ ). Performance-avoidance goals negatively predicted performance ( $\beta = -.35$ ,  $p < .05$ ). Harmonious passion predicted subjective well-being ( $\beta = .39$ ,  $p < .05$ ), whereas obsessive passion was a weak but negative predictor of subjective well-being

(beta = .04,  $p < .05$ ). This study provided additional support for deliberate practice as a predictor of performance, harmonious and obsessive passion as valid concepts to explain the nature of motivation for deliberate practice engagement in sport, as well as the adoption of mastery goals as a predictor of deliberate practice.

The study by Bonneville-Roussy et al. (2011) aimed to test the Dualistic Model of Passion among expert musicians, and to explore any differences in deliberate practice behaviors and types of achievement goals used by professional and expert student musicians. A total of 187 participants were involved in the study, ranging between 15 and 74 years in age ( $M = 26.54$ ,  $SD = 12.92$ ). All participants scored an average of four or higher on a 7 point passion scale instrument, and were thus judged to be passionate about music performance. One-hundred-forty-three of the participants were music performance students, and 44 of the participants were professional music performers. The average amount of time spent practicing was 24.37 hours ( $SD = 5.63$ ) per week. All the participants were recruited through selective music academies or conservatories.

The participants in the Bonneville-Roussy et al. study (2011) completed a questionnaire that included several instruments assessing passion, achievement goals, deliberate practice, life satisfaction, and a performance index. The latter was based on the number of solo concerts a participant had performed in her career, divided by the years of experience. The achievement goal instrument measured performance-approach (e.g., “It is important for me to do well compared to others”), performance avoidance (e.g., “I’m afraid that if I do poorly, people may think I’m not very talented”), and mastery goal orientation (e.g., “It is important that I develop my skills as thoroughly as possible”)

using a seven-point scale ranging from 1, “I do not agree at all” to 7, “I strongly agree.” The deliberate practice instrument had four items that measured the frequency of four types of deliberate practice on a seven-point Likert scale: 1 for “Never” to 7 “Almost always.” The life satisfaction instrument included five items measuring subjective well-being.

The means, standard deviations and correlations for each variable were computed, with results of professionals and students reported separately. Deliberate practice was significantly related to harmonious passion ( $r = .23, p < .001$ ), obsessive passion, ( $r = .16, p < .05$ ), and mastery goals ( $r = .27, p < .001$ ). Deliberate practice was not related to either avoidance goals or approach goals. Deliberate practice also correlated significantly with the performance index ( $r = .23, p < .001$ ). Interestingly, the two highest correlations reported were between the performance index and avoidance goals ( $r = -.29, p < .001$ ), and life satisfaction and harmonious passion ( $r = .29, p < .001$ ). Apparently, the more a musician was afraid to appear unskilled in front of people, the fewer solo performances she had given per year of experience. Moreover, musicians who had harmonious passion for performance were more likely to have more satisfaction in life.

The researchers also tested the Dualistic Model of Passion using path analysis with LISREL 8.0. Covariances between the three types of goals (mastery, performance-approach, and performance-avoidance) was added to the model because these variables represented related constructs. The path analysis resulted in a satisfactory fit between the data and the model. Path analysis results revealed that deliberate practice predicted higher levels of performance ( $\beta = .23, p < .001$ ). Harmonious passion was positively

related with the adoption of mastery goals ( $r = .31, p < .001$ ), which was positively related to deliberate practice ( $\beta = .26, p < .001$ ). Obsessive passion was positively related to performance-approach ( $r = .21, p < .01$ ) and performance-avoidance goals ( $r = .20, p < .01$ ). Obsessive passion had no association with mastery goals ( $r = .09, p > .05$ ). In terms of differences between professional and student music performers, the researchers controlled for participants' years of experience with MANCOVA and found no group differences on any of the variables.

Bonneville-Roussy and colleagues (2011) concluded that passion is a viable explanation for motivation and attainment of expertise in musical performance, since all of the study participants had a passion for playing their instrument. Consistent with the Dualistic Model of Passion, the study found that harmonious passion predicted the use of mastery goals, which in turn predicted deliberate practice. Obsessive passion predicted the use of performance goals, and had low but significant correlation with deliberate practice. Musicians who have a harmonious passion for playing their instrument that is not driven by external or internal pressures, such as the need to outperform others, generally do so because they desire to attain mastery in musical performance.

In addition to the research on passion, a couple of additional studies have addressed the question of motivation for deliberate practice. In an aforementioned study (Ward et al., 2007), researchers used a questionnaire to assess elite and sub-elite soccer players' commitment to soccer in terms of their perceived time and effort invested in soccer, and perceived dedication to the sport. Based on Ryan and Deci's (2000) assertion that one's perceived competence in a domain can be intrinsically motivating, Ward and

colleagues obtained participant ratings of their perceived competence and enjoyment during the first and last year of their participation in the sport using an 11-point Likert-type scale. Dedication to soccer was measured by a scenario-specific question, which asked participants to choose whether they would prefer playing soccer or another favorite activity. A response of 0 indicated they preferred soccer only; a response of 10 indicated they preferred another activity only. Ward and colleagues hypothesized that elite players would perceive themselves to be more competent, dedicated, and to have invested more time and effort in soccer than sub-elite players in their first and last years of participation in the sport.

In addition, the researchers asked participants to identify the person who most influenced them to participate in soccer; what they perceived to be the most important factor to success; and the primary reason they played soccer during the last year of their participation. It should be noted that these questions did not ask what motivated the participants to engage in practice activities, but rather in the sport itself. There is a likely and important distinction between what motivates a person to participate in a field and what motivates a person to engage in deliberate practice in that field.

The researchers used a two-way ANOVA with skill and age as between-participant factors to analyze time and effort ratings. The researchers used separate three-way ANOVAs to analyze dedication, enjoyment and competence ratings. The within-participant factor for dedication was specificity (general vs. situation-specific dedication). The within-participant factor for enjoyment and competence was time (ratings for the first and last year of participation in the sport). Elite players invested more time and

effort in soccer ( $M = 9.58$ ,  $SD = .62$ ) than sub-elite players ( $M = 7.72$ ,  $SD = 2.48$ ).

Analysis revealed significant main effects for skill level,  $F(1, 185) = 63.178$ ,  $p < .001$ .

Significant main effects for skill level were also found in ratings of dedication,  $F(1, 180) = 85.37$ ,  $p < .001$ ,  $\eta^2 = 0.32$ , and specificity,  $F(1, 180) = 35.24$ ,  $p < .001$ ,  $\eta^2 = 0.16$ , with elites' dedication ratings ( $M = 9.13$ ,  $SD = 1.99$ ) being higher than sub-elites ( $M = 6.58$ ,  $SD = 2.98$ ). Elite players' enjoyment ratings of soccer ( $M = 9.7$ ,  $SD = 0.67$ ) were slightly higher than those of sub-elites ( $M = 9.01$ ,  $SD = 1.82$ ). There was a main effect for skill level for enjoyment levels of soccer,  $F(1, 185) = 19.96$ ,  $p < .001$ ,  $\eta^2 = 0.10$ . Elite players' ratings of perceived competence ( $M = 7.01$ ,  $SD = 2.48$ ) were also higher than those of sub-elite players ( $M = 5.94$ ,  $SD = 2.75$ ).

The researchers performed descriptive analysis on the responses to the remaining motivation-related items on the questionnaire and reported results as percentages.

Parents were reported as the most influential person responsible for their participation in soccer for 84.2% of elite players, followed by teachers (10.8%) and friends or family (5.1%). In comparison, only 43.6% of sub-elite players said a parent was the most influential. The same percentage of sub-elites also reported family members or friends as the most influential (43.6%). Teachers were also noted as the most influential person for 9.7% of sub-elite soccer players.

Regarding the main factors necessary to achieve soccer success, elites thought practice (36.7%), and motivation (26.61%) were the most important. Motivation was operationalized as having a desire to win, having determination, being dedicated to the sport. The most frequently identified factors necessary to achieve success according to

sub-elites were: skill (25.74%), practice (23.76%), teamwork (20.79%), and motivation (11.88%).

Ward and colleagues (2007) concluded that soccer players who attain elite status showed a stronger tendency to invest time and effort to improve their skill than sub-elites. The researchers referred to this tendency as “rage to master,” and believe it may be a motivational factor supporting expertise development in soccer. Higher perceptions of competence and enjoyment in the sport may foster this motivation. Ford and colleagues (2009) similarly proposed that early engagement in a sport through play can foster the motivation and willingness to engage in more disciplined activity. However, these assertions have not been directly tested or examined.

The research on motivation and deliberate practice presents plausible explanations for deliberate practice engagement: harmonious or obsessive passion (Vallerand et al., 2007), mastery goal orientation or desire to master (Vallerand et al., 2007; Ward et al., 2007), perceptions of competence (Ward et al., 2007), early engagement with enjoyment (Ford et al., 2009; Ward et al., 2007), having a support system (Ward et al., 2007) and perceiving oneself to be competent (Ward et al., 2007). Other possible motivational factors may be talent and characteristics of one’s environment (Ericsson & Charness, 1994). More research is needed to test these explanations.

### Conclusion

Communication research on speech preparation, practice and expertise development has been limited to the behaviors of undergraduates, and to some extent the instructional strategies of basic and advanced public speaking course teachers. The

concept of deliberate practice has dominated expertise research and may be applicable to the study of professional speaking expertise. Deliberate practice research has examined the nature and amount of persistent efforts experts in various domains have engaged in over time to improve their skill and attain to eminent levels of performance.

Collectively, the research on deliberate practice supports the basic tenet that a primary factor contributing to performance is the amount of deliberate practice. Amount of deliberate practice may be critical not only to acquire but also to maintain expert levels of performance through later adulthood (Krampe & Ericsson, 1996). Amount of deliberate practice has been a distinguishing factor for expert and non-expert groups (Duffy et al., 2004; Ford et al., 2009; Ward et al., 2007). At least a couple of studies supported the more extreme view that deliberate practice is the single major factor that predicts performance (Charness et al., 2005; Duffy et al., 2004). Other studies challenged this extreme view (Meinz & Hambrick, 2010, Hodges et al., 2004).

What constitutes deliberate practice varies across domains, and can be owning books (Moulaert et al., 2004), taking a class (Keith & Ericsson, 2007), practicing alone (Charness et al., 2005), practicing with a group (Campitelli & Gobet, 2008), seeking a quiet study environment (Plant et al., 2005), being mindful when performing regular job duties (Dunn & Shriner, 1999) and reading scientific literature (van de Wiel et al., 2004). In professional domains, deliberate practice may vary depending on the individual and may not be one specific activity (Sonnentag & Kleine, 2000).

Several studies have explored the issue of motivation for deliberate practice. More research is needed that explores the reasons people choose to engage in deliberate



practice. The methodology used in deliberate practice research has been predominantly questionnaires, diaries, and structured interviews. Deliberate practice research may be complemented by studies that: a) directly investigate what motivates individuals to engage in deliberate practice; and b) use qualitative methods to produce more specific and detailed descriptions of what deliberate practice looks like in a given domain. By applying the deliberate practice framework to the study of speaking expertise, the present study attempts to contribute to the deliberate practice literature as well as explore the nature of professional speaking expertise and how it may be developed.

## CHAPTER III

### METHODOLOGY

The purpose of this study was to: a) investigate whether deliberate practice exists in professional speaking; b) elicit descriptions of what activities constitute deliberate practice for professional speakers to the extent that deliberate practice exists in the domain; c) describe motivational factors that support professional speakers' deliberate practice engagement; and d) compare the deliberate practice behaviors and motivations of elite and experienced professional speakers.

The study attempted to answer the following research questions:

- 1) Does deliberate practice exist in professional speaking?
- 2) If so, what does deliberate practice in professional speaking look like?
- 3) What motivates professional speakers to engage in deliberate practice?
- 4) How do deliberate practice behaviors and motivations differ among elite and experienced professional speakers?

In this section, I describe the methodology for the study. Specifically, I address: the research design, sample, protection of human subjects, interview as a research method, pilot interviews, instrumentation, recording apparatus, procedures, validity of transcriptions, data analysis, timeline and limitations.

#### Research Design

This research study used semi-structured interviews to explore the *structure* of deliberate practice and the *motivational factors* for deliberate practice engagement for two independent groups of professional speakers: 10 elite professional speakers and 12

experienced professional speakers. The comparison of elites and experienced groups was akin to approaches in previous deliberate practice studies comparing elites and non-elites, or experts and non-experts (de Bruin et al., 2008; Dunn & Shriner, 1999; Ericsson et al., 1993; Ford et al., 2009; Krampe & Ericsson, 1996; van de Wiel et al., 2004; & Ward et al., 2007). After initial analysis of the interview data, a follow-up questionnaire was administered in order to be consistent with previous research and to obtain additional information that would inform my deliberate practice theory-based interpretations of the interview data.

For the purpose of this study, deliberate practice was defined as any activity that: a) had a goal of performance or competence improvement; b) was maintained with some frequency for at least one year; and c) was considered relevant to performance or competence improvement. These criteria for categorizing an activity as deliberate practice were similar to that of previous studies (Sonntag & Kleine, 2000; van de Wiel et al., 2004).

The structure of deliberate practice was defined as the frequency, duration, and components of practice. Frequency and duration of practice activities have been investigated in past research on domain-specific deliberate practice (Ericsson et al. 1993; Ford et al., 2009; Hodges et al., 2004; van de Wiel et al., 2004). Components of practice may refer to details describing what the activity entails (van de Wiel et al., 2004; Ward et al., 2007). A description of the structure of deliberate practice included any of the following: a) how long the practice activity lasted; b) how a practice activity was selected and organized; c) how often the speaker engaged in a particular practice activity.

Motivational factors were defined in this study as innate, environmental, social, or other factors that were cited by the speaker as supporting their initial commencement of and continuous persistence in deliberate practice engagement (Ericsson & Charness, 1994). Motivational factors could include: a) self-perceptions of temperament or talent; b) the presence of supportive community or coaches; c) elements of the physical environment that the speaker ordered or controlled in order to facilitate a deliberate practice routine.

### Sample

The study involved two groups—elite and experienced professional speakers. The sampling frame was all professional members of the National Speakers Association (NSA) who were identified in the organization’s online directory of speakers. Before describing the two groups in the study sample and how the groups were obtained, I first provide background on the NSA.

#### *The National Speakers Association (NSA)*

The National Speakers Association is a leading professional association for aspiring and professional speakers that provides resources, training and support to its members. There are approximately 3500 members in the NSA (National Speakers Association, n.d.). The NSA describes the core competencies of a professional speaker to be the four “E’s”: eloquence, ethics, expertise and enterprise. Eloquence refers to a speaker’s ability to communicate effectively on the platform. Ethics refers to the standards of conduct that guide a speaker in his or her business. Expertise refers to a speaker’s experience, knowledge, and skills in a particular area for which he or she is

sought after for speaking engagements. Enterprise refers to the specific steps a speaker will take to build a successful speaking business. For the purpose of this study, the researcher focused on the eloquence aspect of the professional speaker's skill development. The researcher did not inquire specifically into each speaker's area of content expertise, business practices, or ethical standards.

In order to qualify for professional membership in NSA, speakers must provide evidence of a certain level of accomplishment and experience as professional speakers. Thus, a speaker may consider being accepted into the NSA as a significant milestone in his or her professional development. Beyond qualifying for NSA professional membership, the NSA confers the Certified Speaking Professional (CSP) designation, which is an internationally recognized measure of professional speaking achievement. CSP's are considered to represent the top ten percent of the professional speaking community. The NSA also presents an elite award, the Council of Peers Award for Excellence (CPAE) to honor select members who have achieved the top echelon of platform skills. The CPAE is awarded to up to five members of the NSA each year and is considered to be the organization's Speaker Hall of Fame, constituting an elite group. Out of approximately 3500 members, there are currently 151 living members of the CPAE Speakers Hall of Fame (National Speakers Association, n.d.).

#### *Elite Group*

Elite participants (Group 1) were a convenience sample of 10 NSA members who had earned both CSP status and the Council of Peers Award for Excellence. The CSP and CPAE designations served as an acceptable measure of expertise for the purpose of this

study. Domain-conferred designations have served as a basis for identifying experts in prior studies (de Bruin et al., 2008; Ericsson et al., 1993; Ford et al., 2009; Ward et al., 2007). For example, van de Wiel and colleagues (2004) identified expert organizational consultants by referring to an industry publication (van de Wiel et al., 2004).

Given the generally accepted rule that expertise development takes ten years, and the use of the 10 year minimum rule to identify experts in the literature (Dunn & Shriner, 1999), another criteria for the elite group was having a minimum of ten years of professional speaking experience. The average number of years of experience of the elite participants was 34.9 years (range was 20 - 45 years). The average age of elite participants was 62.9 years. All of the elite participants were white/Caucasian. Eight elites were male, two were female. The elite speakers resided in a total of seven different states; six elites live in the Western region, two in the South, one in the Northeast, and one in the Midwest. One of the elite speakers was retired, another semi-retired. The remaining eight speakers were still actively involved in their speaking business, although at least two of the elites said they were de-emphasizing speaking activities in favor of publishing or creating video products.

### *Experienced Group*

The criteria for the experienced group (Group 2) was non-CSP, non-CPAE professional membership in NSA. One other criteria for Group 2 was that participants had a minimum of ten years of speaking experience. One of the 12 participants in Group 2 did not meet this criteria, having 8 years of experience as a professional speaker with his or her own speaking business. I decided to keep this participant in the sample,

however, considering the person's prior experience in paid public performance. A total of 12 experienced speakers comprised Group 2. The average years of professional speaking experience for Group 2 was 22 years (range was 8 - 50 years). The average age of participants in Group 2 was 53.3 years. The majority of experienced speakers were white/Caucasian (83%), followed by one Asian (8%), and one Hispanic (8%). In the experienced speaker group was an equal number of males and females. Experienced speakers lived in a total of nine different states in the U.S.; five experienced speakers live in the Northeast region, four in the South region, two in the Midwest, and one in West.

Participants in Group 2 were at different stages in their careers. One had recently launched a speaking business after being a presenter for a major corporation for twenty years. Two experienced speakers were in significant leadership positions of large organizations for at least 20 years. Two other speakers in Group 2 were in a phase of working a regular job and supplementing their income with speaking gigs, with the full intention to go back to full-time speaking in the future. Several speakers in Group 2 had had their own speaking business for eight to twenty years or more and were still actively engaged as full-time professional speakers.

Demographic and biographic information for the two groups of speakers is summarized in Table 4 below. This information includes the sex, race or ethnicity, average age, and the average number of years of professional speaking experience for the two groups.

Table 4

*Demographic and Biographic Info of Participants*

Variable	Elites (N1 = 10)	Experienced (N2 = 12)
Sex	Males = 8 Females = 2	Males = 6 Females = 6
Race/Ethnicity	Caucasian/White = 10	Caucasian/White = 10 Asian/Indian = 1 Hispanic = 1
Age	M = 62.9 years SD = 8.03 years Range: 51-74 years	M = 53.3 years SD = 13.14 years Range: 37 - 70 years
Years of experience as a professional speaker	M = 34.9, SD = 7.78 Range: 20-45 years	M = 22 years, SD = 12.42 Range = 8 - 50 years

A total of 22 elite and experienced speakers participated in the study.

Participation was completely voluntary and uncompensated. The typical number of interviewees in an interview study may be around 15, give or take ten participants (Kvale & Brinkmann, 2009). To give a sense of how the size of the sample for the present study compares to those of other deliberate practice studies, Duffy, Baluch and Ericsson (2004) conducted structured interviews with 18 professional dart players and 18 amateur dart players. Ford et al. (2009) administered questionnaires to 11 elite soccer players, 11 ex-elite soccer players, and a control group of 11 recreational-level players. Hodges et al. (2004) administered questionnaires to 30 triathletes and 48 swimmers.

Dunn and Shriner (1999) conducted qualitative interviews with eight experienced teachers, after administering questionnaires to 136 teachers who varied in years of



experience. Sonnentag and Kleine (2000) administered structured interviews with 100 insurance agents. In van de Wiel et al.'s (2004) study of organizational consultants, 11 top professionals and 10 experienced professionals participated in structured interviews. Another deliberate practice study using a questionnaire had a sample as large as 777 (Moulaert et al., 2004). Clearly, the size of the samples obtained in previous deliberate practice research varies across studies. Notwithstanding, the present study's sample size is comparable to those of other deliberate practice studies, which, it should be noted, did not use the qualitative interview, with the exception of the study by Dunn and Shriner (1999).

#### Protection of Human Subjects

The researcher obtained approval from the University of San Francisco Institutional Review Board for the Protection of Human Subjects in order to use human subjects in the study. The NSA also approved the study. The letter that was given to study participants informing them of the relevant research procedures and their rights as research subjects is presented in Appendix B.

#### Interview as a Research Method

The interview is one of the most common research methods used in social science (Brenner, Brown & Carter, 1985; Gubrium & Holstein, 2002), and particularly in education (Kvale & Brinkmann, 2009). The employment of the interview as a research tool is based on the assumptions that people have the ability to convey their experiences and opinions about their own lives (Fontana & Frey, 2005; Gubrium & Holstein, 2002) and that to inquire directly with individuals to speak for themselves produces better

information about the group in which they are a part than to inquire of a community representative or “informed” other (Gubrium & Holstein, 2002).

The most common interview format is the one-to-one interview (Tierney & Dilley, 2002). Kvale and Brinkmann (2009) defined an interview in the most basic terms as “a conversation that has structure and purpose” (p. 3). Unlike most conversations in which the participants presumably have equal influence over the flow and content of the conversation, interviews are typically guided by the researcher (Warren, 2002). The objective of an interview is to produce knowledge (Kvale & Brinkmann, 2009).

The research interview is characterized by descriptiveness, specificity, and focus (Kvale & Brinkmann, 2009). The objective of the interview is to elicit open descriptions of various phenomena in the participant’s life world. The sought after descriptions are ideally of specific instances or behavioral sequences in the subject’s life, as opposed to generalizations or opinions. The ultimate goal is for the researcher to identify meaningful themes within rich descriptions (Warren, 2002). The interview is focused on a theme without being rigidly structured and directive.

In this study, the researcher conducted one-to-one interviews with professional speakers using a semi-structured format. The researcher guided the conversation, asking all participants the same set of questions, but also using probing and follow-up questions unique to each participant that arose in the moment of an interview. An example of a typical probing question was, “Can you give me an example of....?” to encourage the participant to further elaborate and give a specific description of some behavior they had mentioned. The researcher did not dominate or steer the conversation in any particular

direction other than occasional attempts to maintain or re-establish the focus of the interview, and manage the time.

The interview has advantages and disadvantages over other research methods, such as a questionnaire or test. One advantage is that misunderstandings resulting from wording of a question or response can be clarified through the interaction of the researcher and participants (Brenner et al., 1985). Another advantage is that interviews can provide descriptions of the matter under investigation that are not as possible in other methods (Weiss, 1994).

Some disadvantages of interviewing as a research procedure include the possibility of bias to occur through the interaction of researcher and participant, or underreporting of information due to limits in the memory or verbal proclivities of participants. One way this limitation was addressed was by giving the participants the interview questions in advance. The intention was not only to make participants more comfortable with the interview, knowing the questions in advance, but also so that the participants could have time to prepare and refresh their recollection before the actual interview. Not all participants chose to reflect on what they would say before the interview, and I did not make any attempt to ascertain or document the extent to which participants prepared their responses in advance of the interview.

Another disadvantage of interviewing is potential researcher bias during the interpretation phase of interview data. To remedy this, the theoretical or conceptual framework the researcher uses to interpret the data must be justified and made explicit (Brenner et al., 1985). In my case, I have clearly described the deliberate practice

framework, what aspects of the theory will be used to interpret the interview data. In addition, I have laid out the motivational factors that have been mentioned in deliberate practice literature, which will serve as a framework in my interpretation and organization of the data concerning motivation for deliberate practice of professional speakers.

When conducting interviews, the researcher has the option of doing interviews in-person or over the phone. Which mode is better depends on several factors, including the interview purpose, the complexity of the questions or answers that are desired, and financial, time, and geographic constraints of the study (Shuy, 2002). Telephone interviews save the researcher time and money, and also enable the researcher to access participants from a broader geographic area (Kvale & Brinkmann, 2009; Shuy, 2002). In-person interviews generally produce more thoughtful responses than phone interviews because of the added non-verbal communication through which respondents may be encouraged to elaborate or clarify their responses (Shuy, 2002). As such, in-person interviewing is generally considered better for research involving sensitive questions (Shuy, 2002). The present study did not attempt to probe personally sensitive areas. I conducted telephone interviews in order to save time, money and to have access to a relatively small population of subjects across the country.

The interview is considered an effective approach when the research topic is geared more toward identifying themes or patterns among a group, rather than being focused on defining a particular setting (Warren, 2002). The interview is not an appropriate research method if the objective is to predict the behavior of large groups, when the researcher has limited time to complete a study, or when the research topic of

interest is focused more on people's behavior and interaction with their environment. In the latter case, a field study using observation will probably yield more valid data (Kvale & Brinkmann, 2009). Interviewing was a suitable method for this study because the aim of the research was to identify themes and patterns of expertise development behaviors in professional speakers.

### Pilot Interviews

Pilot interviewing is considered essential to constructing effective interview questions because it allows the researcher an opportunity to discover which questions are unclear or need to be reworded, which questions fail to generate relevant data, and what additional questions may be needed (Merriam, 2009). The pilot interview also serves as a means to practice good interview skills, which is essential for the validity of the data. According to Kvale and Brinkmann (2009) a good interview can be assessed by several criteria. One is the extent to which the responses are relevant to the research topic, spontaneous, detailed and specific. Another indicator is that the interview questions are short and the responses of participants are long. Quality interviews may also be characterized by the extent to which the researcher asked follow up questions, made requests for clarification, or otherwise attempted to verify his or her interpretations throughout the course of the interview. These criteria reflect the principle that interviews aim to produce valid knowledge.

I conducted four pilot interviews with NSA members in order to practice my interviewing skills, and also test the interview questions. The results of the pilot interviews was one initial means to assess the validity of the interview findings, i.e., the

extent to which the piloted questions were soliciting relevant information. As a result of the pilot interviews, the instrument was shortened from 14 to 7 questions.

Three of the four pilot interview participants were NSA members with CSP status. One of the pilot interviews was conducted with an elite speaker, who had both CSP and CPAE status, and who was ultimately included in the final elite group sample of this study.

### Instrumentation

Two instruments were used in this study. The primary instrument was the interview guide. A questionnaire, the secondary instrument, was also administered for several reasons: 1) to be consistent with past research on deliberate practice (Campitelli & Gobet, 2008; Charness et al., 2005; de Bruin et al., 2008; Dunn & Shriner, 1999; Ford et al., 2009; Hodges et al., 2004; Meinz & Hambrick, 2010; Moulaert et al., 2004; Plant et al., 2005; Ward et al., 2007); 2) to be able to compare results with past research; 3) to simplify the interview protocol and facilitate the flow of the interview by assigning closed-ended questions to a separate instrument; and 4) to complement the qualitative data with quantitative descriptive measures.

### *Interview Guide*

The semi-structured interview questions were developed by the researcher in order to explore what activities may constitute deliberate practice for professional speakers, and what motivates professional speakers to engage in deliberate practice. The initial instrument was reviewed by a professional speaker to establish content validity, and contained 14 questions. After piloting the instrument with four professional

speakers, the interview questions were revised and pared down to seven questions plus two brief demographic questions. The reasons for the revisions had to do with avoiding redundancy, improving the flow of the interview, and being sensitive to the time constraints of the participants. After nine interviews were conducted, the researcher consulted with the Chair of Research at the NSA Foundation, who provided additional suggestions to improve the validity of the questions. As a result, one additional question was added to the instrument, which was: “What are things you do consciously and regularly to maintain or improve your speaking skills?” This question was included in 13 of the 22 interviews. The final version of the interview guide with all eight questions is given in Appendix A.

Table 5 below identifies the questions in the interview guide that were intended to elicit data for the first three research questions. The fourth research question was addressed during the data analysis phase by comparing the responses of the two groups. Question #1 in the interview guide, “How did you become a professional speaker?” was not directly related to the research questions per se, but served as a suitable opening question for the interview. This first question encouraged subjects to recollect and talk about their entry into the field, and served as a primer for subsequent questions on subjects’ skill development.

The main interview questions were followed by probes, or follow-up questions to further examine any content the respondent brought up in their response to a prior question. Probing questions were not specifically identified in the interview guide. Primarily out of concern for the time constraints of the participants, I kept introductory

and debriefing remarks very short. My experience during the pilot interviews suggested that the participants were comfortable jumping right into the interview questions. It is possible that the email correspondence (see Appendices B and C), which provided participants with a description of the study and research procedures during the recruitment and scheduling phase provided participants with enough context to feel comfortable moving straight into the questions.

Table 5

*Interview Questions That Correspond to Research Questions*

Research Question	Interview Question
RQ 1: Does deliberate practice exist in professional speaking? <i>and</i>	-What do you consider to be milestones in your development as a speaker? (#2)
RQ 2: If so, what does deliberate practice in professional speaking look like?	-What are some things you have worked on to improve your speaking performance? How did you do this? (#3) -What's the most difficult thing you have worked on? (#5) -In what ways do you seek feedback on your performance? (#6) -What are things you do consciously and regularly to maintain or improve your speaking skills? (#8)
RQ 3: What motivates professional speakers to engage in deliberate practice?	-What motivated you to do work on improving your speaking performance? (#4) -Who is the person who has most influenced you to pursue excellence in your speaking skills and how has she/he done this? (#7)



### *The Questionnaire*

The items on the questionnaire were developed after a preliminary analysis of the interview data revealed 16 potential deliberate practice activities and 9 motivational factors for deliberate practice engagement of professional speakers. The purpose of the questionnaire was to confirm the initial interpretations of the interview data and help determine the extent to which the 16 activities were in alignment with characterizations of deliberate practice in the literature. The questionnaire was developed using Survey Monkey.

Table 6 provides the organizational scheme of the questionnaire and a description of the response stems. The complete questionnaire is presented in Appendix E. The items were arranged according to five scales, plus three short answer items, with a total of 65 items on the questionnaire. The rationale behind the questionnaire design was simply to get respondents to indicate the frequency in which they engage the 16 activities, how relevant respondents believe each activity was to his or her skill development as a speaker, and how much effort was required of respondents to engage in each activity. Similar questions have been used in past studies that involved structured interviews or questionnaires (Dunn & Shriner, 1999; Sonnentag & Kleine, 2000; Ward et al., 2007). The questionnaire also had respondents indicate the extent to which they agreed that each of the nine motivational factors was a reason for their engagement in any of the 16 activities.

Table 6

*Topic and Response Stem Descriptions of Questionnaire Items*

Item Number(s)	Topic	Response Stem Description
1-3	Frequency of Engagement	5-item scale; 1 = Never; 2 = Once in a while; 3 = Monthly; 4 = Weekly; 5 = Daily
4-10	Frequency of Engagement	5-item scale; 1 = Never; 2 = 1-2 times a year; 3 = 3-6 times a year; 4 = 7-12 times a year; 5 = More than 12 times a year
11-16	Frequency of Engagement	7-item scale: 1 = Never; 2 = Seldom; 3 = Occasionally; 4 = Somewhat often; 5 = Often; 6 = Very often; 7 = Always
17-32	Relevance of Activities to Skill Development	5-item scale; Irrelevant (1) to Extremely Relevant (5), plus an N/A option
33-48	Effort Required for Engagement in Activities	5-item scale; No effort (1) to Extremely Effortful (5)
49-57	Motivational Factors	7-item scale; Strongly Disagree (1) to Strongly Agree (7)
58-62	Life Satisfaction	7-item scale; Strongly Disagree (1) to Strongly Agree (7)
63	Age Joined NSA	Short answer
64	Years Active NSA Member	Short answer
65	Number of Presentations in a Typical Active Year	Short answer

In addition to inquiring about the frequency, relevance, effort, and motivation relating to speakers' engagement in skill development activities, I also included a life satisfaction survey and a brief short-answer section in the questionnaire. The life

satisfaction survey is a five-item instrument used by Blais, Vallerand, Pelletier, and Briere (1989). Previous studies on passion and deliberate practice linked the concepts harmonious and obsessive passion with both deliberate practice and life satisfaction (Vallerand et al., 2007; Vallerand et al., 2008; Bonneville-Roussy et al., 2011). Although I did not investigate or measure harmonious and obsessive passion in this study, I was interested in whether there might be any connection between participants' life satisfaction measure with their participation in deliberate practice activities.

The second addition were three short answer questions; specifically, the age during which the participant joined NSA, how many years the participant had been an active NSA member, and how many presentations the participant had given during a typical year in which he or she was most engaged in professional speaking. Prior deliberate practice studies had reported the age at which a subject started serious study in a domain (Campitelli & Gobet, 2008; de Bruin et al., 2008; Ericsson et al., 1993; Hodges et al., 2004). Since joining NSA was mentioned by 86% of respondents in this study as a significant milestone, or key factor in their skill development, I thought it reasonable to consider NSA membership and participation as an indicator of serious study in professional speaking. My reason for asking participants how many presentations they had given in a typical year when they were most engaged in professional speaking was to get a sense of the intensity of their speaking experience.

### Recording Apparatus

The telephone interviews were recorded in MP3 format using an Olympus VN-8100PC Digital Voice Recorder in conjunction with an Olympus TP-7 Telephone Recording Device. In addition, the researcher took handwritten notes during the interview.

### Procedures

The researcher contacted an acquaintance and senior member of the National Speakers Association. This contact recommended eight speakers who would be potential elite participants for the study. Once a few elite participants were secured, the researcher used the snowball method until nine subjects were obtained. Snowball sampling is a type of convenience sampling in which additional participants for the study are obtained through the referrals of already enlisted participants (Weiss, 1994). Due to difficulties obtaining a 10th participant for the elite group, I included one of my pilot interview participants, who is an elite speaker, in the final sample. Verification of elite participants being a CPAE recipient and CSP was confirmed by referring to the NSA member directory.

To identify experienced speakers for the study, I used random selection to generate a list of speakers from the NSA directory who did not have the CSP or CPAE designations in their member profiles. Specifically, I randomly selected a letter of the alphabet and a number between 1 and 50. Then I went to the NSA directory and looked up a speaker whose last name began with the randomly-drawn letter, and who was listed according to the number that was randomly drawn. I noted whether that speaker had the

CSP or CPAE designation. In the event that he or she did have the elite designations, I selected the next closest speaker listed in the directory that met the criteria for the experienced group. I repeated this process until I had generated an initial list of 20 names. I sent email invitations to the 20 NSA members (see Appendix C).

From this cold-email recruitment process, I secured three participants for the experienced group. To recruit additional participants, I repeated the same process to generate another list of experienced speakers. In addition to sending an email invitation, I also made phone calls and spoke to the speakers directly, or left a voice mail message. Through this strategy, I got a much more favorable response and ultimately secured a total of 12 participants for the experienced speaker group.

All participants were informed of the general purpose of the study and research procedures. Appendix B gives the information pertaining to the protection of human subjects that was shared with participants before the interview prior to obtaining consent. Consent to participate in this study was documented by email correspondence or by audio recording. The interviews were conducted over the phone at a time that was convenient for the participant, and lasted between 30-60 minutes. Interview questions were given to the participants in advance of the interview via email in order to give the participants time to prepare their responses. In a few instances, participants who had not received the interview questions or disclosure of research procedures were afforded the opportunity on the phone to have this information read to them before the interview started.

As interviews were completed, the audio record was converted to a written record through transcription. One of the interviews was not recorded due to a mistake in the set up of the recording device. However, the researcher generated five pages of handwritten notes during the interview, which served as a sufficient record of the speaker's remarks for the purpose of this research. Nine out of 22 of the interviews were transcribed by a professional transcribing service, and the remaining interviews were transcribed by the researcher, with the assistance of a free transcription software called Express Scribe.

#### Validity of Transcriptions

Poland (2002) identifies at least four issues that can reduce the quality of transcriptions: bad audio quality in the recording, the transcriber lacking familiarity with the topic area which can result in transcribing mistakes, the transcriber being tired, and the clarity of the interviewees' speech. To mitigate the challenges to transcription quality, I ensured the interviews were recorded in a quiet area with a tested recording system. During the pilot interviews, I was able to assess the general audibility and clarity of the speakers' speech and found there to be no difficulties. Feedback from the professional transcribers also indicated that the recordings were clear and the speech easily discernible. I also provided a brief background of the study and the interview situation to the transcribers in order to help ensure their familiarity with the general context of the study.

Poland (2002) suggests reviewing a 10% random sample of transcripts when there is more than one transcriber involved because there is likely to be variability in quality. I

reviewed and edited every transcript for accuracy. When reviewing the transcripts, I found only a few typos or semantic errors and no meaning-changing errors.

### Data Analysis

In this sub-section, I describe how I analyzed the interview data and the questionnaire data.

#### *Interview Data Analysis*

The interview data was analyzed using a general analysis mode called bricolage (Kvale & Brinkmann, 2009). Bricolage is a common approach to interview analysis, in which the researcher uses whatever tools, approaches and concepts are available to generate meaning. My reading of the interview data was guided by the deliberate practice framework, my research questions, and the interview questions. The study's objectives were to: a) determine whether deliberate practice exists in professional speaking; b) if so, elicit descriptions of activities that constitute deliberate practice for professional speakers; c) compare the deliberate practice activities of elite and experienced professional speakers and d) describe motivational factors that support professional speakers' deliberate practice engagement.

#### *Preliminary Analysis*

My preliminary analysis of the interview data involved the following: beginning with the elite group, I read through the transcripts, and noted a unit or idea on a post-it note if the idea was mentioned in direct response to an interview question, or represented some activity, behavior, or sentiment that was mentioned by the speaker as an element in the speaker's growth, training, or practice. If the speaker provided a unique description,

example or quote about that particular unit, I also jotted this down on the post-it note. Every time a unit or idea was mentioned by subsequent speakers, I would write down his or her identifier (Speaker 1.1, 1.3, 1.5) on the original post-it. That way, each post-it note identified a unit or idea, and the number of times it was mentioned across the experienced group interviews, and which speaker in the sample mentioned that idea. This process yielded about 30 units on post-it notes.

After this review of the elite group interviews was completed, I went through the experienced group interview transcripts and repeated the same process. If an experienced speaker mentioned the same idea or activity that was already catalogued by a post-it note, then I added his or her identifier (Speaker 2.1, 2.2, etc.) to the existing post-it note. When a speaker mentioned a new idea or activity, I created a new post-it to document that unit. Approximately 19 more units were identified through this process.

I went through the post-it notes a few times to consolidate the units whenever possible. The chart in Appendix E presents a table that identifies all the units that were mentioned more than once by the 22 speakers. The table indicates which speakers mentioned the unit by check mark, which made no mention of the unit (no check mark present), and the total number of speakers that mentioned each unit. In a couple of instances, a speaker mentioned a unit in a negative manner, (e.g., “I think coaching is an ineffective way to improve platform skills” or “I rarely rehearse.”). In such cases, an N is indicated in the column that corresponds to the speaker who made negative mention of an activity.



In my organization of the data, I separated participant responses to the questions on motivation from the other questions that dealt with expertise development activities. I identified nine units that I put under the category of “motivational factors.” For all units, I included a description of the unit, which were based on the transcripts; where there were apt quotes, I recorded them in the table.

Some of the comments made by speakers I did not document in my analysis. Comments that were not included had any one of the following characteristics: a) the comments were particular to the speaker’s subject matter expertise or platform message; b) the comments were observations about others rather than themselves; c) the comments were detailed story examples that illustrated an idea or unit that was already documented; or d) the comments related more to the speaker’s unique background and did not concern activities engaged in for speaking development purposes, or motivation. I estimate that the information presented in Appendix E represents 90-95% of the relevant data contained in the interviews, not including the types of comments I have just described. I reviewed the transcripts a few times looking for any units that I may not have caught before, in order to record the data in as complete and accurate a manner as possible.

Based on my preliminary data analysis, I identified 16 general activities that were more frequently mentioned by the speakers; i.e., mentioned at least 3 times across the 22 interviews. For some of these activities, I consolidated a few units. For example, I consolidated the units of seeking feedback from audience, seeking feedback from other speakers, and seeking feedback from family and friends into a general activity of seeking feedback. There were additional units that represented specific comments that were

unique to a single speaker, or specific skill areas that speakers mentioned they had worked on. I decided to separate the latter category from the 16 activities mentioned above, with the thought that the specific skill areas were examples of things speakers worked on while participating in one or more of the 16 activities.

Looking at the 16 activities, I then laid out the components of deliberate practice that are mentioned in the literature on a sheet of paper and looked for any correspondence between the activities and the definition. Specifically, deliberate practice involves repetition, feedback, self-monitoring, and reflection. Some of these components became labels for themes: for example, self-monitoring and feedback being one. Other themes emerged by finding some logical relationship between various units. I kept a record of the labels of my themes and the units on which the labels were based. This record of my preliminary analysis of the interview data is presented in Appendix E.

After the preliminary table of units was generated, and the sixteen units identified, I then reviewed the interview notes and transcripts to see if there was any evidence I had missed, or any data that might deviate from the units or themes that I had identified. Any data that would qualify or negate a theme were documented.

#### *Comparison of Deliberate Practice Activities and Motivational Factors of Experts and Non-Experts*

To compare the deliberate practice activities and motivational factors of the two groups, I took a tally of the number of mentions per unit per group, and looked for any notable differences between the two groups on a particular activity.

### *Questionnaire Data Analysis*

Questionnaire data results played a part in determining to what extent these activities were in alignment with characterizations of deliberate practice in the literature: specifically, that the activities are engaged in with some degree of frequency and are considered relevant to performance improvement. I also included measures of effort required for activity engagement. In addition, the questionnaire had respondents indicate the extent to which they agreed that each of the nine motivational factors was a reason for their engagement in any of the 16 activities. Lastly, I included a life-satisfaction scale, to explore whether there may be any relationship between degree of deliberate practice engagement and life-satisfaction (Bonneville-Roussy et al., 2011; Vallerand et al., 2008), or any differences among the two groups in life-satisfaction.

Means and standard deviations were calculated on each of the items for the two groups and for the total sample in SPSS. Please note, there was some missing data in the data set. Missing data occurred when respondents did not answer an item, or when they replied N/A to an item. There were a total of 53 instances of missing variables out of a total of 1,170 responses across the 65 items and 18 respondents. This represents 4% of the data. When there was missing data, the mean score for the item was inserted. Mean score, median score and correlational analyses were conducted on the 65 items using the Mann-Whitney U test, Median test, and Kendall's tau, respectively, in SPSS. Cronbach's alpha reliability coefficients were also identified using SPSS on the five scales.

*Final Analysis of the Interview and Questionnaire Data*

The questionnaire results were examined to see if the frequency, relevance and effort ratings of the participants provided support for identifying the sixteen activities as deliberate practice for professional speaking. The definition and conceptual framework for deliberate practice was then reviewed, and the themes that emerged from the qualitative data analysis were interpreted in light of this framework. In other words, major concepts in the framework, such as Resources, Motivation, Structure and Components of Deliberate Practice, were explicitly linked to themes and individual units that emerged in the interviews.

The questionnaire results were also used to confirm or disconfirm any tentative similarities or differences between the two groups that had been observed in the qualitative data analysis.

## Chapter IV

### RESULTS

This chapter is arranged in three sections. In the first section, I outline the results of the interview data analysis. In the second section, the results of the questionnaire data are presented. In the third section, I present the collective interpretation of both sets of data.

#### Results of Qualitative Interview Data Analysis

In this subsection, I present the results of the qualitative data analysis in answer to each of the research questions and also discuss the use of negative case analysis to re-examine the data.

*Research Questions #1 and #2: Does deliberate practice exist? If so, then what does it look like?*

In interviews with 22 elite and experienced professional speakers, several activities and behaviors were mentioned as being a part of speakers' development and maintenance of excellence in their speaking skill. The specific activities can be viewed in the table of units that represents the preliminary analysis of the interview data in Appendix E. (Note: see Chapter 3 for an explanation of how the units were identified). A careful synthesis of the skill-development activities mentioned in the collective interview data resulted in the identification of five distinct themes or categories of activities that may constitute deliberate practice in speaking, identified in Table 7 below.

In Table 7, the units that were grouped together under each theme were identified and quantified. In order to give a sense of the relative frequency or dominance of a

particular theme in the interview data, I also identified: a) the total number of speakers that mentioned the units in a theme; and b) the number of mentions per unit for each theme. For example, the first theme is Community. This theme represents two units: membership and participation in NSA and having

Table 7

*Potential Deliberate Practice Themes from Interview Data*

Themes	Units included in theme	# of Units in the theme	Total # of speakers who mentioned units in the theme	Mentions per unit of Theme
Community	Participation in NSA, having a mentor	2	28	14
Attitudes	Audience focus, commitment to give 100%, authenticity	3	40	13.3
Self-development and learning	Reading and self study to stay current, writing, publishing, getting a coach, learn by observing other performers	5	43	8.6
Experience and Repetition	Getting experience, having additional venues to practice, attention to microdots, rehearse	4	32	8
Self-monitoring and Feedback	Reflection, video review, audience feedback, client feedback, referrals, other feedback	6	43	7.2

a mentor (see Table 7). Nineteen speakers mentioned NSA membership in their interviews, and 9 speakers mentioned having a mentor as an important part of their skill development. Thus, the total number of mentions for this theme was 28, and 14 was the number of mentions per unit (28 mentions/2 units). As a point of comparison, the total number of possible units that identified potential deliberate practice activities was 20. Collectively, the 20 units were mentioned a total of 186 times by the 22 interviewed speakers, making the average number of mentions per unit 9.3. The range of the number of mentions for a unit was 3 to 19.

#### *Theme #1: Community*

The first theme was being a part of a community of professional speakers, namely the National Speakers Association. Membership in the NSA meant several things. For one, qualifying for NSA in itself was considered an accomplishment and type of recognition, particularly for the experienced speakers. Speaker 2.8 said, “When I qualified to join NSA at the time that felt like a really big step...That was a huge deal for me.” Speaker 2.7 said qualifying for NSA meant that “you’re real and you’re authentic and you can be a speaker.”

Membership in NSA also meant having access to resources and training that would help a speaker learn and improve their skills, and meeting other speakers and thus finding camaraderie and the ability to exchange information. Speaker 1.6 said of the NSA, “you have the best people in the business that are telling you everything they know.” Speaker 1.8 commented:

“I could just walk up to any speaker there and pretty much ask any question I wanted. So the ability to have the access to people that are at all

levels of success or failure is worth an incredibly--that was something that really helped me with my career, where I could just ask. I could just say, 'You know, this isn't working,' or 'How did this work?' (They are a) very giving group of people."

NSA membership also meant being able to find mentors, people who could give the speaker honest feedback and guidance on how to improve or develop his or her speaking skills and business. Speaker 1.4, who joined NSA in 1977, said, "I joined because I wanted to be around the people that were my heroes."

Participation in NSA activities could involve attending national conferences and workshops, local chapter meetings, conference calls and tele-seminars. At each of these events, effective speaking techniques are both discussed and modeled. Participation in a community of peers and other speaking professionals appears to provide that synergy that not only motivates speakers to get better, but also provides the guidance and resources to help support a speaker's development. Speaker 2.1 said: "The business can be lonely if you're just on your own all the time feeding yourself your own stuff. You don't even know what you don't know. And by going to the meetings, I found that I knew--I got to learn what I didn't know."

It should be noted that a few speakers reported that they were not as active in NSA as they had been at other times, due to a busy schedule, a sense that the meetings and activities were repeating similar information, or because of a change in life focus at that particular time. Notwithstanding, participation in NSA activities was mentioned by all but one speaker (Speaker 2.11) as a major source of skill development and maintenance. Speaker 2.11 attributed his development to having a strong mentor, being proactive in the beginning to seek speaking opportunities, and then eventually being



employed in a leadership position which gave him frequent and ample opportunities to give speeches.

*Theme #2: Attitudes: Audience focus, Commitment and Authenticity*

The second theme was possessing essential attitudes that would guide behavior: audience focus, authenticity and commitment. Consciously focusing on the audience was considered essential to effective preparation and success. Speakers emphasized the importance of knowing the audience, tailoring the presentation to the audience's need, working with the client to make sure the speaker understood his or her expectations and desired outcomes. Referred to in the professional speaking industry as customization (Speakers 1.3, 1.9, 2.1), the practice of making slight adjustments in a speech to incorporate material that was relevant to the particular audience was considered a key to speaking effectiveness.

Focusing on the audience was typically mentioned in contrast to focusing on one's own ego. Getting to the point of focusing less on self and more on the audience may have required struggle and experience. Speaker 2.8 said, "I don't want to be a superstar. I don't want to be obtuse. I don't want to be anything except clear...I think ten years ago, it would have been much more about being on stage." Speaker 1.6 said:

For me, the most difficult thing is getting my ego out of it...I mess myself up if I start thinking about, okay, I really hope they like me. What can I do that will make them like me? I hope I don't mess up and say something that they don't like. When if I...think the presentation is about me, I'm very likely to botch it up. If I remember that it's about them and about the ideas, then I'm fine.

Focusing on the audience could also involve building rapport with the audience, before and during the speech. Speaker 1.3 described "hand holding with the client,

making sure that either the evening before or the morning of or whatever...I make contact with them at the venue, exhibiting as much patience as needed and certainly not coming across as a prima donna.” Speaker 1.10 said, “I learned the more I connected with my audience before I spoke, the more effective I was. I learned to stand at the door, whether it was 2000 people or 20, and greet people, call them by name, ask them questions, make a few questions.” Speaker 2.2 expressed a similar practice: “I go early so I can scope out the audience and get a feel for what they’re like.”

Making a commitment to give 100% to a speech performance was also related to audience focus. Speaker 1.8 described this commitment as saying to oneself, “This is going to be the best one yet. And I let everything else go.” Speaker 2.4 described it as making an emotional commitment not to hold anything back on the platform. Speaker 1.6 described it as being fully present, or to “stop thinking about delivery.” Apparently, an ideal state of mind for speakers is to not think about themselves, or their technical skills, but how to best connect with the audience. Speaker 1.10 put it this way: “...if you are focused on the message, your mission, and the meaning of what you’re bringing, it enhances presence. If you’re focused on money, marketing, and media, it stands in the way of presence...there’s nothing worse than a hungry salesman.”

Speaker 2.5 shared a costly lesson of not being focused on the audience and possessing an attitude of commitment to the speech performance. Instead he was in an “arrogant, auto-pilot state of mind.” The presentation was for a group of camp counselors who would be working with burn victims, and some of whom were themselves burn victims. The speaker, whose job was to motivate the group, said to the audience: “This is

going to be a great week, you have to come out really excited...come out like your hair's on fire!!" After the room got quiet and the speaker apologized, the speaker recovered momentarily. Later in the speaker's Powerpoint presentation, however, one of the transition slides had fire built in as an animation for effect. The speaker had not gone through the material, which the speaker had used several times for other audiences. "Why is this so monumental in speaking? Because it literally taught me that regardless of who your audience is and how many times you've presented something, you always need to be on top of your game."

Authenticity referred to an ideal state of being in which one was the same person on the stage as off the stage. "Really walking my talk," as Speaker 2.12 put it. "Being comfortable in one's own skin," was how Speaker 1.10 described the attitude that was necessary to achieve authenticity. Authenticity was closely related to the idea of audience connectedness; that if a speaker was not being himself or herself, the inherent falseness in the speaking situation would be a turn-off for the audience. Authenticity was also related to credibility; that is, a speaker should not speak on topics that he or she has no expertise in, or give advice that he or she does not live by. Speaker 2.12 relayed the message that was emphasized at a recent NSA convention: "Speak from your heart, your truth, your passion, and tell your story."

### *Theme #3: Self-development and Learning*

The third theme was self-development and learning. Professional speakers engage in activities that will engage their minds, foster creativity to produce material on which to speak, find new ideas to apply to their speaking practice, and improve their

performance. Self-development and learning activities included a variety of behaviors, including constant reading and study to keep speech content current, writing blogs, newsletters, or books, hiring a coach, seeking to be authentic, and learning by observing other performers.

Speaker 1.9 mentioned reading biographies, inspirational books, self-help books, and newspapers, keeping potential speech material, such quotes and stories, organized in files. Speaker 1.6, who is a business expert, mentioned reading newspapers and periodicals, like *Forbes Magazine* and the business section of *The New York Times*, always looking for new ideas that can be applied to a speech for a client. Speaker 2.3, who is an expert in a very specific niche market, reported spending 2 hours a day, or 10-12 hours per week researching relevant reports and national statistics related to his topic.

Writing for speakers is a way to develop one's content expertise. Speaker 1.2 maintained an extensive online presence, including four professional websites and two fan pages, and produced an e-zine, and used blogging and tweeting to both generate and test material that may eventually become a book, and content for a speech. "Blogs are open for comment. So it creates dialogue. Blogs also get reposted and almost every platform...will tell you how many times it's been reposted. Twitter's even better because...in 140 characters, I can really play with words and I know if it struck a chord by how many times it gets re-tweeted." Speaker 2.3 also sends out a weekly tip to his clients, and then considers how to integrate it as a "bit" or "chunk" in his presentation. Publishing a book was often a means to increasing name recognition and typically led to

more speaking engagements. Speaker 2.12 explained “(Publishing a book) gives you a platform that you didn’t have before.”

Speakers may hire a variety of coaches to help them improve. A speech coach would work with a speaker one on one to review video footage and suggest ways the speaker could improve his or her delivery and technique. Speaker 1.2 had been a full-time professional speaker for six years when he hired a speech coach, who reviewed some video footage of the speaker giving a presentation. When I asked Speaker 1.2 for an example or two of what the speech coach did, this is what he shared:

Well, some of it was kind of philosophical. For instance in the first few minutes I had done a bunch of humor, and then I got serious. I remember (the coach) said, ‘You know, people are wondering what happened to the funny guy. If you’re too funny at the beginning you set up the expectation that you’re going to be funny throughout.’ Then some of it was real specific, like, ‘Notice how you didn’t pause long enough there.’ Back then at the time I was particularly hooked on audience feedback. If they weren’t laughing or smiling, you know, if I wasn’t getting a visceral response, I got really stressed. And (the coach) said, ‘By and large, people don’t applaud or make noise when they are emotionally impacted.’ ...So I would say (the coach) was good at both the philosophical as well as the pragmatic--the mechanics, if you will.

Speaker 1.2 added that when working with a coach, the coach can easily identify a dozen things that can be improved. Notwithstanding, only one or two changes can be made at a time. Trying to improve too many things at once would be counterproductive. Other examples that speakers gave of things they had worked on with a coach include using specific and concise language, developing a speaking style that was more in line with the speaker’s off-stage personality, storytelling, writing, and speaking with more authority, directness, and conviction.

It should be noted that some speakers said they had never commissioned a speech coach. Speaker 1.7 said, “I just assumed that the audience was my friend and that they were eager to listen to what I had to say, and I just fortunately felt relaxed enough to share those thoughts.” Speaker 1.10 said, “I’ve chosen not to get training because I’ve seen that training can squelch great speakers. They all begin to be cookie cutters, you know?” The concern with coaching was that coaching, if not done well, can cause speakers to become too focused on mechanics or cause them to become artificial.

Other speakers may have hired a vocal coach, a business coach, or an executive coach. A vocal coach might work on accent reduction, or general voice quality and breathing. A business coach would provide assistance in developing marketing strategies to build the speaker’s business, or in how to effectively manage employees. An executive coach might identify a speaker’s personality strengths and weaknesses and offer practical advice on self-care and how to handle professional issues.

#### *Theme #4: Experience and Repetition*

The fourth theme was experience and repetition. Getting as much speaking experience as possible, both paid and unpaid, having additional venues to practice, giving attention to the little details in speech delivery, and rehearsing portions of a speech out loud were the activities comprising this theme. Speakers emphasized the importance of seeking as many opportunities to speak as possible; whether it be practicing at a Lion’s Club meeting, attending a Toastmaster’s meeting or a peer speaking group, serving in a leadership position, seeking any opportunity to get in front of people. For Speaker 1.10, giving unpaid speeches was both a way to practice and advertise:

I got asked to speak often with no pay—the Rotary Club, the Lions Club, the Chambers, whatever. But because I knew I had a message that would change people’s lives, I spoke every place I had an opportunity, with or without money. Because when I would speak, someone would come up to me who had a business and say, “How much do you charge to come and do a training?” So it was my way to market, but I wasn’t having to do anything except show up and practice my skill. Through that I began to learn what works and what doesn’t work.

The sentiment expressed was that by virtue of experience and repetition, one is able to refine one’s speech performance, paying attention to the effects of making small changes in the nuances of delivery. Speaker 1.9, a keynote speaker, described what happens as the same keynote speech is adapted and presented multiple times to different audiences:

...you repeat the same scenario, and you’re honing it. And you’re developing how to say it and how to change the way you say it. Because we all know that you put different emphasis on a different word in a sentence, a different word each time, the sentence will sound differently. As we hone those keynotes, as we give them over and over, they become perfected.

Through experience, speakers also gained confidence. Speakers 2.1 and 1.7 both overcame stuttering over time as they gained experience speaking before larger and larger audiences and getting positive feedback.

Rehearsal was a regular practice of some speakers. Speaker 2.3 reported spending 2-3 hours per week rehearsing new chunks of material. Speaker 1.1 regularly reads his manuscript out loud, then commits the speech to memory. After that, the speaker recites the entire speech, quietly on a plane, or out loud while on a walk. In this manner, an hour-long speech may be rehearsed in 35-40 minutes.

Speakers also learn by increased experience how to handle various situations, such as speaking in front of audiences of thousands, dealing with hecklers, dealing with difficult questions, and in one case, dealing with an audience member who has a heart attack during a presentation. In addition, being willing to be open to new and uncomfortable situations important to skill development. Speaker 2.11 talked about the importance of “giving myself permission to be uncomfortable so I can grow and that’s not easy. It’s very easy to do the things that you’re good at. But that’s not where we have the greatest amount of growth.”

Getting as much speaking experience as possible was also a way that professional speakers might gain confidence that they would succeed in professional speaking. It is worth noting that 11 out of the 22 interviewed speakers had early experiences or exposure to performance and public speaking that left a strong impression. Examples of early engagement in speaking included involvement in 4H Club, debate teams, church youth activities, high school improv and theater groups, or having public speaking or storytelling modeled in their family environment.

#### *Theme #5: Self-monitoring and Feedback*

The fifth theme was self-monitoring and feedback. Activities grouped into this theme were reflection, video review, video feedback, audience or client feedback, a preponderance or lack of referrals, and feedback from other speakers, family and friends. Reflection involved thinking about what worked and what did not work after a speech, and was mentioned by four experienced speakers. Watching oneself on video, with or without a coach present, and asking colleagues for critique was mentioned by four elite



speakers and six experienced speakers. Speaker 2.8, commenting on the importance of watching oneself on video, said, “I was surprised at how much I was touching my clothing, pulled on my jacket. I thought, what is up with that? Twitchy.” Speaker 1.5 described helpful feedback from colleagues as constructive: “When feedback is given, it’s never harsh. You know, it’s not you idiot or that’s terrible or it’s--you know...we always say...couple it with something that you think they could do.” Speaker 1.2 expressed a similar sentiment: “The best feedback comes from those who know enough about the profession who are proven in their own abilities that they can tell you not just the what but the why and the how. Here’s what you did or didn’t do. Here’s why you should or shouldn’t do it, and here’s how to do it better. That’s really key.”

Paying attention to the nonverbal feedback of an audience during a speech, reading audience evaluations, and listening to verbal feedback of audience members after a speech, were mentioned by 5 elite and 9 experienced speakers. Notwithstanding, speakers were careful to qualify their emphasis on audience evaluations. Speakers 1.1, 1.2, and 1.8 cautioned that numeric ratings, such as “I give this speaker a 6 out of 10” are less helpful. “It just gives you a relative sense of how you did and there’s no absolute benchmark,” said Speaker 1.2. A few speakers mentioned that they had learned not to take too seriously negative evaluations by a single member of the audience, but rather look for any patterns in feedback. Speaker 2.8 said, “There’s always that one person who is extremely dissatisfied and you have to make sure not to let that one person get under your skin. Which is really easy to do.” Notwithstanding, a few speakers, including

Speaker 2.10, had learned to glean a lesson from even the toughest feedback: “there’s always a kernel of truth in every criticism.”

Client feedback was described as more valuable than audience feedback by four elite speakers and three experienced speakers. The explanation was that the client being the person who hired the speaker, the client would be in the best position to inform the speaker whether he or she had fulfilled the job for which he or she was hired. In addition to client feedback, speakers took note of referrals, repeat business, and interest in purchasing speaker products. Speaker 2.10 said referrals, or lack thereof after a presentation, was the “ultimate form of feedback.” Speaker 1.10 said, in contrast to audience feedback, which is vague and may be based on a subjective and fleeting sentiment, referrals are actual and concrete: “I’m going to trust that reality.” Speaker 2.12 said rhetorically, “Do they come back to me for more?”

*Research Question #3. What motivates professional speakers to engage in deliberate practice?*

Table 8 below presents the 9 units that emerged in response to questions on motivation for ongoing engagement in activities that enhance, develop and maintain speaking skills. Because multiple responses were given by each of the 22 participants, the numbers add up to more than twenty-two. Several factors appeared to be consistent with the literature, namely, the influence of family, a passion for speaking, and inner drive. Other motivational factors were observing other speakers, wanting to help others, wanting to avoid failure, or wanting to build one’s business. Respect for the audience and desire to help people were combined units, as they seemed to convey a similar

sentiment of wanting to positively impact the audience. For a more detailed description of each factor, see the table of units in Appendix E.

Table 8

*Motivational Factors for Engagement in Skill Development Activities*

Motivational Factor	Number of Speakers Who Mentioned the Motivational Factor
Desire to help people, respect for the audience	16
Inner Drive	15
Passion for topic/craft	9
Observing other speakers	8
Upbringing/parents/close relatives	8
Need to develop or maintain business	7
Sense of spiritual calling/fulfilling one's purpose	6
Receiving positive feedback from audience	6
Desire to avoid failure	3

Based on these initial results, the motivational factors can be synthesized into four general categories: passion, temperament, supportive environment, and practical necessity.

*Passion* can be described as an inherent enjoyment derived from the act of speaking itself, a love for the topic on which one speaks, a satisfying sense that one is helping people and having a positive impact, or fulfilling one's purpose or spiritual calling by engaging in speaking. Speaker 1.1 described his early sentiment when he first began his paid speaking career: "This isn't work. It's love, you know." Speaker 2.10

expressed: “I love waking up every day with the opportunities I have every day to reach people and touch people. If I’m going to do that, then I’m going to be the very best I’m going to be.” Speaker 2.8, who was on a hiatus from full-time speaking in order to work a regular job, referred to her occasional speaking gigs as “oxygen dates,” conveying her love for speaking and presenting.

*Temperament* is another factor, described as inner drive, or the constant desire to improve, to learn, to do one’s best, to avoid boredom. Respect for the audience may be an expression of this temperament. Speaker 2.6 said, “I want to be the best. I want to connect. I value people who are in my audience. I don’t want to waste their time and I don’t want to waste mine.” Speaker 1.5 described it as being “competitive with me.”

*A supportive environment* was also a factor of motivation. A supportive environment could involve being able to observe other speakers and performers. Speaker 2.10 said, “If you want to be good, you got to be around the greats.” Speaker 1.5 got his inspiration from observing a variety of performers, from athletes to musicians, to Broadway performers:

“I really get so inspired by the Broadway performers because as you know...if the show goes well--they’re doing it eight times a week, for heaven sake...week after week. And yet when I go, to me it’s opening night, and I want their performance to reflect that. And it virtually always does....Anybody who can do something over and over and over again but always do it with such a vigor and such panache and such commitment, that’s what inspires me.”

The presence of negative models could also be a motivator. Speaker 2.5 said, “I’ve sat in on way too many awful professional development experiences that...was one of my

motivations for even beginning my business. I said to myself, ‘I can do this better than these people.’”

Influential family members may have been models or coaches of good speaking, or enforcers of a strong work ethic. Speaker 2.7’s father had gone to college on a speech scholarship and was the speaker’s first speech coach. “He’s still around to give me feedback and help me. And that’s awesome.” Speakers who cited their parents as influential in their development as speakers would say they wanted to make their parent(s) proud. Influential friends and relatives were described as valuable to a speaker’s ongoing success primarily for the role the friends play in keeping the speaker grounded; that is, keeping the speaker’s ego in check so that the applause of audiences doesn’t get to his or her head. Speaker 1.8 humorously recounted the moment of receiving the CPAE award, which may be the greatest public honor in the professional speaking world: “When I was inducted into the Hall of Fame, I’m standing there with Zig Ziglar and the guys that wrote *Chicken Soup for the Soul* and all this, and one of them said to my mom, ‘Mrs. ----, you must be so proud.’ And she said, ‘Well, maybe he’ll pick his underwear up off the floor when he visits next time.’ You know? So they keep me really grounded.”

Fourth, *business necessity*, was a very tangible motivator. Because many professional speakers owned their own speaking business, and were self-employed, maintaining excellence in their speaking performance was critical to getting referrals and ongoing business in a competitive industry. Speaker 1.7 said, “(A) professional speaker for all intents and purposes is unemployed right after their speech. You know, we don’t

get a weekly check for going to the office. And so we need to be that good so somebody will recommend us.” The desire to avoid failure may be closely linked to the need to excel and avoid mediocrity or mistakes on the platform in order to get coveted referrals and survive professionally. Speaker 2.4 said, “I hate most...of marketing. I realize that one of the things that will help me be successful is to do a really really good job on stage.” Moreover, the speaking business is competitive. Speaker 1.8 put it this way: “I’m in competition with 2,000 other speakers all over the planet, every minute of every day. And if I’m not continuing to get better at it, I can’t compete.”

*Research Question #4: How do Elites and Experienced Speakers*

*Compare in their Practice Behaviors and Motivations?*

Elite and experienced speakers were very similar in the types of activities they considered important to their skill development and maintenance. The most frequently mentioned activities for elites were the same activities mentioned most frequently by experienced speakers, except for coaching and audience feedback. Coaching was mentioned by a higher percentage of elites as a group than by experienced speakers, whereas paying attention to audience feedback was mentioned by a higher percentage of experienced speakers than elites. Table 9 displays the most frequently mentioned units for the two groups:

Table 9

*Comparison of Most Frequently Mentioned Units for Elites and Experienced Speakers*

Most Frequently Mentioned Units for Elites	Most Frequently Mentioned Units for Experienced
NSA Membership (100%)	NSA Membership (69%)
Reading/staying current (80%)	Audience focus (69%)
Audience focus (70%)	Reading/staying current (69%)
Get experience (70%)	Audience feedback (69%)
Be authentic (70%)	Get experience (67%)
Coaching (60%)	Be authentic (58%)

The differences were slight. While more elite speakers (60%) as a group mentioned coaching as an important contributor to their expertise development than experienced speakers (25%), the latter group more often reported having a mentor (50%) than did elites (30%). A higher percentage of elites (40%) than experienced (8%) speakers mentioned the importance of noticing little details in speaking; such as the impact of timing, or inflection on a single word. More elites (30%) talked about learning keynote speaking as an art form than did experienced speakers (0%). None of the elite speakers mentioned having received any academic training in speaking or performance, whereas four (33%) of the experienced speakers did. More experienced speakers (42%) mentioned having worked specifically on slowing down and pausing than did elites (20%), studying comedy and humor (42% of experienced, 20% of elites), and engaging in reflection (33% of experienced, 0% of elites). Unexpected was the fact that only a small

minority of both elites (10%) and experienced (17%) speakers mentioned rehearsal as important to their skill development.

Elite and experienced speakers had only slight differences in their motivations for engaging in activities that would develop and maintain their speaking skills. Table 10 below shows the most frequently mentioned motivational factors for the two groups. The most frequently mentioned motivator was inner drive to succeed for both elite and experienced speakers. Desire to help others was the second most frequently mentioned motivator for both groups. However, watching other speakers was also mentioned as frequently as the desire to help others among experienced speakers (50%), and less so among elite speakers (20%).

Passion for their speaking craft and their upbringing and supportive family members were more frequently mentioned by elite speakers (50%) as being a source of motivation than by experienced speakers, only 25% of whom mentioned upbringing and supportive family as being motivators.



Table 10

*Comparison of Most Frequently Mentioned Motivational Factors for Elite and Experienced Speakers*

Elite	Experienced
Inner drive (80%)	Inner drive (58%)
Desire to help others (50%)	Desire to help others (50%)
Upbringing/supportive family (50%)	Observing other speakers (50%)
Passion for craft (50%)	Passion for craft (33%)
Business necessity (30%)	Business necessity (33%)
	Respect for audience (33%)
	Positive feedback from audience (33%)

The need to maintain business was mentioned by 30% of elites as a significant motivator for engaging in skill development activities. Similarly, 33% of experienced speakers acknowledged business necessity. An equal percent (33%) of experienced speakers mentioned passion for their craft, respect for the audience, and positive audience feedback as significant motivators. Respect for the audience and positive audience feedback was less frequently mentioned among elites (10% and 20%, respectively.)

*Negative Case Analysis*

The preliminary analysis of the qualitative data involved identifying units, which were descriptions of activities, events and behaviors that related to the speaker's skill development. (For a more detailed explanation of how the units were identified, see Chapter 3. The table of units is presented in Appendix E). At this point, negative case

analysis was used to review the transcripts and interview notes to search specifically for any information that may have been missed, or that might in any way be interpreted as contrary to the units that had been identified. As was mentioned, any negative mentions of a unit were carefully documented. For instance, an elite speaker said she had never received coaching and thought coaching could be damaging to a speaker's development.

After the preliminary comparative analysis between the two groups (see preceding sub-section), the researcher reviewed the interview notes and transcripts again to see if any evidence could be found to support a case for more prominent differences between the two groups or to contradict the existence of even slight differences between the two groups. What could be observed from this negative case analysis, beyond what had been already documented, was that some experienced speakers made mention of elite speakers as people who inspired them, whereas elite speakers tended to mention other elites as their role models and friends. In terms of motivations and practice behaviors, no additional evidence was found that contradicted the findings of this preliminary analysis of the interview data.

#### Results of Questionnaire Data

The primary purpose of the questionnaire was to gather information from the speakers that would help a) determine whether the 16 activities that emerged from analysis of the interview data had deliberate practice characteristics; b) confirm the preliminary analysis from the interview data regarding the 9 sources of motivation; and c) identify whether there were any differences in the elites and experienced speakers in their

responses. A secondary purpose of the questionnaire was to gather biographic data and other information that was not covered in the interview.

There were a total of 65 items on the questionnaire, divided into five scales: frequency, relevance, effort, motivation, and life satisfaction; plus 3 short answer questions concerning age at which NSA membership commenced, number of years of NSA membership, and number of presentations given in a typical active year of speaking. A total of 18 speakers, 8 elite and 10 experienced, completed the questionnaire, yielding a response rate of 82%. One participant did not complete items 49 to 65 of the survey.

#### *Inconsistencies in the Data Set*

A careful reading of the data revealed several inconsistencies in participant responses. In nine instances, a participant indicated “Never” for frequency of engagement in an activity (e.g., writing, attending NSA meetings, having a mentor, having a coach). When it came to ranking the same activities for relevance to skill development, the instructions indicated that participants were to reply N/A if they had never engaged in an activity. Yet the participants gave the activities they had reported “Never” for frequency a rating of 2, 3, or 4 for relevance. It is unclear what may have been the reason for this inconsistency. One likely reason may have been the weakness of the questionnaire design. The question prompt asked participants to think about a “typical year” in which they were “most engaged in professional speaking.” Some of the participants were either retired, semi-retired or not presently engaged in full-time speaking. The second phrase was added with the intent of guiding participants to respond to the questions according to the time in which they were most active in their profession.

But this phrasing may have been confusing for participants, as a typical year may not have been synonymous with a year in which they were “most engaged in speaking.” It is also possible that participants were thinking about their recent behavior when ranking an activity for frequency, but thinking more cumulatively over their career when ranking an activity for relevance. Not knowing the reasons for these inconsistencies, I did not change the responses.

Three inconsistent responses were corrected. One participant gave the activities of Reflecting, Writing, and Being Authentic the highest frequency rating, but answered N/A for relevance. The instructions on the questionnaire indicated that N/A was to be for activities that the participant did not engage in. Thus, an N/A response for an activity the participant gave the highest rating for frequency must have been a mistake. In the interview, this particular speaker stressed the importance of authenticity to speaking success. Regular reflection to improve and writing were also discussed in the interview when the speaker was responding to questions about regular activities engaged in for the purpose of skill development and maintenance. The N/A response column was right next to the “Extremely Relevant” column on the online survey. I reasoned that this speaker most likely bubbled in the wrong response due to the unanticipated weaknesses of the survey design, and adjusted the response accordingly. These were the only corrections I made to the data.

As was mentioned in Chapter 3, N/A responses and instances in which a respondent left an item blank were treated as missing data. When there was missing data, the mean response for an item was inserted. This involved a small percentage (4%) of the

total data. Table 11 presents the means, SD, and ranges for the summed frequency, relevance, effort, motivation and life satisfaction items.

Table 11

*Means, Standard Deviation (SD), and Range for the Five Summed Scale Scores*

Scale	Mean	SD	Range
Frequency	4.16	0.67	2.94 - 5.25
Relevance	4.14	0.63	2.75 - 4.88
Effort	3.14	0.53	1.94 - 4.13
Motivation	6.08	0.55	5 - 7
Life Satisfaction	6.52	0.82	3.6 - 7

#### *Mean Score Analysis*

Means and standard deviations for each of the item responses can be reviewed in Appendix F. The independent sample Mann-Whitney U test, which is a non-parametric t-test suitable for small sample sizes, was run on all the question items. The p values for the frequency, relevance, effort, motivation, and life satisfaction scales are presented in Table 12 below. There were no significant differences between the two groups on any of the 5 scale items. The difference between the groups in their responses to the motivation scale items approached statistical significance at  $p = .08$ , with elites scoring on average 5.86 out of 7, and experienced speakers scoring 6.27 out of 7 for life satisfaction. Group mean responses for items 63 and 64, which concerned the age at which the speaker joined NSA and the number of years the speaker had been an NSA member, were statistically

significant at the  $p < .05$  level. There was no significant difference in the mean group averages for number of presentations in a typical year.

Table 12

*Results of Mann-Whitney U Test on Five Questionnaire Scales*

Scale Name	p value
Frequency	0.70
Relevance	0.83
Effort	0.63
Motivation	0.08
Life Satisfaction	0.24

*Frequency.* The frequency scale was comprised of a total of 16 items on the questionnaire that had participants indicate how often they engaged in each activity. Due to the differing nature of the activities, the 16 activities were clustered into three sets, with 3, 6 and 7 activities in each set. Each set of items had a particular type of response options (see questionnaire instrument in Appendix D and questionnaire results in Appendix F). Technically, three frequency sub-scales rather than one total scale should have been created. But correlations between each frequency sub-scale with the four other scales were examined and found to be moderately strong and similar to the correlations between the total frequency scale with the other four scales. In addition, the reliability of the frequency sub-scales was not substantively different from the reliability of the frequency total scale. Because of these similarities, the overall frequency scale based on the 16 items was used.

Practice activities that received the top three highest mean frequency ratings from the total group of participants were: commitment to give 100% ( $M = 6.83$ ,  $SD = .38$ ), authenticity ( $M = 6.67$ ,  $SD = .59$ ), and focus on the audience ( $M = 6.22$ ,  $SD = 1.26$ ). For these items, a rating of 6 corresponded to “very often” and a rating of 7 meant “always.” Activities that received the lowest average frequency ratings were: meeting with a coach ( $M = 1.78$ ,  $SD = .88$ ), meeting with a mentor ( $M = 2.06$ ,  $SD = .87$ ), and attending other speaking group meetings besides NSA ( $M = 2.28$ ,  $SD = .90$ ). For these items, a rating of 1 indicated a frequency response of “never”; a rating of 2 indicated a frequency of 1-2 times a year.

*Relevance.* The relevance scale was comprised of 16 items that had participants indicate how relevant each listed activity was to their skill development, improvement and maintenance. Response choices ranged from 1 to 5, with 1 meaning *irrelevant*, and 5 meaning *extremely relevant*. Practice activities that received the highest ratings for relevance to skill development were: commitment to give 100% ( $M = 4.94$ ,  $SD = .24$ ), focusing on the audience ( $M = 4.83$ ,  $SD = .51$ ), and authenticity ( $M = 4.67$ ,  $SD = .60$ ). Practice activities that received the lowest relevance ratings were: meeting with a coach ( $M = 3.07$ ), meeting with a mentor ( $M = 3.37$ ,  $SD = 1.40$ ), and rehearsing portions of a speech out loud ( $M = 3.39$ ,  $SD = 1.69$ ). The relevance scale for all 16 items ranged from 1 for irrelevant to 5 for extremely relevant. Thus, activities that received even the lowest relevance ratings were considered moderately relevant. In other words, all of the 16 activities on the questionnaire received at least moderately strong to strong relevance ratings.

*Effort.* The effort scale was comprised of 16 items that asked participants to rank each activity for degree of effort required to engage in that activity. The response choices for all 16 items ranged from 1 to 5, with 1 meaning *no effort*, and 5 meaning *extremely effortful*. Practice activities that received the highest ratings for effort were: focusing on the audience (M=3.83, SD = 1.34), seek as many speaking opportunities as possible (M = 3.76, SD = 1.06), and authenticity (M = 3.44, SD = 1.15). Activities that received the lowest ratings for effort were: attending other speaking group meetings (M = 2.62, SD = .90), observing other performers (M = 2.76, SD = .88), and meeting with a mentor (M = 2.77, SD = .85). The effort scale for these items ranged from 1 for no effort, to 5 for extremely effortful. A rating of 2 corresponded to minimal effort, 3 corresponded to moderate effort, and 4 corresponded to very effortful. Thus, all of the 16 practice activities on the questionnaire received low-moderate and moderately strong average effort ratings.

*Motivation to Engage in Skill Development Activities.* The motivation scale was comprised of 9 items that asked participants to indicate the degree to which they agreed that each factor listed was a source of motivation to engage in skill development activities. The scale for items concerning motivation ranged from 1 for strongly disagree to 7 for strongly agree. Table 13 below presents the total group's mean responses on these items. The motivational factors that received the strongest ratings for agreement were: passion for topic and the speaking craft (M = 6.71, SD = .57), inner drive (M = 6.59, SD = .77) and desire to help people and have an impact (M = 6.35, SD = .76). The motivational factors that received the lowest ratings for agreement were: sense of



spiritual calling (M= 5.41, SD =1.88), desire to avoid failure (M = 5.47, SD=1.29), and upbringing (M = 5.53, SD=1.46). Thus, the bottom three motivational factors on average received a rating of somewhat agree, and the top three motivational factors received an average rating of agree to strongly agree.

Table 13

*Mean and Standard Deviations (SD) for Questionnaire Items Concerning Motivation*

To what extent do speakers agree that each of the following factors motivate them to continue working to develop their speaking skills?	Mean	SD
Passion for topic/craft	6.71	0.57
Inner drive	6.59	0.77
Desire to help people, have an impact	6.35	0.76
Respect for the audience	6.35	0.83
Receiving positive feedback from audience	6.18	0.79
Need to develop or maintain business	6.12	1.28
Upbringing/parents/close relatives	5.53	1.46
Desire to avoid failure	5.47	1.29
Sense of spiritual calling/fulfilling one's purpose	5.41	1.88

*Note.* 1 = Strongly Disagree; 2 = Moderately Disagree; 3 = Slightly Disagree; 4 = Neither Disagree nor Agree; 5 = Slightly Agree; 6 = Moderately Agree; 7 = Strongly Agree

*Life Satisfaction Survey.* The Life Satisfaction scale was comprised of 5 items, which asked participants to indicate the degree to which they agreed with 5 statements concerning their quality of life and sense of fulfillment. Item response choices ranged from 1, for *strongly disagree* to 7, for *strongly agree*. Table 14 below presents the question items and the total group's mean responses. On average, the respondents indicated moderately strong to strong agreement with the life satisfaction items.

Table 14

*Life Satisfaction Item Results*

Question	Mean	Standard Deviation
In general, my life corresponds closely to my ideals and values.	6.76	0.42
My living conditions are excellent.	6.53	0.98
I am satisfied with my life.	6.41	1.03
Up to now, I have obtained important things I wanted in life.	6.59	0.77
If I could start my life over, I would hardly change a thing.	6.29	1.27

*Note.* 1 = Strongly Disagree; 2 = Moderately Disagree; 3 = Slightly Disagree; 4 = Neither Disagree nor Agree; 5 = Slightly Agree; 6 = Moderately Agree; 7 = Strongly Agree

*NSA Membership.* The means and ranges for the elite and experienced group responses on the items concerning involvement with NSA are presented in Table 15 below. Experienced speakers had started their formal training in speaking on average ten years later than elites. Moreover, elites had on average almost 20 years more time spent in formal training activities through participation in NSA than the experienced group. As

was previously mentioned, these differences were statistically significant at the  $p < .05$  level. Given that years of NSA membership was considered a measure of time spent in formal training in this study, this finding suggests that the elites and experienced groups were not comparable groups in terms of experience and training.

Table 15

*Results Concerning NSA Membership*

Item Topic	Elites (n =8)	Experienced (n =9)
Age Joined NSA	M = 33 years Range: 21 - 43 years	M = 43 years Range: 32 - 51 years
Years NSA Member	M = 29.88 years Range: 22 - 38 years	10.33 years Range: 2 - 23 years

*Correlational Analysis*

Cronbach's alpha reliability coefficients for the frequency, relevance, effort, motivation, and life satisfaction scales are presented in Table 16 below. The reliability estimates for the frequency (alpha = .85), relevance (alpha = .86), effort (alpha = .85), and life-satisfaction scales (alpha = .92) are high, indicating these four scales have favorable measurement properties.

Table 16

*Reliability of Five Questionnaire Scales*

Scale Number	Scale	Number of Items	Cronbach's Alpha
1	Frequency	16	0.85
2	Relevance	16	0.86
3	Effort	16	0.85
4	Motivation	9	0.58
5	Life Satisfaction	5	0.92

Table 17 below presents the Kendall's tau inter correlation coefficients between the five scales: frequency, relevance, effort, motivation and life satisfaction. The frequency and relevance scales correlate highly ( $r = .78$ ), which indicates the participants in the questionnaire may view frequency and relevance similarly. The correlation between effort and frequency ( $r = .39$ ) and effort and relevance ( $r = .39$ ), is less strong, indicating the effort scale is measuring a phenomenon that is distinct from frequency and relevance. Motivation and life satisfaction have a moderately positive correlation,  $r = .42$ . This latter finding suggests that the degree of life satisfaction experienced by the respondents may have some relationship to the presence of motivational influences in their lives.

Table 17

*Kendall's Tau Inter Correlations of the Five Questionnaire Scales*

	Scale Name	1	2	3	4	5
1	Frequency					
2	Relevance	0.78				
3	Effort	0.39	0.39			
4	Motivation	0.29	0.32	0.21		
5	Life Satisfaction	0.14	0.27	0.29	0.42	

*Note.* Correlations greater than .35 are statistically significant at the .05 level.

### Collective Results of Interview and Questionnaire Data

The collective results of the interview and questionnaire data indicate that there are at least 16 activities that constitute deliberate practice in professional speaking. Not all speakers participated in all 16 activities, and some activities occurred more frequently than others. Activities such as meeting with a mentor, meeting with a coach, or attending other speaking group meetings, occurred on average one to three times a year, whereas committing to a performance, seeking to be authentic and focusing on the audience were more frequent deliberate practice activities that occurred very often to always. Speakers who had made no mention of a certain activity (e.g., hiring a coach) in his or her interview, nevertheless might have indicated participating in that activity in the questionnaire. On average, speakers considered all 16 activities relevant to developing expertise in speaking, engaged in most of the activities with some degree of regularity, and considered the activities relevant to extremely relevant to developing and maintaining their skill in speaking.

During the interviews, speakers were directly asked about what motivates them to engage in activities that will enhance their speaking skills. Speakers typically discussed one to three sources of motivation in their interviews. However, when presented with nine sources of motivation in the questionnaire, speakers on average indicated agreement to moderately strong agreement that each factor contributed to their motivation to engage in deliberate practice. The collective results of the interview and questionnaire data therefore indicate that professional speakers are motivated by a variety of factors: passion, temperament, business necessity, and a supportive environment.

Finally, the results of the interview and questionnaire data indicate that the experienced and elite speakers were similar in their deliberate practice behaviors, motivations, and perceptions of life-satisfaction, even though they differed in their number of years of training, and the age at which they commenced their training, with elites starting on average ten years earlier and having 20 more years of training than the experienced group. Slight differences that were observed in the interview data in the responses of elites and experienced were not borne out in the questionnaire data. For example, more experienced speakers mentioned the value of having a mentor and observing other performers than elite speakers during the interviews. More elites than experienced speakers talked about paying attention to details in their speeches, such as the impact of subtle variations in delivery (e.g., timing, pause, inflection) in the interviews. However, the difference in mean average responses for the two groups on the questionnaire items concerning all 16 activities were not statistically significant.

In the next chapter, the interpretations of these findings are discussed in relation to the theory of deliberate practice and past research. The implications of the results of this study and suggestions for future research are also explored.

## Chapter V

### DISCUSSION: INTERPRETATION AND IMPLICATIONS

This chapter is arranged into four sections. In the first section, a summary of the study is provided. In the second section, the limitations of the study are identified. In the third section, the major findings of the study are discussed. The study concludes in the fourth section with a discussion of the implications of the study to research and the teaching of public speaking.

#### Summary of Study

Each year, hundreds of thousands of college students in the United States enroll in a basic oral communication course. Surveys of communication departments have indicated that 50-76% of institutions require the basic oral communication course to graduate (Morreale, Hugenberg & Worley, 2006; Wardrope, 2002). The objective of the basic course, otherwise known as a public speaking class, is to enhance student competence in public speaking skills (Goulden, 2002; Finn, Sawyer & Schrodt, 2009). Public speaking theory and the nature of the public speaking course has been influenced primarily by traditional theories of rhetoric, textbook publishers, practitioners and scholars (Goulden, 2002). However, empirical research on public speaking expertise is very limited (Levasseur, Dean & Pfaff, 2004).

The primary purpose of this study was to explore the nature of expertise development from the perspective of Ericsson's concept of deliberate practice. Deliberate practice refers to individualized and structured training, typically designed by a teacher or coach, that facilitates improvement in performance (Ericsson & Charness,



1994). Ericsson generally asserts that over a ten-year period, individuals who engage in more deliberate practice will outperform their peers who possess comparable years of experience (Ericsson, Roring, & Nandagopal, 2007; Ericsson & Charness, 1994). Once expert performance levels are attained, continued improvements in performance can be accomplished through ongoing deliberate practice.

According to Ericsson's model, individuals who engage in deliberate practice must be motivated to engage in deliberate practice when such practice is not inherently enjoyable; have access to resources such as time, energy, good teachers, and practice facilities; and be able to avoid exhaustion and give themselves time for periods of recovery. When you narrow the group to those who meet these criteria and control for factors such as years of experience, Ericsson predicted that the amount of deliberate practice would be the variable that explained individual differences in performance (Ericsson et al., 1993).

Deliberate practice has been applied to numerous domains. Studies have consistently uncovered significant relationships between time spent in deliberate practice and measures of performance (Campitelli & Gobet, 2008; Charness et al., 2005; Duffy et al., 2004; Ford et al., 2009; McKinney and Davis, 2003). More recently, deliberate practice has been extended to professional settings. Studies on deliberate practice in the professions have sought to identify what constitutes deliberate practice in work contexts (Dunn & Shriner, 1999; Sonnentag & Kleine, 2000; van de Wiel et al., 2004).

The present study contributed to the deliberate practice research in three ways. First, this study applied the deliberate practice framework for the first time to the domain

of professional public speaking. Second, the present study used a mixed-method approach that included semi-structured interviews. The researcher's objective was to produce more detailed descriptions of deliberate practice activities than that of prior deliberate practice research, which had been dominated by questionnaire and structured interview methods.

Third, this study contributed to research that examined what motivates individuals to engage in deliberate practice. Previous research had explored the construct of passion (Vallerand et al., 2007; Vallerand et al., 2008) or so-called "rage to master" (Ward et al., 2007) to explain motivation for deliberate practice, as well as the influence of significant others (Ford et al., 2007; Ward et al., 2007). Ericsson had surmised in his theoretical discussions of deliberate practice that other motivational factors may be talent (Ericsson et al., 1993), temperament (Ericsson & Charness, 1994), or one's environment and support system (Ericsson & Charness, 1994). This study confirmed these motivational factors and brought other factors to light that can be explored in future research.

In addition to contributing to the deliberate practice literature, this study addressed the need for more communication research on the nature of public speaking expertise (Goulden, 2002). By investigating what professional speakers have done to develop their skill, the researcher hoped to identify behaviors, exercises, or other factors that may be pedagogically useful in the public speaking classroom.

#### *Purpose of Study*

The four-fold purpose of the study was to: a) assess whether deliberate practice exists in professional speaking; b) generate detailed descriptions of deliberate practice in

professional speaking; c) examine what motivates professional speakers to engage in deliberate practice; and d) compare deliberate practice behaviors and motivations of experienced and elite professional speakers. For the purpose of this study, deliberate practice was defined as any activity that: a) had a goal of performance or competence improvement; b) was maintained with some frequency for at least one year; and c) was considered relevant to performance or competence improvement. These criteria for categorizing an activity as deliberate practice were similar to that of previous studies (Sonnentag & Kleine, 2000; van de Wiel et al., 2004).

### *Method*

To complete this study, 10 elite and 12 experienced professional speakers were interviewed on the phone to investigate the structure of deliberate practice in their profession and what motivated them to engage in deliberate practice. All participants were professional members of the National Speakers Association. The group of elite subjects was a convenience sample of 10 NSA members who had received the elite CPAE award, earned their CSP designation, and averaged 62.9 years of age (SD = 8.03 years; range: 51 - 74 years) and 34.9 years (SD = 7.78 years; range: 20 to 45 years) of professional speaking experience. The participants were obtained through referral and snowball method.

The experienced speakers in the study were professional members of NSA who had an average age of 53.3 years (SD = 13.14 years; range: 37-70 years), and an average of 22 years (SD = 12.42 years, range: 8 - 50 years) of professional speaking experience. Experienced speakers had not received the CPAE award, nor obtained Certified Speaking

Professional (CSP) status. Participants were identified by random selection, using the NSA member directory as the sampling frame. Participation of both elite and experienced speakers was completely voluntary and uncompensated.

Approximately 30-60 minute interviews were conducted using a semi-structured interview protocol over the phone. Unlike previous studies in which researchers first developed a list of potential deliberate practice activities and then used structured interviews or questionnaires to investigate participants' involvement in those activities through questionnaires or structured interviews (Charness et al., 2005; de Bruin et al., 2004; Hodges et al., 2004; Sonnentag & Kleine, 2000; van de Wiel et al., 2004), the present study used a qualitative approach in order to elicit descriptions of practice activities from the participants themselves. Interviews were audio-recorded with participant consent and transcribed for data analysis. After analysis of interview data, a list of 16 possible deliberate practice activities were identified and described. Data from a follow-up questionnaire confirmed the 16 activities constituted deliberate practice based on participant ratings of frequency of their participation in each activity, their perceived relevance of each activity to their skill development, and the degree of effort required to participate in each activity. In addition, the questionnaire included items relating to motivational factors for deliberate practice engagement, and questions on life-satisfaction.

#### *Data Analysis*

Preliminary analysis of the interview data resulted in the identification of a total of 50 units, or descriptions of behaviors and activities that more than one speaker

mentioned as important to their skill development. The more frequently mentioned units were then clustered and arranged into 16 general activities that speakers might engage in to develop and maintain their speaking skills. An analysis of these 16 activities resulted in the identification of five major themes. Elites and experienced speakers were similar in the types of activities they engaged in to improve their speaking performance and in their sources of motivation. Slight differences were observed in the number of times elites and experienced mentioned particular units. Negative case analysis was used to re-examine the data to search for any evidence that contradicted the themes or the preliminary comparison of the two groups. No evidence was found that would substantively change the reporting of the units, the identification of the themes, or the initial comparison of the groups.

The questionnaire data was analyzed using descriptive statistics and non-parametric t-tests in order to: a) identify whether the 16 activities fulfilled the criteria for deliberate practice; and b) identify whether there were any group differences in item responses for frequency, relevance, effort, motivation, or life-satisfaction questions. In addition, non-parametric correlational analysis was used to examine whether there was any relationship among any two of the dependent variables. Finally, reliability measures were obtained for the frequency, relevance, effort, motivation and life-satisfaction scales.

#### Major findings

The following were the four major findings of this study:

1. This study provided a descriptive analysis of five themes that are indicative of deliberate practice in professional speaking: community, attitudes, self-development

- and learning, experience and repetition, and self-monitoring and feedback. These themes were based upon activities and behaviors identified by professional speakers as being important for the purpose of developing and maintaining excellence in their speaking skills. The average frequency of engagement in each activity varied from once or twice a year to always. All of the activities were considered moderately relevant to highly relevant to speaking skill development, and received low-moderate to moderately strong ratings for effort required.
2. This study found no significant differences between experienced and elite professional speakers in their deliberate practice behaviors, motivation for deliberate practice, and life satisfaction.
  3. This study identified four motivational factors that appear to support deliberate practice engagement among professional speakers: passion, temperament, supportive environment, and practical necessity.
  4. This study generated an instrument with strong reliability measures that may form the basis of a deliberate practice scale in professional speaking. Reliability coefficients for each set of 16 items on frequency, relevance and effort were .85, .86, and .84 respectively.

### Limitations

The research design of this study had several limitations. One limitation was the small convenience sample size of 22 participants. Although 22 was well within the acceptable range of qualitative interview studies (Johnson & Weller, 2002; Kvale &

Brinkmann, 2009), the number was not sufficiently large to warrant strong conclusions about a population without additional research.

A second limitation of the study was the inability to control for years of experience or training in forming the two participant groups. The original intent of the study was to compare the deliberate practice behaviors of two comparable groups; i.e., two groups with similar years of experience but who differed on levels of achievement. The intent was based on the premise, observed in previous studies (Campitelli & Gobet, 2008; Charness et al., 2005; Duffy et al., 2004; Ford et al., 2009; McKinney & Davis, 2003; Ward et al., 2007), that amount of deliberate practice was a distinguishing factor that explained achievement differences in comparable groups. Instead, the elite and experienced groups differed significantly in both the age at which they commenced serious professional training in speaking and the number of years of involvement with NSA. Thus, one could not assess in this study whether speakers who obtained elite status were different in their motivations or practice behaviors from comparable peers who had the same amount of experience, but had not achieved elite standing.

A third limitation to the study was the lack of obtaining concrete measures of the duration of time spent on deliberate practice activities. Previous deliberate practice studies have obtained estimates of current and cumulative number of hours spent on practice activities by participants (Campitelli & Gobet, 2008; Charness et al., 2005; De bruin et al., 2008; Duffy et al., 2004; Ford et al., 2009; Hodges et al., 2004; Krampe & Ericsson, 1996; Sonnentag & Kleine, 2000). Elite participants have been found to spend a significantly larger amount of time on the same activities as non-elite participants. The

distinction between cumulative and current time spent on deliberate practice activities has also been found to be important. For example, Sonnentag and Kleine (2000) found that cumulative amount of deliberate practice did not explain variance in performance, whereas amount of current deliberate practice did explain variance.

Due to the diversity of activities that emerged in this study, and the desire to keep the questionnaire format simple and relatively short for participants, I did not seek specific information on the duration of time spent on activities, although I did obtain measures of frequency of engagement. Moreover, I did not make an explicit distinction between current and cumulative time spent on the activities, but simply requested estimates for frequency of engagement in a typical year of active engagement in speaking. Thus, some participants' responses may be less reflective of their current practices than others.

A fourth limitation of the study was the lack of validity measures for the interview data and questionnaire, specifically respondents' descriptions of practice activities and their frequency of engagement. During the interviews, it is possible that participants were unable to recall or effectively speak about their practice behaviors accurately and completely, or that the interview questions may have inadequately prompted their memory of relevant activities. In several deliberate practice studies (de Bruin et al. 2008; Dunn & Shriner, 1999; Ericsson et al., 1993; Hodges et al., 2004; Krampe & Ericsson, 1996; Sonnentag & Kleine, 2000), participants completed a week-long diary, recording their daily activities in 15-minute increments and coding the activities. The diary data was correlated with interview or questionnaire data to establish the validity of respondent



estimates of time spent on deliberate practice activities. The researcher decided not to ask participants to keep a week-long diary because of concerns that requiring such a laborious task would make it difficult to recruit participants for the study.

Instead, a follow-up questionnaire was administered to confirm or test the validity of the researcher's interpretations of the interview data, as well as get supplemental quantitative data to describe deliberate practice behaviors of professional speakers. The questionnaire gave all participants a chance to report the extent of their involvement with and perceptions of relevance and effort of practice activities that may have not been brought up during their interview. However, the design of the questionnaire had flaws that I did not anticipate and the wording on the items may have been ambiguous or interpreted in different ways by participants, thus affecting the validity of the results. It is likely that refining the instrument and administering the questionnaire over the phone, which is essentially a structured interview, would afford participants opportunity to get clarification on the items and increase validity of responses.

### Discussion

In light of the limitations of the study, it can nevertheless be proffered that this study identified 16 activities and behaviors that constitute deliberate practice in professional speaking. In this study, deliberate practice was defined as an activity that was engaged in for the purpose of developing or maintaining their speaking skills. Other studies in the professions defined an activity as deliberate practice according to additional specific criteria, including but not limited to: a) considered highly relevant to improving performance (Dunn & Shriner, 1999; Sonnentag & Kleine, 2000; van de Wiel et al.,

2004); b) practiced frequently (Dunn & Shriner, 1999) or regularly during daily work activities (Sonntag & Kleine, 2000); and c) required considerable effort to engage in and maintain over time (Dunn & Shriner, 1999). The 16 activities identified in this study varied in ratings of frequency, relevance and effort. Notwithstanding, on average, all of the 16 activities were engaged in with a modest to great degree of frequency (i.e., 1-2 times a year to always); were considered at least moderately relevant to extremely relevant to performance improvement, and required low-moderate to moderate degree of effort.

Figure 6 on the next page presents the sixteen activities in relation to the framework. The original intent of this study was to identify specific practice activities; i.e., the structure and components of specific practice exercises that speakers have used to refine their speaking skills. One can see in Figure 6 that some of the 16 activities that emerged in the study are not in and of themselves a practice exercise, but point to resources and environments that provide motivation and the means for speakers to work on skill improvement goals. In addition, some of the activities have to do with the adoption of attitudes that guide professional conduct more than they are exercises per se; namely, focusing on the audience, committing oneself to give 100% to the speech performance and striving to be authentic. In the next sub-section, the 16 activities are discussed, both in terms of how they fit into the deliberate practice framework and how they illustrate one of five deliberate practice themes that in professional speaking: community, attitudes, self-development and learning, experience and repetition, and self-monitoring and reflection.

# Deliberate Practice in Professional Speaking

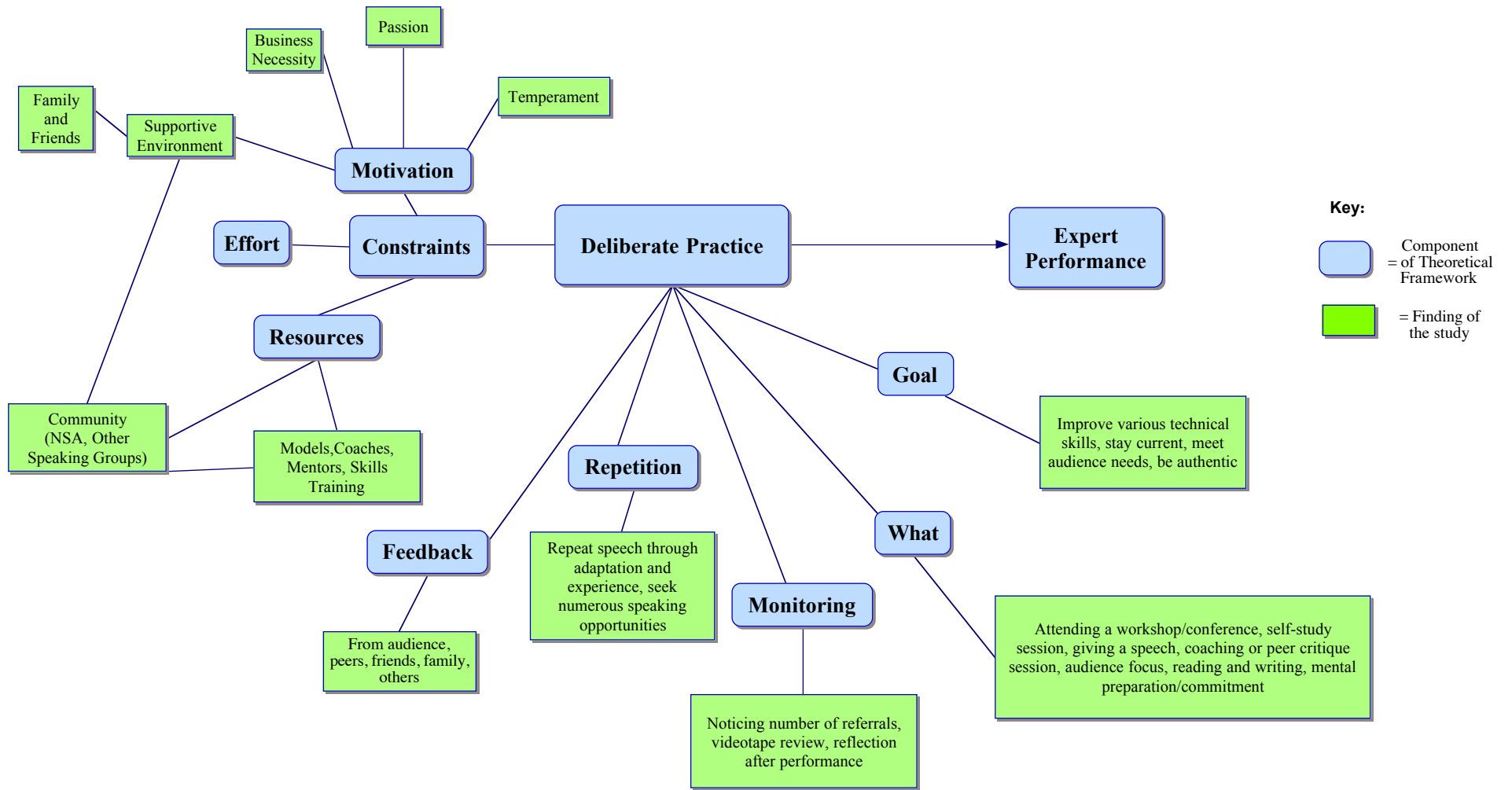


Figure 6. Deliberate Practice in Professional Speaking.

### *Five Deliberate Practice Themes*

#### *Community*

Participating in a community of like-minded professionals, such as the National Speakers Association, was the first deliberate practice theme identified in the study. Ericsson asserted that in order to engage in deliberate practice, individuals must overcome a resource constraint (Ericsson et al., 1993). In other words, deliberate practice engagement requires having the appropriate resources, whether it be training materials, equipment, or quality coaches and teachers. Being a part of a community of peers and professionals provided speakers with *access* to resources; e.g., mentors, models, coaches, and skills training that they may otherwise not have had if working in isolation. As a result of this community participation, speakers became motivated to improve their skills, aware of what they needed to work on, and informed of how to work on a particular improvement goal. Community thus appears to fit in the deliberate practice framework as a type of resource that facilitates deliberate practice engagement.

Community engagement in a professional field may be likened to athletes', musicians', and chess players' regular participation in competitions, tournaments and other practice events, insofar as participants are able to observe and learn from other performers in their fields. Previous deliberate practice studies in these domains have not discussed the significance of community, or social engagement in the field, as a component of an individual's skill development. This could be because these studies have focused more on deliberate practice activities per se, than the resources or environments that facilitate deliberate engagement. On the other hand, a professional

association like the NSA, is explicitly focused on providing training and networking opportunities to its members. Such opportunities may happen more fortuitously, or subsidiary to competition and performance assessment, at a swim meet, chess tournament, or music competition.

Membership in a professional association per se has not been previously mentioned in deliberate practice research in work contexts, although social interaction behaviors such as consulting peers and professionals has been identified as an important contributor to skill development. Dunn and Shriner (1999) found in their qualitative interviews with eight experienced teachers that talking with other teachers was valued as a source of ideas and feedback concerning students and teaching techniques. Dunn and Shriner also found that teachers perceived interaction with other teachers as highly relevant to improving teaching effectiveness, and not requiring effort. Because of the lack of effort required, which was a criteria for deliberate practice in the Dunn and Shriner study, the researchers refrained from calling discussions with teachers a deliberate practice activity per se.

Sonnentag and Kleine (2000) found that out of 100 insurance agents, 22 reported consulting colleagues and 8 reported consulting domain experts as activities they performed with the goal of competence improvement. The researchers defined a deliberate practice activity as one that is engaged in with the goal to improve competence and is performed at least once a week. With this latter criteria, consulting colleagues and consulting experts was found to be a deliberate practice activity for 11 and 5 out of the 100 insurance agents, respectively. Van de Wiel et al. (2004) found that asking

colleagues for advice was one of the activities engaged in by organizational consultants that most often constituted deliberate practice, and that talking with colleagues was one of the most important professional and skill development activities.

### *Attitudes*

Another theme that emerged as deliberate practice in professional speaking was the conscious adoption of specific attitudes that would guide one's conduct. The three attitudes were: audience focus, commitment, and seeking to be authentic.

Focusing on audience needs was a frequent goal that guided speaker's preparation activities. Meeting and exceeding audience or client expectations was often the goal or measure of a speaker's performance. Building rapport with the audience, whether it was by arriving early to a speech event to mingle with audience members, interviewing members of the audience before the speech to incorporate their stories in the presentation, or maintaining close contact with the client throughout the speech planning process, was a deliberate practice activity of experienced and elite professional speakers.

Audience focus in professional speakers is comparable to the finding by Dunn and Shriner (1999) that a goal for deliberate practice in teaching is not necessarily self-improvement but student learning. The researchers reasoned that improvements in teaching were directly related to improvements in student learning. Similarly, a professional speaker's success or effectiveness is directly related to audience satisfaction. Thus, it is understandable that one goal of deliberate practice in professional speaking would be meeting the audience's needs. Meeting audience expectations is, in a sense,

equivalent to aiming for the bullseye in dart-throwing, seeking to outwit an opponent in chess, or move an audience through a piano performance.

Commitment refers to the deliberate practice of speakers making a conscious decision before a speech to give 100% of themselves to a performance. Rather than having a lackadaisical attitude, or presuming the speech would go well because of previous experience, professional speakers made deliberate efforts to “stay fresh” and present their speeches as if it would be their last.

Authenticity, or being the same person on and off the platform, was also considered an ideal and objective for speakers. Any artifice in the speaker’s manner, or delivery of content that did not emerge from the speaker’s own practice and experience, would be detected by the audience and inhibit the speaker’s effectiveness. Authenticity was rooted in a belief that the most effective speakers are those who live their message or practice what they preach.

The conscious adoption of mindsets such as commitment and authenticity have not been mentioned in other studies of deliberate practice. Future studies might investigate whether expert performers deliberately adopt certain mental attitudes to enhance their performance or whether there are domain-related metaphysical ideals that performers strive towards in their efforts to improve or maintain their skills.

### *Self-development and Learning*

The next deliberate practice theme was self-development and learning. Because professional speakers are constantly searching for and developing material to speak on, several described themselves as continual learners. Most of the activities that fell under

this theme of self-development and learning comprise the “What” of deliberate practice in Figure 6. Attending workshops and conferences, hiring a coach, engaging in constant reading and writing, studying self-improvement literature are examples of ways speakers sought to keep their minds engaged and their speaking skills sharp.

These activities are comparable to the updating activities described by van de Wiel et al. (2004) in their study of 11 top and 10 experienced organizational consultants, which were reading the newspaper, reading professional literature, reading scientific literature, attending conferences, following a course, publishing books and articles. Of the six self-development activities, reading scientific literature was the one activity in which more top professionals reported engaging in compared to experienced professionals ( $p = .06$ ). These activities were all done by organizational consultants as a means to stay current in their profession. In the present study of professional speakers, staying current was one deliberate practice goal. Other self-development goals that guided deliberate practice engagement included improving various technical skills, such as storytelling, humor, or pacing.

#### *Experience and Repetition*

The fourth deliberate practice theme was experience and repetition. Gaining experience and seeking numerous speaking opportunities was valued for a few reasons. One, through experience, speakers could learn, initially whether they had what it took to succeed in the profession. Second, increasing experience was typically accompanied by increasing confidence. And third, through repeated experiences of giving different



versions of the same speech, speakers refined their delivery and honed their speaking craft.

The importance of gaining experience generally confirms the notion of the ten-year or 10,000 hour rule (Simon and Chase, 1973), upheld by Ericsson et al. (1993), that acquiring expertise in a domain requires at least ten years or the equivalent of training and experience. In the present study, speakers did not specify how many years of speaking experience were requisite to skill development. The emphasis was more on the importance of gaining experience to first test one's abilities, and then to develop and refine one's speaking skills and gain confidence.

One experienced speaker reported during the interview that when she was a novice, she was advised at an NSA chapter meeting to do 100 speeches, paid or unpaid, and track her performance. The purpose of that exercise was to help the novice speaker ascertain whether she liked the profession, had any ability for it, and the desire to continue in it. After three years of tracking, this particular speaker came to the conclusion, with encouragement from a peer, that she was fit for the profession. Her prior experience in broadcasting had likely contributed to her development as a speaker.

An elite speaker reported during the interview that he received the exclusive CPAE award for life-time achievement after only six years of entering the professional speaking business, at age 38. Before entering the field of professional speaking, however, this elite speaker had at least seven years of university teaching experience, which likely contributed to his skill development.

Related to gaining experience was the importance of having repeated speaking opportunities to refine their delivery skills. In the speaking profession, it is common practice for speakers to have prepared messages or bits of a presentation that are then tailored for different audiences. As a result, each time a speaker gives a speech, there are elements of repeating familiar material over and over again. By virtue of this repetition, speakers learn how to deliver their presentations with more confidence and authority, experiment with the effects of different nuances, such as placement of pauses, or changes in vocalics.

Ericsson et al. (1993) described deliberate practice as effortful activities that are well-defined tasks, at an appropriate level of difficulty for the learner, designed to improve performance, include feedback, and provide opportunities to repeat a task in order to correct errors. For a professional speaker, the very act of giving speeches fulfills these deliberate practice criteria. Although a speaker does not have the opportunity to start over when giving a live speech, the repetition and opportunity to correct mistakes comes in subsequent speaking engagements. Off-stage rehearsing and working with a coach were additional ways that some speakers engaged in deliberate practice and worked on skill development through repetition.

#### *Self-monitoring and Feedback*

The fifth deliberate practice theme was self-monitoring and feedback. Monitoring and feedback are explicit components of deliberate practice (Ericsson, et al., 1993). Speakers monitored their performance in a few ways: videotaping their speeches and reviewing them on occasion, reflecting on their speech performance after a presentation,

or noticing how many referrals they receive from a speech event. Regarding the latter method, some speakers reasoned that the number of referrals or repeat business was the strongest indicator of a job well done.

Feedback on performance was sought in a number of ways. Feedback from the audience was obtained through nonverbal feedback during a speech presentation, written evaluations, face to face feedback, and debriefing with the client after a presentation. Audience evaluations were generally treated with caution. In other words, speakers tended to give less weight to a single negative evaluation, and give more weight to a point of criticism when received by more than a few audience members.

Notwithstanding, some speakers had learned to persist to find a constructive point to grow from in mean-spirited comments. Some speakers also advised that audience feedback forms provided relative indicators of listeners' immediate reactions, rather than concrete data on the impact of a speech, or specific feedback that helped the speaker identify areas of improvement. Receiving feedback from the client was considered more reliable than audience feedback. The client was the person who had hired the speaker to accomplish a particular objective, and would thus be the person to best assess whether the speaker had achieved the desired outcome.

Feedback was also sought from peers, mentors or coaches in the speaking community. Speakers might invite their peers or mentors to sit in on a live speech, or send their peers or coach a video of their performance and request a critique. In addition to feedback from audience and peers, speakers also sought feedback from friends and family. When seeking feedback, speakers often had to encourage their sources to be

honest and constructive, as speakers recognized that people were typically reluctant to give anything but positive feedback.

Feedback was also identified as a deliberate practice activity by Sonnentag and Kleine (2000), who found that 20 out of 100 insurance agents reported seeking feedback from their supervisors at least once a week in order to improve their performance. In comparison, feedback from audience, family, friends and colleagues received average frequency rating from professional speakers of 3.78 (SD = 1.353), in which a rating of 3 meant 3-6 times a year, and 4 meant 7-12 times a year. This result was somewhat puzzling, as receiving feedback, particularly from the audience, would seem to be a practice that occurs each time a person gives a presentation. It is possible that since the questionnaire item lumped the different types of feedback together, non-verbal feedback from the audience was not a salient type of feedback in the participants' minds when responding. Another possibility is that the variance in the number and frequency of presentations in a given year across participants lowered the mean frequency for seeking feedback. The number of presentations given by participants in a typical year ranged from six to 200, with an average of 76.41, SD = 50.66.

#### *No Differences Found Between Groups on Study Variables*

This study found no significant differences between experienced and elite professional speakers in their deliberate practice behaviors, motivation for deliberate practice, and life satisfaction. With regard to the 16 deliberate practice activities, the present study found no group differences in frequency, relevance, or effort ratings. Previous studies that collected ratings from participants on relevance, effort, and

enjoyment observed no differences between accomplished and less accomplished groups (Ericsson et al., 1993; Duffy et al., 2004) In those same studies, however, group differences have been observed in the amount of time spent in deliberate practice activities. Additional studies in structured domains, in which there are concrete measures of performance, have found differences in amount of time spent on deliberate practice between expert and non-expert groups (Campitelli & Gobet, 2008; Charness et al., 2005; Duffy et al., 2004; Ford et al., 2009; McKinney and Davis, 2003).

Sonnentag and Kleine (2000) found that there was not one specific deliberate practice activity that was done by all insurance agents, but that individuals varied in the types of activities they engaged in as deliberate practice. Sonnentag and Kleine (2000) also found that current time spent on deliberate practice, measured by estimates of hours per week, was related to job performance, measured by supervisor ratings. The participants in the Sonnentag and Kleine (2000) study were controlled for years of professional experience and number of cases handled per day.

In another study by van de Wiel et al. (2004), top and experienced professionals in organizational consulting differed in the amount of time they spent on one out of nine deliberate practice activities, which was reading scientific literature ( $M = .55$ ,  $SD = .52$  for top professionals;  $M = .10$ ,  $SD = .32$  for experienced professionals,  $p = .06$ ). Top and experienced groups were controlled for years of experience and work environment.

The present study did not control for experience as was the case in other deliberate practice studies that compared elite and non-elite groups (de Bruin et al., 2008; Ford et al., 2009; Sonnentag & Kleine, 2000; van de Wiel et al., 2004; Ward et al., 2007).

On average, the elite professional speakers had significantly more years of speaking experience than the experienced speaker group ( $M = 34.90$  years,  $SD = 7.78$  vs.  $M = 22$  years,  $SD = 12.42$ ;  $p = .01$ ). Elites on average also commenced NSA membership at 33 years of age. Experienced speakers' average age when joining NSA was 43; 8.3 years later than elites ( $p < .05$ ). Average years of NSA membership for elites was 29.88 and 10.33 years for experienced speakers. Thus, the finding that there was no difference between the elite and experienced group in their frequency ratings for the 16 deliberate practice activities does not necessarily negate previous research that found group differences in amount of time spent on deliberate practice between comparable elite and non-elite groups. Moreover, aforementioned weaknesses in the questionnaire design may have hindered detection of differences between the elite and experienced groups.

#### *Motivational Factors*

This study identified four motivational factors that appear to support deliberate practice engagement among professional speakers: passion, temperament, supportive environment, and practical necessity.

Passion for their craft or speaking topic may be closely related to the construct of passion articulated by Vallerand et al. (2007) as “a strong inclination toward an activity that individuals like (or even love), that they find important, in which they invest time and energy...and which comes to be internalized in one's identity.” Engaging in activities for which one has a passion promotes feelings of autonomy, competence and connection to significant others.

The degree to which participants had internalized their roles as professional speakers into their identity was not directly examined. Notwithstanding, there was a sense during the interviews that such internalization was actual but negotiated and balanced. The negotiation and balancing act of their identities as speakers may be necessary because the speaking industry is risky and unstable. A speaker's ego and perception of competence may be highly affected by the ups and downs of the business. Difficult seasons of little to no business can rattle a speaker's confidence.

Thus, the internalization of the role of speaker into one's identity may be connected to continued success and favorable circumstances. Several of the experienced speakers, for example, mentioned being accepted into professional membership at NSA as a milestone in their development; an event that signified their legitimacy as successful professional speakers. Elite speakers mentioned their entry into the Speaker's Hall of Fame, and their being asked to speak at the Million Dollar Roundtable, a prestigious speaking gig, as milestones that established them in their careers. These measures of success and recognition undergird a speaker's confidence and promote the internalization of their roles as professional speakers into their identities.

On the other hand, in order to protect ego and identity from becoming overly inflated from success or devastatingly low from a business lull, speakers relied on supportive family and friends outside the business to keep their role-management and identities in check. One of the elite speakers remarked that he had come to see himself not as a speaker, but as a teacher, and that speaking was just one channel to deliver information, whereas books and video were other channels. This speaker, interestingly,

had negotiated his identity while concomitantly adapting and diversifying his professional role and business model.

Temperament and supportive environment were discussed by Ericsson et al. (1993) as likely sources of motivation in the lives of international-level performers in music. Parents played a key role in noticing a child's interest and signs of promise in a domain, and providing structure for the child to maintain a regular and consistent schedule of practice. "The social reactions of parents and other individuals in the immediate environment must be very important in establishing this original motivation" (Ericsson et al., 1993). Similarly, among the professional speakers, speakers attributed their motivation to any one or combination of the following elements in their temperament or environment: work ethic endowed to them by their parental upbringing, modeling and coaching of first parents and then their peers, an inner drive for success, or the presence of supportive family and friends.

What stood out among the comments of speakers was that the presence of supportive family and friends was important not as a source of positive social reactions for the speakers' abilities, but rather a source of perspective, to keep speakers' egos in check. In other words, speakers often risked becoming inflated by the praise and feedback of their audience, and relied on family and friends outside of the industry to remind them of their mortality, and to keep their roles as speakers in perspective and in balance with other areas of their lives.

Practical necessity as a motivator to engage in deliberate practice has not previously been mentioned in the literature on deliberate practice. Practical necessity, in



this case, referred to the the speaker's need for ongoing business and referrals in order to survive economically. The lack of a regular pay check, and the corresponding need to attract business through speaking excellence was a motivator to some extent for all but one of the speakers who participated in the study. The dependence of regular income on the speaker's performance is perhaps a unique constraint in the field of professional speaking that is not particularly salient in other domains in which deliberate practice has been previously examined. Ericsson et al. (1993) distinguished deliberate practice from work activity, but in professional speaking, the two may overlap. Thus, financial reward, which is associated with work, is also a reward for deliberate practice in the field of speaking.

The three previous studies on deliberate practice in professional contexts (Dunn and Shriner, 1999; Sonnentag & Kleine, 2000; van de Wiel et al., 2004) did not investigate sources of motivation for deliberate practice engagement. Arguably, teachers, insurance sales agents, and organizational consultants who are employed by a school or company, and thus receive regular paychecks, may not feel the pressure of financial survival as keenly as professional speakers who are self-employed. Notwithstanding, future studies in similar work contexts might examine the role of equivalent necessities and rewards, such as tenure in teaching, promotion in insurance sales and consulting, or retaining employment, as motivators for deliberate practice.

One might observe that the dual presence of practical necessity and passion as motivators for deliberate practice appears contradictory. That is, if a person is passionate for the activity of speaking, would that not be independent of financial gain? It is likely

that identifying sources of motivation for deliberate practice, at least in professional speaking, is not an either-or issue. Speakers may be conscious of passion as their dominant source of motivation, and other speakers may be more conscious of business survival as their source of motivation, while not denying a passion for speaking. Both may be present, along with other sources of motivation mentioned earlier, which are supportive environment, and temperament. Vallerand et al. (2007) found that harmonious and obsessive passion had a moderately strong relationship ( $r = .41, p < .001, n = 143$ ). Thus, the two types of passion were not diametrically opposed. Analogically, two different motivators may not be mutually exclusive.

#### *Instrument*

This study generated an instrument with strong reliability measures that may form the basis of a deliberate practice scale in professional speaking. The instrument items measuring frequency, relevance and effort for 16 deliberate practice activities in speaking had high Cronbach alpha reliability coefficients ( $r = .85, .86, .84$ , respectively). Future instruments may focus on frequency and effort of engagement for the sixteen activities, and leave out the relevance scale. The sixteen items emerged from interview responses to the question of what speakers do in order to improve their speaking skills. Thus, asking speakers to rate the items for relevance to skill improvement in the questionnaire instrument was intended to provide some validity to the activities that were elicited in the interview responses. The frequency and relevance scales correlated high using Kendall's tau, which suggests the two scales were measuring the same or similar phenomenon.

The relevance scale may be replaced by items that measure duration of activities. Examples of duration questions might be “How many hours per month do you spend participating in NSA-related activities?” “How many hours would you spend with a coach in a typical session?” “How many hours per week do you engage in reading or self-study?” “How long is a typical session in which you review videos of your speeches?” Thus, a revised instrument for measuring deliberate practice in professional speaking might include frequency, duration and effort scales.

#### Implications for Research and Pedagogy

The present study raises several questions that may be examined in future research and practical implications for the teaching of public speaking. One, future research on deliberate practice might examine the ways individuals first overcome the resources, motivation and effort constraints in order to engage in deliberate practice. Deliberate practice is an optimistic theory insofar as it suggests that virtually any hard-working individual, given enough determination and access to training resources, can over time develop and reach levels of excellence and eminence in their fields compared to their counterparts, who are equal to them on all counts but diligence. The theory has been and will continue to be challenged for its reductionist view by those who assert that other factors, such as talent, or working memory capacity, explain differences in achievement beyond hours of deliberate practice.

Having said that, deliberate practice cannot benefit those who are not able to engage in it. While prior research has emphasized the ‘what’ and ‘how much’ of deliberate practice, what has received less attention is the ‘how’ of deliberate practice;

that is, how do individuals negotiate the need for motivation, access to resources, and maintaining levels of effort to engage in deliberate practice? The present study found that membership in a professional association was a key part of a speakers' development and success. It appeared that the association provided its members with training materials, workshops, models, coaches, networking opportunities, that accelerated speakers' learning and fueled their motivation for continued improvement. The professional association in and of itself was not deliberate practice, but the association provided the environment and structure in which deliberate practice could take place. Research on the channels through which individuals have accessed training, coaching, mentoring and the ways individuals have maintained their motivation and effort levels for deliberate practice, may be very instructive to those who are interested or involved in training and education in various fields. Moreover, it is possible that qualitative methods may be more effective to elicit from successful performers the diverse ways they have negotiated these constraints and challenges than structured and quantitative methods.

Second, this study found that speakers were motivated by a variety and combination of factors, including passion, temperament, supportive environment and practical necessity. Future research may focus on the role of passion in professional speaking performance, applying the work of Vallerand et al. (2007), and building upon the findings of the present study. Vallerand et al. (2007) created a simple instrument to measure deliberate practice in dramatic arts, based upon the three most frequently reported activities by teachers, students, and actors on the question of what activities were engaged in during free time in order to seek performance improvement. The present

study identified 16 activities that speakers engaged in for the purpose of performance improvement; the activities that received the three highest ratings for frequency of engagement were: commitment to give 100% ( $M= 6.83$ ,  $SD=.383$ ), authenticity ( $M = 6.67$ ,  $SD=.594$ ), and focus on the audience ( $M = 6.22$ ,  $SD=1.263$ ). Subsequent studies could use a similar instrument used by Vallerand, adapted for professional speaking using the three top deliberate practice activities. Alternatively, all sixteen activities could be included in the instrument to get a more complete survey and measure of deliberate practice engagement.

Measures of harmonious and obsessive passion could be obtained using Vallerand's Passion scale (Vallerand et al., 2003). Additionally, measurements for sense of identity derived from speaking may be obtained using an instrument similar to that used by Vallerand et al. (2003) and Mageau et al. (2009). That instrument involved presenting seven pairs of VENN diagrams, with two circles, one representing "ME" and the other representing "ACTIVITY". Each VENN diagram differed in the amount of overlap that was shared, from the first pair of circles having no overlap, to the last pair of circles overlapping 100%. Participants were asked to select the VENN-diagram that most accurately reflected the importance of the activity in relation to themselves, and to estimate the degree to which the activity defined their identities.

In addition to investigating the role of passion as a source of motivation in professional speaking, future research might explore the role of practical necessity, i.e., financial survival, continued employment, or promotion in motivation for deliberate practice in the various professions. Ericsson's theory emerged out of a study of

competitive musicians and athletes (Ericsson et al., 1993), in which deliberate practice was associated with performance improvement, and disassociated with financial gain. Notwithstanding, Ericsson and other studies on deliberate practice in competitive fields such as sports, chess, and music, have not explored whether gaining titles or even monetary prizes, if applicable, was a source of motivation. Such explorations may shed more light on a binary view that a person is either motivated by desire for mastery and intrinsic enjoyment, or by performance avoidance and external reward. Motivation may be more complex and different types of motivations may coexist.

Third, future studies on deliberate practice in professional speaking may build upon the design of the present study in the following ways: a) measurements on the cumulative or current time speakers spend on deliberate practice activities may be obtained; b) years of experience in speaking may be controlled in order to better compare elite and experienced speakers' engagement in deliberate practice; and c) structured interviews may be administered over the phone in order to enhance the clarity of the questions and the uniformity of interpretation of the questions across all respondents.

Fourth, the present study provides ideas for public speaking classroom interventions adapted from the deliberate practice behaviors of professionals that can be tested in the public speaking classroom. Not all the deliberate practice activities of professional speakers identified in the study may be directly suitable for the novice learner in a basic oral communication class. For example, joining a professional association or hiring a professional coach--insofar as these activities are typically engaged in voluntarily by those who have already achieved a level of proficiency and are

self-motivated to develop their speaking skills--- may be neither feasible nor appropriate for a student whose primary motive for taking the public speaking class is to fulfill a course requirement. However, there may be some skill-appropriate versions of these deliberate practice supports and activities that might enhance learning and motivation in the classroom.

For example, does dedicating more instructional time to individual student coaching and video playback result in higher speech performance scores and increased motivation? As a speech teacher, it has been my observation that instructor feedback for a student speech performance is typically given orally or in writing after the speech, with little or no opportunity for the student to repeat the speech to address target areas of improvement. One possible intervention would be to devote five to ten minutes immediately after a student gives a presentation to give oral feedback and then have the student re-present a specific portion of the speech in order to engage in targeted practice for one or two specific skills. For example, if the student had weak eye contact or delivered the opening line of the presentation by reading, the instructor might ask the student to repeat just the introduction in front of the class, and focus on giving strong eye contact to the audience during the opening line. The reason for limiting the intervention to five or ten minutes is in consideration for the class time available, as well as the comfort level of students, who may prefer to be done with their speech rather than engage in more practice afterward.

Another intervention that may be tested is the use of video playback in giving oral feedback to students. Optimally, the instructor would have an individual conference with

each student and playback portions of the student's speech video. The instructor could then point out one or two areas for improvement, and have the student stand up and practice portions of the speech targeting those areas. This conference session with the student may be videotaped in order for the student to have an audio-visual record of the topics covered, and the results of the practice.

Another deliberate practice intervention that may be tested in the classroom is the formation of peer practice groups and assigning these groups to meet outside of class twice a month during the semester to practice their speaking skills. Participating in peer speaking groups, referred to as Mastermind groups, or meetings such as Toastmasters, in which speakers met on a regular basis to practice their skills in a smaller group setting, was considered relevant to skill improvement by the subjects in the present study. Smith and Frymier (2006) found that public speaking students who practiced in front of an audience received higher speech grades than those who did not. Moreover, the researchers also found that the size of the practice audience also made a difference; practicing a speech with an audience of four or more people resulted in significantly higher speech scores than practicing with an audience of one to three people ( $t [28.63] = 2.55, p < .005$ ). In view of Smith and Frymier's (2006) research and the finding regarding peer speaking groups in this study, the formation of student peer practice groups comprised of four to five students may result in better speech grades and student perceptions of increased skill development in speaking.

Another deliberate practice intervention that might be examined is introducing the concept of authenticity to students. Authenticity, or being the same person on stage as off



the stage, was a highly valued concept to the subjects in the study. Related to authenticity was the notion of being true to oneself, to live in a manner that was consistent with one's message; to walk one's talk. Authenticity also was associated with the ability to *not* focus on one's delivery, which might produce an artificiality, but rather focus on connecting with the audience. Authenticity is distinct from the concept of credibility, which is an Aristotelian concept taught in public speaking courses. Credibility is defined as the audience's perception of the speaker's competence, sincerity and trustworthiness. Whereas credibility has to do with the audience's perception of the speaker, the NSA members' concept of authenticity has to do with a speaker's actual integrity, defined by the degree to which the speaker's message is consistent with the speaker's private practice. Would students who are introduced to the concept of authenticity and are encouraged to be themselves when delivering their speeches perform better than students who do not receive such an intervention?

These are some ideas of how researchers can adapt deliberate practice activities of professionals for novice speakers, and conduct experimental or quasi-experimental studies that investigate whether any significant gains in performance and motivation can be observed among students from these interventions.

In addition to presenting ideas for future research in deliberate practice and public speaking pedagogy, the findings of this study confirm the value of at least four instructional approaches that may currently exist in basic and advanced public speaking courses:

*Providing appropriate models of effective speakers.* For participants in the study, observing other performers and speakers was frequently mentioned as an activity that contributed to learning, skill development, and motivation. Modeling of effective and ineffective speaking techniques was provided at conferences, workshops and meetings. In a speech class, such modeling is provided by the instructor, peers, and can also be encouraged through assignments that require students to watch speeches online, or at live events outside the classroom.

*Videotaping student speeches for review.* Watching themselves on video in order to monitor and reflect on their performance was a deliberate practice activity for several professional speakers in this study. Videotaping student speeches and assigning students to review their recorded speech performance is one way speech teachers provide opportunities for student self-critique and reflection. As mentioned above in the discussion of potential deliberate practice interventions, meeting with students one-on-one to review portions of their video is another activity through which the instructor can provide feedback, identify practice goals, and facilitate speaking exercises with their students to develop their speaking competence.

*Providing instructor and audience feedback.* Feedback from the audience, peers, coaches and others was a deliberate practice activity for professional speakers. Providing feedback to students on their speech performances is a routine practice in public speaking classes. Giving opportunities for the class audience to provide oral or written feedback to student speakers may also be considered a suitable form of deliberate practice in the classroom. Students may need training and modeling from the instructor, however, on

how to give appropriate, concrete and constructive feedback to one another. The instructor may give a copy of his or her rubric to the class, play a video of a speech, and conduct a think-aloud assessment, using the rubric, to help the students learn to identify weaknesses and strengths of a speech according to observable, concrete criteria.

*Teaching audience analysis.* Audience-centeredness was the second highest-ranked activity for frequency of engagement and relevance to skill improvement by subjects in the present study. Audience-centeredness referred to focusing on the needs of the audience or client, and customizing a speech so that the language, style and content would appeal to and be inclusive of the specific audience. These behaviors correspond to what is referred to in public speaking textbooks as audience analysis, which is part of the speech planning process. Insofar as audience-centeredness was identified by professional speakers as a key practice that leads to improved performance, the teaching of audience analysis should continue to be emphasized when teaching speech planning to novice speakers.

### Conclusion

Overall, this study found deliberate practice was a useful framework to understand the behaviors professional speakers engage in to develop and maintain speaking expertise. The present study may be considered a first step to identifying and describing some deliberate practice activities of professional public speakers and the motivational factors that support their deliberate practice engagement. Although no differences were found between the elite and experienced groups, future research may improve the design of the study to obtain more comparable groups that are equivalent in

experience, and elicit more concrete data on the duration of time spent on deliberate practice activities. By identifying several deliberate practice activities of professionals, this study offered instructors of the undergraduate course in public speaking ideas for activities that can be adapted for novice speakers, and tested as an intervention by researchers. This study also confirmed the value of teaching methods, such as videotaping speeches, providing opportunities for reflection, and emphasizing audience analysis in speech preparation, as similar to, if not consistent with, the deliberate practice strategies of professional speakers in the real world.

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## APPENDIX A:

## Final Interview Guide

## Intro:

Thank you again for participating in this study. Would you like to ask me any questions at this time?

## Questions:

1. Can you tell me how you became a public speaker? (when?)
2. What do you consider to be milestones in your development as a speaker?
3. What are some things you have worked on to improve your speaking performance?  
How did you do this?
4. What motivated you to do this?
5. What's the most difficult thing you have worked on?
6. In what ways do you seek feedback on your performance?
7. Who or what has most influenced you to pursue excellence in your speaking skills?
8. What are things you do regularly and consciously in order to maintain or improve your speaking skills?\*

## Demographic information:

- 1) Would you please tell me your age group? (30-39, 40-49, 50-59, 60-69, 70-79, 80+, no comment)
- 2) Ethnicity/race? (White, African American, Hispanic, Asian, Other)

## Debrief:

Do you have any final thoughts you'd like to share before we end?

Thank you so much for your time and participation. I will be following up with you in a month or two with a brief questionnaire. I will also send you a brief report when the study is completed. Feel free to contact me if you have any questions or concerns.

(End of Interview Guide).

\* This question was added after the ninth interview.

## APPENDIX B:

## Protection for Human Subjects

The participants in the study will be informed in writing and verbally at the beginning of the interview of the following:

1. Names of participants will remain anonymous through the use of pseudonyms or identifiers such as Speaker 1.
2. Interview responses will be recorded and transcribed. The interviews will be recorded by the researcher in mp3 format using \_\_\_\_\_. The data will be sent to a professional transcribing service. For the purpose of readability and efficiency, the data will be transcribed at a level of detail that will seek to accurately preserve the meaning and content of the data without including false starts and excessive uhs. The researcher will periodically review a sample of the transcripts to gauge the accuracy and acceptability of the transcriptions.
3. Interview transcripts will be analyzed and used only for the purpose of the study. Interview data will not otherwise be distributed without consent of the participant.
4. Interview data will be stored electronically in a password-protected area. Data will only be accessible to the researcher and her research oversight committee.
5. Follow-up questionnaires will be administered to participants after interview data is analyzed. Participants will be notified via phone or email when the questionnaire is ready for their completion. Questionnaires may be completed online or via phone and will take participants no longer than 10 minutes to complete.
6. Participants may choose to withdraw from the study at any point; including before, during and after the interview.
7. Participants will receive an executive summary of the research findings when available.

## APPENDIX C:

## Text of Email Invitation to Potential Research Participants

## I. Elite Group

Dear \_\_\_\_\_. I am a doctoral student at the University of San Francisco School of Education. I am conducting a study on how expert public speakers develop mastery in elocution and what motivates them to do this. This study has been approved by the National Speakers Association. I was referred to you by \_\_\_\_\_. Would you be willing to participate in a 30-40 minute phone interview sometime at your convenience in June or July? If you are available to participate, I will follow-up to give you a bit more information and schedule the interview. Thank you so much for your consideration. Please feel free to ask me any questions.

Helen Lie  
 Doctoral Student, University of San Francisco  
 School of Education, Learning and Instruction  
 and Adjunct Instructor, Public Speaking  
 Department of Rhetoric and Language

## II. Experienced Group

Dear \_\_\_\_\_:

I am a doctoral student at the University of San Francisco School of Education. I am conducting a study on how professional public speakers develop mastery in their speaking craft and what motivates them to do this. The National Speakers Association has approved this study, the results of which will be shared with public speaking instructors and help enhance public speaking instruction at the college level. I am hoping to interview 10-20 professional speakers who have a minimum of ten years of experience. Your name was randomly selected from the NSA member directory. Would you be willing to participate and share your insights in a 30-40 minute phone interview at a time of your convenience in July? If yes, I will follow-up to give you a bit more information and schedule the interview. Thank you so much for your consideration.

Helen Lie  
 Doctoral Student, University of San Francisco  
 School of Education, Learning and Instruction  
 and Adjunct Instructor, Public Speaking  
 Department of Rhetoric and Language

APPENDIX D:  
The Questionnaire

# Expertise Development and Motivation in Professional Speaking

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## Introduction

This questionnaire is a follow-up to the interview portion of the study on skill development and motivation in professional speaking. A preliminary analysis of the interview data with 22 professional speakers has revealed 16 activities or behaviors that were more frequently mentioned as important to developing and maintaining excellence in speaking.

The purpose of the questionnaire is to confirm what activities professional speakers may engage in to develop their speaking skills. The questionnaire will also be used to assess how often speakers engage in the activities, and speakers' perceptions of how much effort is required, and how relevant the activities are to his or her own speaking effectiveness. In addition, this questionnaire seeks to identify what are speakers' primary reasons for participating in skill development activities, and the degree of life satisfaction experienced by professional speakers who engage in these activities.

There are four sections to this questionnaire, and a total of 10 questions. Some of the questions have multiple parts. Except for the last three short answer questions, all the questions in this survey are ranking questions. It should take you no longer than 15 minutes to complete.

Your completing this questionnaire is very much appreciated. As a reminder, your identity will remain anonymous in the reporting of the questionnaire results. Please be open and honest in your responses. If you have any questions or concerns about any of the items, please feel free to call Helen Lie Piserchio at 650-201-8693, or email her at [hlpiserchio@usfca.edu](mailto:hlpiserchio@usfca.edu).

Your timely completion of this survey would be very much appreciated. The deadline is September 6, 2011.

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# Expertise Development and Motivation in Professional Speaking

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## Part 1: Frequency of Skill Development Activities

This section lists 16 activities or behaviors that you may have participated in to improve your performance as a professional speaker. For ease of formatting, I have grouped the 16 activities into 3 clusters.

For each cluster, please indicate HOW OFTEN you participated in each activity on average during a typical year when you were MOST engaged in professional speaking.

You will notice the wording of the response options are slightly different for each cluster to suit the nature of the activities in that group.

### 1. Cluster 1. Please indicate how often you engaged in each activity during a typical year when you were most engaged in professional speaking.

	Never	Once in a while	Monthly	Weekly	Daily
Seek as many speaking opportunities as I could (paid or unpaid).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Read and study to stay current and fresh.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spend time writing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 2. Cluster 2 - Please indicate how often you engaged in each activity during a typical year when you were most engaged in professional speaking.

	Never	1-2 times a year	3-6 times a year	7-12 times a year	More than 12 times a year
Participate in NSA conventions, workshops, chapter meetings, tele-seminars, and/or other NSA activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attend other speaking group meetings (e.g., Mastermind, Speakers Roundtable, Toastmasters, etc.), to practice speaking and	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

receive critique from colleagues.

Meet with a mentor.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Meet with a coach (e.g., speaking, business, executive, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seek helpful feedback from audience, client, family, friends, and/or other speakers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Watch myself on video and self-critique or ask others to critique my video.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Observe other performers (e.g., athletes, musicians, actors, or other professionals in performance-related fields).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**3. Cluster 3- Please indicate how often you engaged in each activity during a typical year when you were most engaged in professional speaking.**

	Never	Seldom	Occasionally	Somewhat often	Often	Very often	Always
Rehearse portion(s) of my speech out loud.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Focus on client or audience needs as opposed to myself when preparing and delivering a speech.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pay attention to little things that make a difference in a speech (e.g., a pause, gesture, inflection, eye contact).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reflect on what	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

worked or didn't work  
after a speech.

Make a commitment to  
give 100% when I  
speak (i.e., not hold  
back, give my all).

Seek to be the same  
person on the platform  
as I am off the  
platform.

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## Part 2: Relevance of and Effort Required to Engage in Activities

The purpose of this section is to find out how RELEVANT you think each of the activities you looked at in the prior section was to increasing your level of speaking performance, and how much EFFORT you think was required to engage in the activity. If you did not engage in a particular activity, select the N/A response.

### 4. Please indicate how relevant you think each of the following activities was to improving your speaking skills during a typical year when you were most engaged in professional speaking:

	Irrelevant		Moderately Relevant		Extremely Relevant	N/A
Participating in NSA meetings, conventions, and other NSA activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attending other speaker group meetings to practice and receive critique.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Meeting with a mentor.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Meeting with a coach.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seeking as many speaking opportunities as possible (paid or unpaid).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rehearsing portions of my speech(es) out loud.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reading and studying to stay current and fresh.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Watching and critiquing myself on video or asking others to critique my video.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seeking Feedback from audience/client/family/friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reflecting on what worked or didn't work after a speech.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spending time writing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Observing other performers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Focusing on client/audience needs instead of on myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Paying attention to the little things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Committing to give 100% to each speech performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seeking to be the same person on the platform as I am off the platform.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**5. Now indicate how much effort (i.e., concentration, self-discipline) was required of you to engage in each activity during a typical year when you were most engaged in professional speaking.**

	No Effort	Minimal Effort	Moderate Effort	Very Effortful	Extremely Effortful
Attending NSA meetings, conventions, and other NSA-related activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attending other speaker group meetings to practice and receive critique.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Meeting with a mentor.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Meeting with a coach.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seeking as many speaking opportunities as possible (paid or unpaid.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rehearsing portions of my speech out loud.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reading and studying to stay current and fresh.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Watching and critiquing myself on					

video or asking others to critique my video.

Seeking feedback from the audience, client, friends, or family

Reflecting on what worked or didn't work after a speech.

Spending time writing.

Observing other performers.

Focusing on client or audience needs rather than on myself.

Paying attention to the little things

Committing to give my 100% when delivering a speech.

Seeking to be the same person on and off the platform.

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# Expertise Development and Motivation in Professional Speaking

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## Part 3: Motivation for Engaging in Skill Development Activities

The purpose of this section is to identify what are the primary factors that may motivate professional speakers to engage in skill development activities.

**6. Please indicate the degree to which you would agree that each factor below is what motivated you to engage in activities that would improve your speaking performance during a typical year when you were MOST engaged in professional speaking.**

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Disagree nor Agree	Slightly Agree	Moderately Agree	Strongly Agree
My inner drive for success	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My upbringing and/or the influence of family or close friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The need to build and maintain business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My passion for my topic or craft	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My desire to help people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My sense of spiritual calling/fulfilling my purpose	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The desire to avoid failure or disappointing people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My respect for the audience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Receiving positive feedback from the audience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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## Part 4: Life Satisfaction Survey

The purpose of this section is to gather information about how fulfilled professional speakers feel in their lives, and how that might relate to motivation and their engagement in skill enhancing activities.

**7. Please indicate the degree to which you agree or disagree with each of the following statements below. Your honesty and openness in responding is appreciated.**

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Disagree nor Agree	Slightly Agree	Moderately Agree	Strongly Agree
In general, my life corresponds closely to my ideals and values.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My living conditions are excellent.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Up to now, I have obtained important things I wanted in life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I could start my life over, I would hardly change a thing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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### Part 5: Three Quick Short Answer Questions

The information you provide in this final section is important to give a sense of the average level of intensity in speaking-related activities for the study participants.

**8. How old were you when you became an NSA member?**

**9. How many years total have you been an active NSA member?**

**10. Approximately how many times did you give a speech or presentation (paid or unpaid) in a typical year when you were most engaged in professional speaking?**

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THANK YOU for completing the questionnaire!!

The generosity of your contribution in time and attention is appreciated. The researcher will be in touch with you in the coming months to share with you the results of this study.

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APPENDIX E:

Table of Units from Preliminary Interview Data Analysis

UNITS	Group 1 Speakers who mentioned Units										TOTAL positives out of 10 Group 1	Examples/Description	
	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10			
<b>Become a member and participate in NSA Activities</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		10	Attending conferences, workshops, chapter meetings, conference calls, teleseminars. Having role models, community, resources, learning techniques, peer critique, analyzing and observing other speakers. Includes learning what doesn't work as well as what works.
<b>Have additional venues to practice, observe, receive feedback</b>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	4	Toastmasters, Dale Carnegie, Kiwanis, Lions, Chambers of Commerce, speaking classes, Mastermind groups, Speakers Roundtable
<b>Focus on connecting with the Audience/Client</b>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		7	Referred to as customization, knowing the audience, tailoring presentation to the audience's need, working with the client to make sure the speaker understands the audience's needs. May also include the following: focusing speaking purpose on the audience, not oneself; getting ego out of the speech, and building rapport with audience before the speech.
<b>Get a coach</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N		<input checked="" type="checkbox"/>			N	6	Could be a speech coach, a voice coach, tech advisor, humor coach, business coach.
<b>Have or get a mentor</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									3	Someone who believes in you, inspires you, encourages you, provides practical guidance and advice.
<b>Get experience; speak often</b>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	7	Get mileage, practice shows you what you need to do, the more you get out there, the better you become. Practice may be any leadership position, performance experience, or getting in front of people. You grow the longer you do it. Gives confidence.

UNITS	Group 1 Speakers who mentioned Units										TOTAL positives out of 10 Group 1	Examples/Description
	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10		
<b>Reading and self-study to stay current and fresh</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	8	Constant, avid reading of any materials (newspapers, books, magazines, internet articles) to get ideas, give added credibility to old ideas, be up on world events, and keep content fresh, accurate. May include industry research and listening to tapes, CD's self-development/business books. Typically distributed by the professional association, but may include other materials related to the speaker's area of interest.
<b>Make a commitment to give 100%</b>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	5	Say to yourself, "This is going to be the best one yet." An emotional commitment not to hold back. Also referred to as "stop thinking about delivery"-- in order to be fully present.
<b>Be Authentic</b>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	7	Learn what works for you, be who you are, have congruence, speak from your heart, tell your story/truth, be comfortable in your own skin.
<b>Watch myself on video</b>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>					4	May be with or without a coach, ask colleagues for critique
<b>Pay Attention to Feedback from the Audience</b>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		5	Nonverbal feedback during speech, audience evaluations, verbal feedback from audience members after speech. Numeric ratings are less helpful (1.1, 1.2, 1.8)
<b>Get Feedback from the Client</b>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			4	Described as most important. The client is the person who hired the speaker. Did the speaker fulfill the job for which he/she was hired?

UNITS	Group 1 Speakers who mentioned Units										TOTAL positives out of 10 Group 1	Examples/Description
	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10		
<b>Microdot matters</b>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	4	Little tweaks in timing, wording, movement can make a big difference. The expert speaker recognizes the little things that make a difference. Learning to pay attention to little things helps gather new insights and fresh stories.
<b>Get Feedback from other speakers, friends, family</b>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			3	This may include asking a speaker/friend/family member to sit in live on a speech, or watch a video of the speech and give feedback
<b>Pay attention to repeat business/referrals as feedback</b>										<input checked="" type="checkbox"/>	1	The ultimate form of feedback (2.10), I'm going to trust that reality (1.10). Do they come back to me for more (products?) (2.12)
<b>Reflect on what worked, what didn't work after a speech</b>											0	
<b>Write regularly</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>			3	Could be writing a blog, article, tweet, newsletter, jokes, or working on a book. Writing is for the purpose of developing content and expertise.
<b>Publishing a book</b>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>			3	Gives you a platform to speak
<b>Learn by observing other performers</b>					<input checked="" type="checkbox"/>						1	May be Broadway performers, athletes, musicians, comics; anyone who does something with excellence.
<b>Rehearse</b>	<input checked="" type="checkbox"/>										1	Especially new bits, new material, techniques
<b>Motivated by inner drive to succeed, learn</b>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	8	Constant attitude of seeking continuous improvement, being a lifelong learner, to be the best, avoid boredom, putting oneself in an uncomfortable situation.
<b>Motivated by passion for topic /craft</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				5	Love for what you do

UNITS	Group 1 Speakers who mentioned Units										TOTAL positives out of 10 Group 1	Examples/Description
	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10		
Motivated by upbringing/close relatives	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		5	Instilled work ethic or influence from mother, father, family, desire to make parents proud, or the ability of family and childhood friends to keep the speaker grounded
Motivated by desire to help people		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5	Feeling of making a difference, having an impact, influencing others. May include a sense of fulfilling one's purpose or divine calling.
Motivated by observing other speakers						<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			2	Watching other speakers inspires, also involves analyzing what and why something works in a speech.
Motivated by business		<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			3	Need to grow business, this is one's living, the field is competitive. Entrepreneurial bent.
Motivated by desire to avoid failure on the platform											0	"I don't want to suck", not wanting to let anyone down, prove someone wrong who said he/she could not communicate.
Motivated by respect for the audience	<input checked="" type="checkbox"/>										1	Valuing the audience's time.
Motivated by positive feedback of audience		<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>				2	Receiving favorable responses from the audience, described as a self-reinforcing loop.
<b>OTHER UNITS</b>												
Early engagement	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		6	There were early experiences or exposure to performance and speaking that left an impression--as early as elementary school. Examples are involvement in 4H club, debate teams, church youth activities, high school improv, theatre groups; or having speaking or storytelling modeled in environment.
Learning to turn nervousness into excitement	<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>			2	

UNITS	Group 1 Speakers who mentioned Units										TOTAL positives out of 10 Group 1	Examples/Description
	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10		
Learning acting skills				<input checked="" type="checkbox"/>							1	Use of voice, staging, movement, pausing, performance skills from the perspective of acting
Learning and working on the business side of speaking	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			3	Learning how to sell, marketing in order to have opportunities to speak. When to raise speaking fees, handling various business situations. Dealing with the ups and downs of the business. Learning may occur by getting coaching, or through networking/colleagues.
Challenge oneself out of comfort zone											0	May involve speaking to new or challenging groups, allowing yourself to be uncomfortable.
Studied comedy/humor	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>							2	How to incorporate more humor into speaking, or telling jokes
Communicating cross-culturally							<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		2	Working with multiple translators when speaking; learning appropriate language choice when speaking across nationalities or cultures
Self-care											0	Getting exercise, personal grooming, maintaining health, proper hydration, etc. Speaker's health is critical to job. Maintaining energy levels for demanding speaking circuit.
Learn by trial and error						<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			2	Process of trying different things to see what works and does not work, to learn from mistakes.
Learning keynote speaking						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		3	Keynote is an artform.
Developing your philosophy							<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	2	Identifying your message.
Managing the physical environment of the speech			<input checked="" type="checkbox"/>								1	May include extensive AV check, giving input to meeting planner on physical arrangement of room.



UNITS	Group 1 Speakers who mentioned Units										TOTAL positives out of 10 Group 1	Examples/Description
	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10		
Getting academic training											0	Honors speech course, B.A. in theatre, Masters in Speech Communication, Doctoral courses in communication.
Keep speech resource file									<input checked="" type="checkbox"/>		1	To hold quotes, or stories, articles that may be useful material for a speech
Worked on tone and energy			<input checked="" type="checkbox"/>								1	Toning down, not being so overbearing or coming across too strong on the platform
Slowing down, pausing		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								2	Speakers may have a tendency to talk too fast.
Worked on withholding judgment and listening skills											0	Receiving communication from people, audiences, and individuals, particularly when the communication may cause defensiveness
Worked on storytelling								<input checked="" type="checkbox"/>			1	How to tell a story effectively, to turn a case example into a dynamic narrative that will captivate the audience.
Worked on managing time								<input checked="" type="checkbox"/>			1	Learning how to organize material to fit time requirement; learning how to prioritize material to adapt presentation to sudden changes in time requirements
Worked on conciseness	<input checked="" type="checkbox"/>										1	Trying to say the most with as few words as possible, important to maintain audience attention
Work on openings and closings									<input checked="" type="checkbox"/>		1	The initial and final moments of a speech are critical; refers to a speaker's introduction and conclusion.

UNITS	Group 2 speakers who mentioned themes												Total positives out of 12 Group 2 (%)	TOTAL out of 22 (%)	
	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	2.11	2.12			
Become a member and participate in NSA Activities	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	9 (75%)	19 (86%)
Have additional venues to practice, observe, receive feedback		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					5 (42%)	9 (41%)
Focus on connecting with the Audience/Client	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	9 (75%)	16 (73%)
Get a coach			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>					3 (25%)	9 (41%)
Have or get a mentor					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		6 (50%)	9 (41%)
Get experience; speak often		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		8 (67%)	15 (68%)

UNITS	Group 2 speakers who mentioned themes												Total positives out of 12 Group 2 (%)	TOTAL out of 22 (%)
	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	2.11	2.12		
<b>Reading and self-study to stay current and fresh</b>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	9 (75%)	17 (77%)
<b>Make a commitment to give 100%</b>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			5 (42%)	10 (46%)
<b>Be Authentic</b>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	7 (58%)	14 (67%)
<b>Watch myself on video</b>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	6 (50%)	10 (46%)
<b>Pay Attention to Feedback from the Audience</b>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	9 (75%)	14 (67%)
<b>Get Feedback from the Client</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>								3 (25%)	7 (32%)

UNITS	Group 2 speakers who mentioned themes												Total positives out of 12 Group 2 (%)	TOTAL out of 22 (%)	
	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	2.11	2.12			
Microdot matters									<input checked="" type="checkbox"/>					1 (8%)	5 (23%)
Get Feedback from other speakers, friends, family	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>							2 (17%)	5 (23%)
Pay attention to repeat business/referrals as feedback							<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>		2 (17%)	3 (14%)
Reflect on what worked, what didn't work after a speech		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									4 (33%)	4 (18%)
Write regularly			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										2 (17%)	5 (23%)
Publishing a book			<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>		2 (17%)	5 (23%)
Learn by observing other performers	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			6 (50%)	7 (32%)
Rehearse	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	N										2 (17%)	3 (14%)
Motivated by inner drive to succeed, learn	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>		7 (58%)	15 (68%)
Motivated by passion for topic /craft	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					4 (33%)	9 (41%)

UNITS	Group 2 speakers who mentioned themes												Total positives out of 12 Group 2 (%)	TOTAL out of 22 (%)
	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	2.11	2.12		
Motivated by upbringing/ close relatives					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						3 (25%)	8 (36%)
Motivated by desire to help people	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	6 (50%)	11 (50%)
Motivated by observing other speakers				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		6 (50%)	8 (36%)
Motivated by business			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		4 (33%)	7 (32%)
Motivated by desire to avoid failure on the platform			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	3 (25%)	3 (14%)
Motivated by respect for the audience	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>				4 (33%)	5 (23%)
Motivated by positive feedback of audience	<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	4 (33%)	6 (27%)
<b>OTHER UNITS</b>														
Early engagement				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			5 (42%)	11 (50%)
Learning to turn nervousness into excitement		<input checked="" type="checkbox"/>											1 (8%)	3 (14%)

UNITS	Group 2 speakers who mentioned themes												Total positives out of 12 Group 2 (%)	TOTAL out of 22 (%)	
	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	2.11	2.12			
Learning acting skills												<input checked="" type="checkbox"/>	1 (8%)	2 (5%)	
Learning and working on the business side of speaking			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						4 (33%)	7 (32%)
Challenge oneself out of comfort zone		<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			3 (25%)	3 (14%)
Studied comedy/humor			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			5 (42%)	7 (32%)
Communicating cross-culturally												<input checked="" type="checkbox"/>		1 (8%)	3 (14%)
Self-care					<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>							2 (17%)	2 (9%)
Learn by trial and error		<input checked="" type="checkbox"/>												1 (8%)	3 (14%)
Learning keynote speaking															3 (14%)
Developing your philosophy														0	2 (9%)
Managing the physical environment of the speech														0	1 (5%)

UNITS	Group 2 speakers who mentioned themes												Total positives out of 12 Group 2 (%)	TOTAL out of 22 (%)
	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	2.11	2.12		
Getting academic training						<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	4 (33%)	4 (18%)
Keep speech resource file								<input checked="" type="checkbox"/>					1 (8%)	2 (9%)
Worked on tone and energy					<input checked="" type="checkbox"/>								1 (8%)	
Slowing down, pausing	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		5 (42%)	7 (32%)
Worked on withholding judgment and listening skills						<input checked="" type="checkbox"/>							1 (8%)	1 (5%)
Worked on storytelling	<input checked="" type="checkbox"/>												1 (8%)	2 (9%)
Worked on managing time	<input checked="" type="checkbox"/>												1 (8%)	2 (9%)
Worked on conciseness			<input checked="" type="checkbox"/>										1 (8%)	2 (9%)
Work on openings and closings													0	1 (5%)

APPENDIX F

Mean Ratings and Standard Deviations for Frequency, Effort and Relevance of Practice Activities

<b>Item Set</b>	<b>Activity</b>	<b>Frequency 1</b> Scale: 1=Never; 2=Once in a while; 3=Monthly; 4=Weekly; 5=Daily	<b>Effort</b> Scale: 1= No effort; 2=Minimal effort; 3=Moderate effort; 4=Very effortful; 5=Extremely Effortful	<b>Relevance</b> Scale: 1-5; 1 = Irrelevant; 5 = Extremely Relevant
1	Read and study to stay current	4.00, 1.14	3.06, 1.06	4.50, .79
1	Writing	3.94, 1.11	3.41, 1.00 (N=17)	4.39, .78
1	Seek as many speaking opportunities as possible	3.50, 1.30	3.76, 1.09 (N=17)	4.17, 1.30
<b>Item Set</b>	<b>Activity</b>	<b>Frequency 2</b> Scale: 1=Never; 2 =1-2 times/yr; 3=3-6 times/yr; 4=7-12 times/yr; 5 = more than 12 times/yr	<b>Effort</b> Scale: 1= No effort; 2=Minimal effort; 3=Moderate effort; 4=Very effortful; 5=Extremely Effortful	<b>Relevance</b> Scale: 1-5; 1 = Irrelevant; 5 = Extremely Relevant
2	Observe other performers	4.06, 1.06	2.76, .90 (N=17)	4.17, 1.10
2	Participate in NSA Activities	2.94, 1.21	3.06, .85 (N=16)	4.12, 1.17
2	Seek feedback from audience, client, family, or friends	3.78, 1.35	2.82, .95 (N=17)	4.06, 1.16
2	Video critique	2.94, 1.06	2.88, .70 (N=17)	3.83, 1.34



2	Meeting with a coach	1.78, .88	3.11, .60 (N=9)	3.07, 1.53
2	Meeting with a mentor	2.06, .87	2.77, 1.01 (N=13)	3.37, 1.50
2	Attending other speaking group meetings	2.28, .90	2.62, .96 (N=16)	3.5, 1.37

<b>Item Set</b>	<b>Activity</b>	<b>Frequency 3</b> Scale: 1=Never; 2=Seldom; 3=Occasionally; 4=Somewhat often; 5=Often; 6=Very often; 7=Always	<b>Effort</b> Scale: 1= No effort; 2=Minimal effort; 3=Moderate effort; 4=Very effortful; 5=Extremely Effortful	<b>Relevance</b> Scale: 1-5; 1 = Irrelevant; 5 = Extremely Relevant
3	Commitment to give 100%	6.83, .38	3.39, 1.20	4.94, .24
3	Focus on audience	6.22, 1.26	3.83, 1.34	4.83, .51
3	Authenticity	6.67, .59	3.44, 1.15	4.67, .59
3	Pay attention to details and nuances	5.67, 1.50	2.94, 1.16	4.61, .70
3	Reflection	6.17, 1.47	3.00, .97	4.56, 1.04
3	Rehearse portions of my speech out loud	3.67, 2.22	3.31, 1.03 (N=13)	4.31, 1.69

Note: Item sets distinguish the 3 different types of response options that were used for frequency measures. The response options for effort and relevance remained the same across all 16 practice activities.