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14. ABSTRACT

This report provides United States Special Operations Command (USSOCOM) with insights into the elements of foreign language training that must be considered if tasked with one of two scenarios: (1) decreasing the current duration of Special Operations Forces (SOF) initial acquisition training (IAT), while maintaining the current training objective (i.e., ILR Level 1/1 on the two-skill Oral Proficiency Interview), or (2) maintaining the current duration of SOF IAT, while increasing the training objective. This report synthesizes information across three sources: (1) the current literature, (2) the perspectives of experts (i.e., academicians, researchers) and SOF language program stakeholders, and (3) an original empirical study investigating the relationship between training duration and post-training language proficiency in the SOF environment. The four main elements of foreign language training that can be leveraged to increase the efficiency and effectiveness of SOF IAT are: (1) student individual differences, (2) instructor qualifications, (3) course factors, and (4) training environment factors. Overall recommendations for both scenarios include: (1) conducting a needs assessment to create alignment between all training elements in SOF IAT, (2) leveraging existing SOFLO research on training elements to optimize SOF IAT efficiency and effectiveness, and (3) ensuring stakeholders' buy-in from the beginning of the change process.

15. SUBJECT TERMS
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Examine Ways to Decrease Training Duration while Maintaining Training Objective

SWA Consulting

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EXECUTIVE SUMMARY

Issue and Overview

In the United States Special Operations Command (USSOCOM), Special Operations Forces (SOF) operators must acquire and maintain language capability to meet their language-related mission requirements and achieve mission success (USSOCOM M350-8; *Inside AOR Use of Language* [Technical Report #2010011010]; *Outside AOR Use of Language* [Technical Report #2010011011]).

The importance of language proficiency to SOF mission success is clear; however, with the 2011 Budget Control Act requiring a $487 billion-dollar decrease in Department of Defense (DoD) spending over the next 10 years (Steele, 2012), SOF operators and leaders may be called upon to do more with less. Specifically, SOF leaders and policymakers may be tasked with making SOF initial acquisition training (IAT) more efficient through two possible scenarios: (1) Scenario 1: decreasing the current duration of IAT, while maintaining the current training objective, or (2) Scenario 2: maintaining the current duration of IAT, while increasing the training objective. Scenario 1 may save money in the short term but might negatively impact maintenance and improvement in the future, whereas Scenario 2 may save money in the long term because fewer resources have to be used to improve or maintain proficiency if SOF operators leave IAT with higher levels of language proficiency.

The primary purpose of this report is to provide USSOCOM with insights into the elements of foreign language training that must be considered when attempting to decrease the current duration of SOF IAT, while maintaining the current training objective, or maintaining the current duration of SOF IAT, while increasing the training objective. To accomplish this goal, this report synthesizes information across three sources of information to identify elements of foreign language training that can be leveraged to increase training efficiency and effectiveness, while maintaining USSOCOM's vision of producing language-capable personnel and to summarize both experts' and stakeholders' perspectives and data-analytic evidence about the relationship between training duration and language proficiency. These three sources of information are:

1. A thorough review of the current literature on this topic.
2. The perspectives of experts (i.e., academicians, researchers) and SOF language program stakeholders.
3. An original empirical study conducted in SOF language training environments investigating the relationship between training duration and post-training language proficiency.

Findings

- Based on a review of the current literature on this topic, there are four main elements of foreign language training that can be leveraged to increase the efficiency and effectiveness of SOF IAT, and, in turn, accomplish the goal of developing language-capable SOF personnel: (1) student individual differences, (2) instructor qualifications, (3) course factors, and (4) training environment factors.

- Based on expert and stakeholder interviews, some of the main factors or levers to consider for both scenarios were training environment factors, though experts and stakeholders also discussed the importance of student or learner characteristics and instruction. Collectively, the results from expert and stakeholder interviews illustrate that this is not a "silver bullet" issue or a one-size-fits-all solution, and as such, alignment is needed across all training elements in SOF IAT to enact each scenario.

- Overall, experts and stakeholders indicated Scenario 2 (i.e., maintain duration, increase objective) is more realistic and achievable than Scenario 1 (i.e., decrease duration, maintain objective). Indeed, previous research conducted by SWA Consulting Inc. (SWA) for the Special Operations Forces Language Office (SOFLO) support these findings.

    - In a naturalistic experiment, increasing the standard for graduation at the U.S. Army John F. Kennedy Special Warfare Center and School (SWCS) from an Interagency Language Roundtable (ILR) Level 0+/0+/0+ to an ILR Level 1/1/1 generally resulted in positive impacts on SOF operators' listening and reading proficiency scores, as measured by the Defense Language Proficiency Test (DLPT), and speaking proficiency scores, as measured by the Oral Proficiency Interview (OPI; Ellington & Surface, 2007, March).

    - SOF operators' proficiency test scores from the Basic Language Course (BLC) at SWCS from July 2011 to July 2012 illustrate that many operators are already achieving an increased training objective within the current training duration; 57% of SOF operators from the BLC at USAJFSWCS exceeded the ILR Level 1/1 standard and 10.8% met the ILR Level 2 standard. These findings represent statistically significant increases of 9% and 5.4%, respectively, from the July 2010 to July 2011 time period (*BLC FY 2012 Training Trend Report* [Technical Report #2012010635]).

- Based on a preliminary analysis of SOF language training data, SOF personnel in Category I/II languages who received 12 or 14 weeks of language training tended to have lower speaking and listening proficiency scores than personnel who received 15 or more weeks of training, as measured by the OPI and DLPT, respectively. Similarly, SOF personnel in Category III/IV languages who received less than 24 weeks of language training tended to have lower speaking and listening proficiency scores than personnel who received 24 or more weeks of language training. Due to limited data, it is difficult to draw any conclusions regarding the training duration-proficiency relationships for durations greater than 18 weeks for Category I-II languages and 24 weeks for Category III/IV languages.

- Interestingly, when SOF operators enrolled in language training at SWCS experienced a change in contact hours from five hours of classroom instruction per day to six hours of classroom instruction per day, operators who received six hours of classroom instruction per day had significantly higher OPI speaking proficiency scores than operators who received five hours of classroom instruction per day.

Overall Recommendations

All sources of evidence examined in the current study suggest that this is not a "silver bullet" issue or a one-size-fits-all solution. In other words, regardless if SOF leaders and policymakers decide to enact Scenario 1 (i.e., decrease duration, maintain objective) or Scenario 2 (i.e., maintain duration, increase objective), there were be barriers to and conditions for success, and these will vary slightly for different SOF training institutions. Accordingly, the following overall actions are recommended for both Scenarios 1 and 2:

- Needs assessment – conduct task and knowledge, skills, and abilities (KSA) analyses to create alignment between all training elements in SOF IAT (cf. Surface, 2012).
- Leverage existing research conducted by SWA for SOFLO on student individual differences, instructor qualifications, course factors, and training environment factors to optimize IAT efficiency and effectiveness.
- Enacting either scenario will require stakeholder cooperation and participation. Thus, it is imperative to get stakeholders' buy-in from the beginning of the change process (Cummings & Worley, 2009).

Although SOF leaders and policymakers could theoretically enact either scenario, the goals of Scenarios 1 and 2 are inherently different. For example, Scenario 1 may save money in the short term but might negatively impact maintenance and improvement in the future, whereas Scenario 2 may save money in the long term because fewer resources have to be used to improve or maintain proficiency if SOF operators leave IAT with higher levels of language proficiency. Higher levels of proficiency post-IAT should translate into higher levels in the field, even with skill decay, and should make maintaining minimum standards easier. Thus, the following conditions for success are recommended separately for Scenarios 1 and 2.

Scenario 1 Conclusions and Recommendations

If it is important for SOF leaders and policymakers to save money in the short term, then Scenario 1 may be preferred over Scenario 2. The following actions are recommended to maximize the success of Scenario 1.

- Regardless of the scenario that is enacted, it is important to conduct task and KSA analyses to create alignment between all training elements in SOF IAT and get stakeholders' buy-in from the beginning of the change process; however, in Scenario 1, these actions are even more critically important to success than in Scenario 2. If Scenario 1 is preferred over Scenario 2, then it is important for SOF leaders and policymakers to:
    - Leverage existing research to optimize student selection for language training and student placement into specific training languages and to target individuals for special interventions when they are less likely to succeed in foreign language courses.
    - Select qualified foreign language instructors and provide them with training so they have the ability to teach efficiently and effectively in the SOF IAT environment.

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  - Ensure language training curricula are task-based and mission-specific and include course materials to support SOF operators in achieving their post-IAT training objectives. Likewise, maximize operators' time on task and provide them with opportunities to practice their language skills, particularly in immersive environments.

  - Not assume the same training objective can be achieved in a shorter duration just by making minimal adjustments, such as decreasing the class size, increasing homework or self-study hours, and providing additional technology. All experts and stakeholders interviewed for the current study mentioned multiple training elements that must be leveraged for Scenario 1 to be successful. In other words, simply changing a few elements of training will likely not be effective for Scenario 1, in particular.

- Consider the results of the original empirical SOF study to provide guidance on the optimal training lengths for Category I/II languages and Category III/IV languages. For Category I and II languages, the optimal IAT length may be 15 weeks. Training durations longer than 15 weeks (e.g., 18 weeks) did not lead to significant improvements in language proficiency. For Category III and IV languages, the optimal IAT length appears to be between 20 and 24 weeks.

  These results, however, must be interpreted with caution because there were many potential moderators that were unable to be controlled for in the current study. Also, due to limited data, it is difficult to draw any conclusions regarding the training duration-proficiency relationships for durations greater than 18 weeks for Category I-II languages and 24 weeks for Category III/IV languages.

Scenario 2 Conclusions and Recommendations

If it is SOF leaders' and policymakers' goal to save money in the long term, then Scenario 2 may be preferred over Scenario 1. The following actions are recommended to maximize the success of Scenario 2:

- Regardless of the scenario that is enacted, it is important to conduct task and KSA analyses to create alignment between all training elements in SOF IAT and get stakeholders' buy-in from the beginning of the change process. If Scenario 2 is preferred over Scenario 1, then it is also important for SOF leaders and policymakers to:

  - Provide SOF operators with training on how to learn a second language. This training could focus on meta-cognitive strategies and other learning strategies to optimize the efficiency and effectiveness of SOF IAT.

  - Provide SOF operators with additional resources (e.g., games) to keep them engaged in language learning, both inside and outside of the classroom, and to sustain their motivation throughout language training.

  - Provide SOF operators with opportunities to practice the target language skills in immersive environments.

- Set realistic post-IAT training objectives and hold SOF operators and language program administrators accountable for meeting these objectives. If post-IAT training objectives are realistic, SOF operators will be more likely to meet them, especially if they are provided with the necessary resources and support and there are mechanisms in place to hold them accountable for meeting these objectives. This point is further supported by previous findings regarding the graduation standard change at SWCS and SOF operators' proficiency test scores from the BLC at SWCS from July 2011 to July 2012 (see p. 3 for additional details).

Caveats

- All of the experts and stakeholders contacted to participate in interviews were not able to participate. Thus, the findings presented in this report may be subject to change if additional interviews are conducted and if these additional interviewees' perspectives differ from those of the experts and stakeholders who were interviewed for this report.

- For the original empirical SOF study, it was not possible to control for several important variables that differed between SOF language training components and units (e.g., instructors, curriculum). As such, differences in language proficiency test scores for training events with different durations may be the result of these other variables, rather than purely being a function of differences in training duration. As more data become available, it may be possible to control for some of these other variables in future analyses conducted on this topic.

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Examine Ways to Decrease Training Duration While Maintaining Objective Report Purpose

In the United States Special Operations Command (USSOCOM), Special Operations Forces (SOF) operators must acquire and maintain language capability to meet their language-related mission requirements and achieve mission success (USSOCOM M350-8; *Inside AOR Use of Language* [Technical Report #2010011010]; *Outside AOR Use of Language* [Technical Report #2010011011]).

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The primary purpose of this report is to provide USSOCOM with insights into the elements of foreign language training that must be considered when attempting to decrease the current duration of SOF IAT, while maintaining the current training objective, or maintaining the current duration of SOF IAT, while increasing the training objective. This report identifies elements of foreign language training that can be leveraged to increase training efficiency and effectiveness, while maintaining USSOCOM's vision of producing language-capable personnel. Further, this report summarizes data-analytic evidence about the relationship between training duration and language proficiency to inform SOF leaders and policymakers about the nature of the relationship between IAT duration and post-IAT language proficiency.

Examine Ways to Decrease Training Duration While Maintaining Objective Report Overview

This report contains the following sections regarding the relationship between training duration and language proficiency:

- Section II (p. 9) describes the rationale for this study.
- Section III (p. 10-23) describes the theoretical, empirical, and best practices literature on this topic, organized around four elements of foreign language training: (1) student individual differences, (2) instructor qualifications, (3) course factors, and (4) training environment factors.
- Section IV (p. 24-55) presents the perspectives of key experts and stakeholders on this topic.
- Section V (p. 56-64) presents and discusses an original empirical study examining the relationship between SOF language training duration and post-training language proficiency.
- Section VI (pp. 65-68) provides an overall synthesis and recommendations across Sections III-IV.

SECTION II: REPORT RATIONALE

As a result of the 2011 Budget Control Act, SOF leaders and policymakers must be prepared if charged to reduce the resources used for SOF IAT to produce language-capable SOF personnel. Two potential resource-reducing scenarios involve: (1) Scenario 1: decreasing the current duration of SOF IAT, while expecting SOF operators to achieve the current training objective (i.e., Interagency Language Roundtable [ILR] Level 1/1 on the two-skill Oral Proficiency Interview [OPI]), or (2) Scenario 2: maintaining the current duration of IAT, but increasing the training objective. If SOF leaders and policymakers are charged with one of these scenarios, one may expect barriers to language acquisition and maintenance to increase in their severity. However, there are specific elements of foreign language training that can be leveraged to mitigate these barriers and increase the efficiency and effectiveness of SOF IAT, and, in turn, accomplish the goal of developing language-capable SOF personnel. These foreign language training elements include:

(1) Student individual differences (e.g., language learning aptitude, motivation),

(2) Instructor qualifications (e.g., language proficiency, instructional experience),

(3) Course factors (e.g., curriculum, instructional objectives), and

(4) Training environment factors (e.g., class size, technology)

In Section III (pp. 10-23), specific aspects of these four elements of foreign language training will be described in greater detail, particularly in terms of how they can be leveraged to either (1) decrease the current duration of SOF IAT, while expecting SOF operators to achieve the current training objective, or (2) maintain the current duration of SOF IAT, but increase the training objective SOF operators are expected to achieve by the conclusion of SOF IAT.

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SECTION III: IMPORTANT ELEMENTS OF LANGUAGE TRAINING

Purpose

A thorough review of the theoretical, empirical, and best practices literature in the fields of education, psychology, second language acquisition, and training was conducted. The purpose of this review was to identify specific elements of foreign language training that can be leveraged to increase the efficiency and effectiveness of SOF IAT, and, in turn, accomplish the goal of developing language-capable SOF personnel. From the literature review, four main themes were identified: (1) student individual differences, (2) instructor qualifications, (3) course factors, and (4) training environment factors. The elements of foreign language training categorized under these four main themes can be used by SOF leaders and policymakers to better understand the nature of the relationship between SOF IAT duration and post-IAT language proficiency.

Research Questions

- What elements of foreign language training can be leveraged to increase the efficiency and effectiveness of training?
- How might these elements operate in the SOF IAT context?

Main Findings

- Four main themes were identified: (1) student individual differences, (2) instructor qualifications, (3) course factors, and (4) training environment factors.
- In general, aside from SWA Consulting Inc.'s (SWA) previous research and evaluation efforts for SOFLO, much of the theoretical and empirical literature on this topic focuses on K-12 instructional contexts; thus, the SOF IAT context must be kept in mind when reviewing much of the previous research on the topic at hand.

Recommendations

- Needs assessment – conduct task and knowledge, skills, and abilities (KSA) analyses to create alignment between all training elements in SOF IAT (cf. Surface, 2012).
- Leverage existing research conducted by SWA for SOFLO on student individual differences, instructor qualifications, course factors, and training environment factors to optimize IAT efficiency and effectiveness. For example, SWA's previous research and evaluation efforts for SOFLO on student individual differences can be used to optimize student assignment to language courses (*The Role of Individual Differences in Foreign Language Speaking Acquisition*, [Technical Report #2010010620]).

Literature Review

As discussed in Section II (p. 9), SOF operators will likely encounter a number of barriers to language acquisition and maintenance specific to the SOF IAT context that may increase in severity if SOF leaders and policymakers are charged with decreasing the current duration of SOF IAT, while maintaining the

current training objective, or maintaining the current duration of SOF IAT, while increasing the training objective. While it may be difficult to remove these barriers entirely, there are specific elements of foreign language training that can be leveraged to increase the efficiency and effectiveness of SOF IAT, and, in turn, accomplish the goal of developing language-capable SOF personnel. These important foreign language training elements include:

(1) Student individual differences (e.g., language learning aptitude, motivation),

(2) Instructor qualifications (e.g., language proficiency, instructional experience),

(3) Course factors (e.g., curriculum, instructional objectives), and

(4) Training environment factors (e.g., class size, technology)

The focus on these four general training elements is consistent with the trainee characteristics, training design features, and situational characteristics examined in the broader training literature (e.g., Gully & Chen, 2010).

Before describing these four foreign language training elements in greater detail, it is first necessary to discuss an important caveat about these findings. This caveat concerns the importance of the language training context to the topic of this report. In his work on the impact of context on organizational behavior, Johns (2006) defined context as "…situational opportunities and constraints that affect the occurrence and meaning of organizational behavior as well as functional relationships between variables" (p. 386). Accordingly, the elements noted above may need to be leveraged differently in the SOF IAT context than in other foreign language training contexts, and further, the SOF IAT context must be kept in mind when reviewing previous research on the topic at hand. This report focuses not only on the foreign language training elements that can be leveraged to increase the efficiency and effectiveness of SOF IAT, but also on the ways in which these elements may operate in the SOF IAT context.

The discussion below identifies the student individual difference variables and instructor qualifications discussed in both the general training and language acquisition literature that may affect student learning and transfer outcomes. The discussion then examines the course and training environment factors that may also affect student learning and transfer outcomes.

Student Individual Differences

Each individual has characteristics that enable him or her to learn and perform more effectively in training environments (Alvarez, Salas, & Garafano, 2004). In the broader training literature, student individual differences have been organized into four general categories: (1) capabilities (e.g., general mental ability), (2) demographics, (e.g., age), (3) personality traits, (e.g., goal orientation, general self-efficacy), and (4) interests and values (e.g., education; Gully & Chen, 2010; Kraiger, Ford, & Salas, 1993). A number of these student individual differences, such as self-efficacy, experience, and cognitive ability, have been found to predict important training outcomes (Alvarez et al., 2004).

Likewise, in the language learning literature, many student individual differences have been examined to better understand the reasons why some students excel in foreign language learning, while others struggle (Gardner, 1991). For example, according to Carroll (1962), success in second language acquisition is

contingent upon a learner's aptitude, general intelligence, and motivation. Previous literature has also identified other student individual differences, such as self-efficacy and previous learning experience, that may affect the amount of language learning success one achieves (e.g., Jackson & Kaplan, 2001; Oxford, 2002). While many of these individual differences cannot be directly impacted by instructor and administrator actions because they are innate learner characteristics (Littlewood, 1984), it is important for language program administrators and foreign language instructors to be aware of the impact these characteristics may have on student learning outcomes and, in addition, the implications these characteristics may have for SOF IAT selection and placement. On the other hand, some of these characteristics may be indirectly influenced through instructor qualifications, along with course and training environment factors, which are discussed later in Section III (pp. 19-23).

The current section focuses on the relevant variables identified in the theoretical, empirical, and best practices literature as possible explanations for student individual differences in second language acquisition. The variables included in the following discussion are: (1) native language ability and knowledge, (2) age, (3) cognitive ability, (4) language learning aptitude, (5) language learning experience, (6) personality, (7) anxiety, (8) language learning motivation, (9) self-efficacy, (10) attitudes toward and interest in the target language, and (11) learning styles and strategies. With a couple exceptions, the variables described in this report align with the most important student individual differences identified in the broader training literature (cf. Alvarez et al., 2004).

Native Language Ability and Knowledge

Various types of knowledge and abilities could influence foreign language learners' eventual success in language learning, but one of the most prominently studied within the literature is that of native language knowledge and ability. It makes theoretical sense that an individual with a great deal of ability and knowledge in his or her native language would be better equipped to acquire a second language, as the same skills that allowed him or her to learn the native language should come into play when he or she is learning the second language. In support of this idea, Silva and White (1993) found significant relationships between native language vocabulary and second language proficiency in speaking, reading and listening comprehension. Similarly, Sparks, Patton, Ganschow, Humbach and Javorsky (2006) found native language reading ability was a strong predictor of foreign language proficiency. An SWA study (*The Role of Individual Differences in Foreign Language Speaking Acquisition*, [Technical Report #2010010620]) found native language ability was positively related to speaking proficiency, suggesting that someone with greater native language ability was more likely to have greater speaking proficiency results at the end of language training.

Age

The "critical period" hypothesis, generally credited to Penfield and Roberts (1959) and Lenneberg (1967), argues language acquisition is easier for children, and therefore, there is little chance for success in acquiring a new language beyond a certain age (Bowden, Sanz, & Stafford, 2005). This is perhaps the most common argument associated with age and language acquisition. However, this approach has its critics who attribute the difference between child and adult success in foreign language acquisition to factors other than age. For example, children may have "more favourable" learning conditions, or may be "…exposed to simpler language," giving the impression it is easier for them to acquire a foreign language (Littlewood, 1984, p. 66). It has also been suggested that adults may feel they have more important

things to do than learn a foreign language, and because their time is "shorter and more valuable," highly motivated adults with good instructors will, in fact, be the most efficient language learners (Diller, 1978, p. 116).

Indeed, the barriers to language acquisition and maintenance faced by SOF operators illustrate the time constraints they may feel when trying to acquire a new language (*Barriers to Language Acquisition and Maintenance* [Technical Report #2010011024]). Competing training requirements may take higher priority over language training, and while SOF operators may be capable of language learning, they may not be able to devote the time necessary for language training when other training requirements compete. Time constraints may thus give the appearance that SOF operators are not as capable of acquiring a second language as younger language learners are, and this lack of ability may be falsely attributed to age.

However, given equal learning opportunities (e.g., exposure to the target language, interactions with native speakers), adults may learn a new language just as, if not more, successfully than children (Littlewood, 1984). In other words, it is possible for both children and adults to gain foreign language proficiency, but the path to proficiency may differ (Oxford, 2002). By addressing the competing training requirements facing SOF operators, or increasing the priority level of language training in SOF operators' mission-preparedness, proficiency levels can be achieved, regardless of SOF operators' age.

Cognitive Ability

In general, individuals with higher cognitive abilities are more likely to learn and be successful in training (Salas & Cannon-Bowers, 2001). More specifically, there is a relationship between cognitive ability, or general intelligence, and the ability to learn a foreign language (Littlewood, 1984). Extensive research has shown that cognitive ability is a predictor of foreign language acquisition (e.g., O'Mara, 1994; Petersen & Al-Haik, 1976; Silva & White, 1993). These findings have been consistently replicated in samples of SOF personnel (*USAJFKSWCS French Legacy Language Training Report: Classes 15 NOV 04 – 12 MAR 07* [Technical Report #2007010103]; *Wonderlic Personnel Test as a Predictor of Language Proficiency* [Technical Report #200810608]; *Predictors of Proficiency on the OPI: Considering the WPT™, Army GT, AFQT, and DLAB* [Technical Report #2009010612]; *Trainee Characteristics and Achievement During Special Operations Forces Initial Acquisition Foreign Language Training* [Technical Report #2012010610]). Cognitive variables, such as grade point average (GPA), are more strongly correlated with achievement in foreign language learning, as compared to personality and demographic variables (Onwuegbuzie, Bailey, & Daley, 2001).

Language Learning Aptitude

Foreign language aptitude refers to the abilities an individual possesses that aid in the acquisition of language (Gardner, 1997). An individual's language learning aptitude is important when determining success in foreign language learning (Littlewood, 1984). Jackson and Kaplan (2001) refer to aptitude as "…the observable fact that some people know how to learn a language very efficiently in a classroom and others do not, regardless of the effort they put in" (p. 74). There are many tests of aptitude, but the most common are Carroll and Sapon's (1959) Modern Language Aptitude Test (MLAT), Petersen and Al-Haik's (1976) Defense Language Aptitude Battery (DLAB), and Pimsleur's (1966) Language Aptitude Battery (Gardner, 1991). Research involving these and other tests of language learning aptitude has shown that aptitude is a predictor of language acquisition (Gardner & Lambert, 1959; Merchant, 1998;

O'Mara, 1994; Shaw & Lett, 1993). Also, the DLAB has repeatedly been shown to be especially useful in predicting language proficiency outcomes for SOF trainees (*A Multilevel Analysis of Language Proficiency at the Completion of USAJFKSWCS Language Training: Assessing the Impact of individual, Class and Instructor Differences on DLPT and OPI Scores* [Technical Report #20050672]; *USAJFKSWCS French Legacy Language Training Report: Classes 15 NOV 04 – 12 MAR 07* [Technical Report #2007010103]; *1st SFG 02-26 OCT 07 Cohort Report* [Technical Report #2008010601]; *Wonderlic Personnel Test as a Predictor of Language Proficiency* [Technical Report #200810608]; *Predictors of Proficiency on the OPI: Considering the WPT™, Army GT, AFQT, and DLAB* [Technical Report #2009010612]; *Evaluating Predictors of Foreign Language Learning* [Technical Report #2011010631]; *Trainee Characteristics and Achievement during Special Operations Forces Initial Acquisition Foreign Language Training* [Technical Report #2012010610]) and is viewed as a useful predictor by numerous stakeholders in the SOF community (*Defense Language Aptitude Battery (DLAB): Perspectives from the Field* [Technical Report #2010011017]).

An individual may have a greater aptitude with one method of language learning than another (Diller, 1978; Jackson & Kaplan, 2001). The DLAB was found to provide incremental validity in predicting foreign proficiency beyond that predicted by cognitive ability, further illustrating the importance of language learning aptitude to language learning (Silva & White, 1993).

Language Learning Experience

In general, prior learning experiences have been found to affect later learning and retention (Smith-Jentsch, Jentsch, Payne, & Salas, 1996). In terms of language learning, if students already have proficiency in languages closely related to the target languages in which they are being trained, learning will be easier (Diller, 1978). Having an "overt, declarative knowledge of salient linguistic and grammatical concepts" may also help foreign language learners acquire the target language more quickly than individuals who do not possess this knowledge (Jackson & Kaplan, 2001, p. 78).

Prior learning experience, especially in a classroom setting, also benefits students by equipping them with learning skills that may increase their future success in the formal classroom setting (Jackson & Kaplan, 2001). Students' background knowledge and experience in the language classroom have been found to influence "…how well and how quickly many adults can learn a new language" (Jackson & Kaplan, 2001, p. 79). Specifically, previous experience related to language learning may increase the collection of topics students have available to discuss in the classroom (Jackson & Kaplan, 2001). Thus, if SOF operators are placed into languages in SOF IAT in which they already have some initial proficiency, then their ability to achieve their training objectives and the efficiency and effectiveness of SOF IAT may increase.

Personality

Personality traits represent fairly stable characteristics of individuals which cannot be easily altered by outside interventions such as training (Guilford, 1959). A useful framework for organizing personality traits is the Big Five model, which consists of conscientiousness, extraversion, agreeableness, neuroticism and openness to experience (Barrick & Mount, 1991). Conscientiousness is a trait that is characterized by dependability, responsibility, orderliness, and attention to detail. Extraversion includes sociability, assertiveness, and dominance. The trait of agreeableness describes the characteristics of courteousness,

flexibility, cooperativeness, humility, and altruism. Neuroticism refers to the individual characteristics of anxiety, insecurity, depression, and negative affectivity. Finally, openness to experience is characterized by imagination, curiosity and intelligence (Kichuk & Wiesner, 1998).

Research on the Big Five personality traits has produced mixed results regarding their relationships with language acquisition. For example, Shirley (2007) investigated the relationships between these variables and three language proficiency skills (i.e., reading, listening, and speaking). Her results showed that conscientiousness exhibited a significant positive relationship with reading proficiency, but all other relationships were non-significant. In contrast, MacIntyre and Charos (1996) found that all five personality traits were related to self-ratings of speaking proficiency. Additionally, Oya, Manalo, and Greenwood (2004) found that extraversion was significantly related to speaking ability, but neuroticism was not. A meta-analysis found that personality characteristics were only weakly related to post-training speaking proficiency (*The Role of Individual Differences in Foreign Language Speaking Acquisition* [Technical Report #2010010620]). In one sample of SOF personnel, openness to experience and conscientiousness were found to predict Defense Language Proficiency Test (DLPT) scores, while other personality variables did not (*USAJFKSWCS French Legacy Language Training Report: Classes 15 NOV 04 – 12 MAR 07* [Technical Report #2007010103]).

Anxiety

Anxiety has been commonly explored in the foreign language learning literature. Anxiety refers to feelings of apprehension or nervousness in response to stimuli. Anxiety that develops or occurs while learning a foreign language can negatively affect language acquisition if it prevents students from focusing on course materials. Prior research has found anxiety negatively relates to a number of foreign language acquisition outcomes, including speaking proficiency (e.g., Butler & Lee, 2006; Chen, 2007; Gardner, 1979; Gardner, 1997; Sanchez-Herrero & Sanchez, 1992; *The Role of Individual Differences in Foreign Language Speaking Acquisition* [Technical Report #2010010620]).

Language Learning Motivation

Motivation is a complex concept (Gardner, 2010), and research on this topic has differed in terms of how motivation is conceptualized and in identifying when and how motivation may impact the language acquisition process. Despite varying approaches within the literature, previous research has found a significant, positive relationship between motivation and language achievement (Masgoret & Gardner, 2003). Language learning aptitude (as previously discussed) and motivation are the most common predictors of language acquisition success (Littlewood, 1984). Language learning motivation can be measured by means of three scales: (1) attitudes toward learning the language, (2) desire to learn the language, and (3) motivational intensity (Gardner, Tremblay, & Masgoret, 1997).

SOF operators may differ in their motivations to learn the target language, and this may affect their success in SOF IAT. Instructors are also advised to be aware of the various types of motivations students may have and plan learning activities around them (Oxford & Shearin, 1994).

Previous focus group discussions have identified a lack of motivation as inhibiting language acquisition and maintenance (*Barriers to Language Acquisition and Maintenance* [Technical Report #2010011024]). Specifically, SOF operators stated they lacked motivation to acquire and/or maintain the target language

because they were not going to use the required area of responsibility (AOR) language during outside AOR deployments. SOF operators also identified the lack of incentive to achieve and maintain language proficiency as negatively affecting their level of motivation (see also *Considering Language in the Promotion Process* [Technical Report #2010011043]). Thus, if SOF leaders and policymakers are able to remove or decrease these barriers to language acquisition and maintenance, then SOF operators may be more motivated to acquire the foreign languages to which they have been assigned.

Self-Efficacy

Self-efficacy refers to an individual's beliefs about his or her ability to complete a task (Bandura, 1977) and is related to motivation to learn, post-training self-efficacy, and training transfer (Colquitt, LePine, & Noe, 2000). In a broader training sense, it is believed that an individual's level of self-efficacy relates to "learning performance" (Goldstein & Ford, 2002, p. 117). In terms of foreign language learning, research indicates language-learning self-efficacy is positively related to language training outcomes (Bonney, Cortina, Smith-Darden, & Fior, 2008; Butler & Lee, 2006; Chen, 2007; Hsieh & Schallert, 2008; *USAJFKSWCS French Legacy Language Training Report: Classes 15 NOV 04 – 12 MAR 07* [Technical Report #2007010103]; *1st SFG 02-26 OCT 07 Cohort Report* [Technical Report #2008010601]).

A meta-analysis investigating the role of individual differences in foreign language acquisition (*The Role of Individual Differences in Foreign Language Speaking Acquisition* [Technical Report #2010010620]) found that across all the individual differences investigated, measures of generalized self-efficacy were the most strongly related to speaking proficiency (r = .38), such that individuals with higher levels of confidence in their ability achieved higher levels of speaking proficiency than did individuals with lower levels of confidence. Research has also found that higher levels of self-efficacy lead to higher levels of post-training speaking proficiency (Huang, 2008; Woodrow, 2006).

Thus, if SOF operators do not believe they are capable of successfully acquiring language proficiency during SOF IAT, their success may be limited, regardless of the effectiveness of other aspects of the training. SOF operators' level of self-efficacy may be influenced by instructional practices, course factors, and training environment factors, which are discussed later in Section III (pp. 17-23).

Attitudes toward and Interest in the Target Language

For decades, researchers have investigated attitudes toward and interest in learning a target language as predictors of foreign language acquisition (e.g., Abu-Rabia, 2003; Lombardo, 1988; Pimsleur, 1963; Veidt, 1973). Research findings on this topic have been mixed. For example, Pimsleur (1963) found that interest in learning the target language was positively associated with language acquisition. In contrast, Mills, Pajares, and Herron (2007) found that student interest and enjoyment in learning the target language was unrelated to final course grades. Despite the mixed findings regarding this individual difference, SOF operators' attitudes toward the target language may affect their language learning success. Therefore, attempts to foster SOF operators' positive attitudes toward and interest in learning the target language may help increase their overall language learning success.

Learning Styles and Strategies

Language learning styles refers to students' predominant approaches to learning a new language, whereas learning strategies can be defined as "…procedures undertaken by the learner, in order to make their own

language learning as effective as possible" (Mitchell & Myles, 1998, p. 89). Learning strategies are contingent upon other individual differences, such as their learning style, personality, and even their gender and culture (Cohen, 1998; Erhman & Oxford, 1995). Research suggests learning styles may have indirect impacts on language acquisition based on their relationship with learning strategies (Jie & Xiaoqing, 2006).

Measuring students' predominant learning style has presented issues. Although a large number of learning styles measures have been developed, these measures have been criticized because of their poor psychometric properties, redundancy with personality measures, and poor construct validity. A few measures have been developed to circumvent these issues (e.g., Jackson's Learning Styles Profiler; Jackson, 2002), but more research is needed to ensure that learning styles can be measured accurately and reliably (Towler & Surface, In progress). Indeed, inconsistent findings have emerged in research on SOF personnel's learning styles (*USAJFKSWCS French Legacy Language Training Report: Classes 15 NOV 04 – 12 MAR 07* [Technical Report #2007010103]; *1st SFG 02-26 OCT 07 Cohort Report* [Technical Report #2008010601]). Thus, caution should be exercised in using these characteristics for student selection for and placement into language training.

Summary

Student individual differences, such as language learning aptitude and motivation, can play significant roles in the language acquisition process during SOF IAT. Though many of these characteristics are innate to language learners and thus, are difficult to change, some of these characteristics may be indirectly influenced by having qualified SOF IAT foreign language instructors.

Instructor Qualifications

As previously noted, the SOF IAT context is a unique environment that may impact students' language learning success differently than in other language training environments. In his discussion of context, Johns (2006) posed the questions of *who*, *where*, *when*, and *why*. In the military training context, specifically the SOF IAT context, the *where*, *when* and *why* will likely remain somewhat stable over time. However, from cohort-to-cohort, there may be a great amount of variability in terms of the *who*, referring to not only the SOF operators who go through SOF IAT, but also to the SOF IAT foreign language instructors who teach IAT courses. Thus, while student, course, and training environment factors are important to the language acquisition process, the instructor plays a "critical role" in "…fostering learning and controlling the social, task, and physical aspects of the discrete learning context" (Surface & Ellington, 2008, p. 2; Ellington & Surface, 2009, April). Because of this importance, language instructors must be of the highest caliber and have the ability to teach efficiently and effectively in the SOF IAT environment.

Previous research has found that instructor assignment accounts for a large amount of variance in post-training student language proficiency (Surface, Ward, & Associates, 2007, July). Similarly, a naturalistic experiment conducted by Ellington and Surface (2007, March) found changing language training vendors at the U.S. Army John F. Kennedy Special Warfare Center and School (SWCS) had positive impacts on SOF operators' DLPT listening and reading proficiency scores. These findings illustrate the impact of instructor effectiveness on student learning outcomes in the SOF IAT context.

The qualifications of SOF IAT foreign language instructors may impact SOF operators' language acquisition success, and may even positively (although indirectly) influence certain student individual differences. The specific SOF IAT foreign language instructor qualifications discussed here include: (1) language proficiency, (2) teaching experience, (3) education, and (4) pre-service training.

Language Proficiency

Previous research has found instructors' language proficiency in both English and the target language to be significantly related to student learning outcomes (*Special Operations Forces Instructor Language Needs Assessment* [Technical Report #2009010603]). More specifically, Ellington and Surface (2007, July) found instructors' target language speaking proficiency scores were positively related to students' listening scores on the DLPT.

Previous reports have recommended foreign language instructors should have, at minimum, a proficiency of Advanced Low in English and a proficiency of Superior in the target language (*Special Operations Forces Instructor Language Needs Assessment* [Technical Report #2009010603]). The American Society of Testing and Materials (ASTM; 2005) recommends a native or near-native target language proficiency level for effective instruction.

Teaching Experience

According to previous research, a positive relationship exists between the tenure of instructors and student achievement outcomes (Carreker et al., 2005). According to ASTM (2005) guidelines, foreign language instructors should have at least two years of teaching experience. Previous teaching experience, along with being familiar with the culture of the target language, were found to be important prerequisites for teaching in the SOF language training context (*Special Operations Forces Instructor Language Needs Assessment* [Technical Report #2009010603]).

Education and Pre-Service Training

It is recommended instructors have Bachelor's degrees, preferably in the target language or education-related fields; however, training goes far beyond instructors' level of education (*Special Operations Forces Instructor Language Needs* [Technical Report #2009010603]). Native speakers of the target language may be used as instructors, but they may lack the instruction-related skills necessary to be successful in the classroom. Foreign language instructors, especially those without the suggested education and experience, should participate in training to learn how to teach effectively in a military training environment, such as SOF IAT (*Online Language Training and the Effective Instructor* [Technical Report #2010010401]).

According to ASTM (2005) guidelines, foreign language instructor training should cover administrative tasks, pedagogical training, course objectives, materials, methodology, lesson planning, cross-cultural sensitivity and evaluation. Again, if an instructor has not had any formal training or experience in these areas, pre-service or on-the-job training is required (ASTM, 2005).

It is also important to assist language instructors in familiarizing themselves with teaching in a military environment. Based on the results of surveys and focus groups with SOF foreign language instructors, it is recommended that pre-service training include military-related familiarization (*Special Operations*

Forces Instructor Language Needs Assessment [Technical Report #2009010603]). Specifically, instructors suggested that future pre-service training cover a familiarization with SOF operators' future mission requirements for which the target language may be used.

Summary

Qualified instructors help create the foundation for successful language acquisition. Without instructors who are able to teach efficiently and effectively in the SOF IAT environment, even the most motivated SOF operators will not be able to acquire the language skills they need to meet their mission-related language requirements and achieve mission success.

Course Factors

In addition to student individual differences and instructor qualifications, success in language acquisition is also contingent upon opportunities available for learning and the adequacy of the presentation of materials (Carroll, 1962). That is, having capable learners is necessary, but not sufficient, for achieving success in language acquisition; SOF IAT language program administrators and instructors must provide SOF operators with supportive learning environments that include the necessary opportunities and resources for acquisition. This section discusses course factors that are essential to language acquisition success, including: (1) curriculum and content, (2) course materials, (3) instructional standards, and (4) instructional objectives and expectations.

Curriculum and Content

Curriculum "…refers to a course of study and is primarily concerned with issues of course content, sequence and articulation" (Heilenman & Kaplan, 1985, p. 57). According to the ASTM *Standards* (2005), curriculum plans are minimum components of foreign language training programs. "Proficiency-based" syllabi are important in developing curricula that are also aimed at target language proficiency as an outcome of training (Heilenman & Kaplan, 1985). To be the most effective in helping SOF operators acquire new language skills, IAT courses must have in place curriculum plans that outline not only the content of the courses, but also the ways in which that content will be structured. As noted previously, pre-service training can ensure instructors are capable of providing SOF operators with syllabi outlining curriculum plans to help SOF operators achieve their language proficiency objectives.

Simply adapting foreign language curriculum plans from outside settings may not provide SOF operators with the language skills necessary to meet their language-related mission requirements. To determine exactly what skills SOF operators need to be mission-prepared and achieve mission success, SOF leaders and IAT language program administrators should consider conducting a training needs assessment, defined as "…a systematic process that applies work analysis techniques and procedures to identify and specify training requirements that have been linked to deficiencies in individual, team, or organization performance to develop learning objectives to address the identified deficiencies" (Surface, 2012, p. 437). By conducting a thorough training needs assessment for each SOF training institution, SOF leaders and IAT language program administrators will be better able to determine exactly what language skills SOF operators need to acquire during SOF IAT to be mission-ready and how to scope and sequence SOF IAT accordingly. One example of a training needs assessment conducted in the SOF IAT community was the *Naval Special Warfare (NSW) Language and Cultural Training Curriculum Development Project*

(Technical Report #2011010109); the goal of this project was to develop a foreign language curriculum based on NSW personnel's mission requirements.

Course Materials

According to the ASTM (2005) *Standards*, language training programs should include instructional materials that are professionally developed, user-friendly, and appropriate for the skill levels of the students participating. It is also important to include materials that can be used by students for study outside of the classroom (ASTM, 2005). The Defense Language Institute Foreign Language Center (DLIFLC) also emphasizes using materials that are authentic, supplementing "core texts" with materials in the target language, such as newspapers and magazines (DLIFLC, 1995, p. 3).

Instructional Standards

Higher instructional standards may be more likely to produce more knowledgeable students (*Online Language Training and the Effective Instructor* [Technical Report # 2010010401]). Both ASTM (2005) and the American Council on the Teaching of Foreign Languages (ACTFL, 1999) have developed standards that can be applied in the foreign language classroom. The ACTFL *National Standards for Foreign Language Learning in the 21st Century* (1999) distinguish communication, cultures, connections, comparisons, and communities as the goals of foreign language instruction. The goal of foreign language instruction is not to simply teach students a new language, but to help increase their cultural awareness and utilize their newly acquired skills outside of formal instructional settings.

By applying appropriate standards to the SOF IAT classroom, it may be possible to help operators acquire a more in-depth knowledge of the target language and culture and be more prepared to use their newly acquired language skills downrange, where it is most important.

Instructional Objectives and Expectations

Instructional objectives are goals that reflect what students should be capable of after instruction, and whether or not these objectives are met may be used to evaluate the effectiveness of instruction (*Online Language Training and the Effective Instructor* [Technical Report # 2010010401]). Goals that are specific and challenging may lead to higher task performance than goals that are easy or broad, or situations where there are no goals at all (Locke, Shaw, Saari, & Latham, 1981). In a naturalistic experiment, increasing the standard for graduation at SWCS from an ILR Level 0+/0+/0+ to an ILR Level 1/1/1 generally resulted in positive impacts on SOF operators' listening and reading proficiency scores, as measured by the DLPT, and speaking proficiency scores, as measured by the OPI (Ellington & Surface, 2007, March). In addition, SOF operators' proficiency test scores from the Basic Language Course (BLC) at SWCS from July 2011 to July 2012 illustrate that many operators are already achieving an increased training objective within the current training duration; 57% of SOF operators from the BLC at SWCS exceeded the ILR Level 1/1 standard and 10.8% met the ILR Level 2 standard. These findings represent statistically significant increases of 9% and 5.4%, respectively, from the July 2010 to July 2011 time period (*BLC FY 2012 Training Trend Report* [Technical Report #2012010635]). Thus, these findings lend support for Scenario 2 (i.e., maintain duration, increase objective), in particular, and suggest that many SOF operators are already achieving increased training objectives within the current training duration.

The expectations instructors have of their students can also impact student performance. When instructors have high expectations of their students, students perform better than students taught by instructors with low expectations (Eden & Ravid, 1982). This aligns with the idea of the self-fulfilling prophecy in training, whereby negative expectations held by instructors are related to inconsistent treatment of students and decreases in student success (Shapiro, Quinones, & King, 2007). If the end training objectives of SOF IAT are increased, while maintaining the current training duration, SOF IAT language program administrators and instructors will play crucial roles in helping SOF operators achieve their increased objectives by increasing their expectations of operators and encouraging them to achieve these increased objectives.

If the training objectives of SOF IAT are not being met by SOF operators, then this is another indicator that training needs assessment may be necessary (cf. Surface, 2012). In the SOF IAT context, if the desired end proficiency goal of IAT is not being met by operators, or there is a desire to increase the end proficiency goal, training needs assessment may be able to indentify whether or not the desired goal is realistic and how this increased level of language proficiency will benefit SOF operators downrange. By assessing the skill level necessary for SOF operators to be mission-ready, training needs assessment will help ensure the end goals of SOF IAT are appropriate and realistic, fostering mission-readiness and a strong sense of accomplishment among SOF operators.

Training Environment Factors

Student individual differences, instructor qualifications, and course factors interact within the larger context of the training environment. Because of this, training environment factors may also affect SOF operators' success in language acquisition. In this section, several training environment factors are examined, including: (1) class size, (2) training purpose, (3) organizational climate, and (4) technology.

Class Size

Class size may impact language learners' success, and smaller classes may provide more learning opportunities (Clifford, 1995). In terms of "rapid learning," the Foreign Service Institute (FSI) has found that six students at lower proficiency is the maximum class size for Category I and II languages like French or Spanish. For higher-level languages and classes at more advanced levels, it is recommended that classes have no more than four students (Jackson & Kaplan, 2001, p. 76). Students learning in smaller classes may also build a sense of community with their peers, and this may also positively impact their success (Sadera, Robertson, Song, & Midon, 2009).

Previous research on this topic supports the importance of smaller class sizes for language learning. For example, Yi (2008) examined the effect of reducing class size on language proficiency for students learning Modern Standard Arabic, Chinese, or Korean and found a reduction from class sizes of 9-10 students to a class size of five to six students positively impacted proficiency levels. As compared to those in the larger classes, students in the smaller classes achieved higher proficiency levels at the end of the course in reading, listening, and speaking, as measured by the DLPT and the OPI (Yi, 2008). Also, a previous SOF study found the initial level of listening acquisition and the rate of change in listening acquisition over time was predicted by class size, such that students in larger classes had lower listening proficiency levels initially and experienced greater declines in their listening proficiency levels over time, as compared to students in smaller classes (SWA Consulting Inc., 2007, December).

Although there are benefits to individual attention in language learning, exclusive one-on-one training is not recommended for most learners, because many learners benefit from the interaction with classmates (Jackson & Kaplan, 2001). Thus, language program administrators must strike a balance between class sizes that are too large or too small, based on the difficulty of the language and the proficiency levels of the students.

Training Purpose

The purpose of language training refers to the reasons behind attempts to learn the target language. Although the purpose of language training may differ from context-to-context, the purpose of SOF IAT is clear. USSOCOM's vision is to have "SOF [who have]…basic through native language and culture capability" (USSOCOM M 350-8, p. 6). To increase the efficiency and effectiveness of SOF IAT, this purpose must be emphasized from the beginning of language training. If a training needs assessment has been conducted to identify SOF operators' language-related mission requirements (cf. Surface, 2012), and if SOF operators understand the importance of language and culture capability to their mission-readiness and mission success, then their motivation to acquire and maintain their language and culture capability may increase. Without knowing SOF operators' language-related training needs and without a clear purpose for SOF IAT, it may be difficult for some SOF operators to actively engage in the language training process.

Organizational Climate

Organizational climate refers to the mood and atmosphere of an organization, and research has shown it may impact the attitudes and behaviors of individuals within the organization (Schulte, Ostroff, & Kinicki, 2006). In training contexts, positive organizational climates are predictive of both motivation to learn and training transfer, and are also positively related to declarative knowledge, skill acquisition, trainee reactions, and job performance (Colquitt et al., 2000).

SOF operators have previously identified a lack of command support as a barrier to language acquisition and maintenance (*Barriers to Language Acquisition and Maintenance* [Technical Report #2010011024]). According to SOF operators, the low prioritization of language training by command personnel results in a lack of resources available for language learning. As a result of a lack of command protection for language training time, SOF operators often must study during non-duty hours. If SOF leaders do not emphasize the importance of language training, then it may not be seen as a priority by SOF operators. In turn, this may have detrimental effects on the language proficiency levels achieved by SOF operators during SOF IAT, especially if IAT length is decreased.

Technology

The use of technology during SOF IAT may supplement the language curriculum and also allow for greater gains in SOF operators' language proficiency levels. In one study, integrating technology-enhanced language learning (TELL) into a second-semester French class increased students' positive views of their progress towards their language goals and also challenged students to take greater responsibility in working towards these goals (Adair-Hauck, Willingham-McLain, & Youngs, 1999). Furthermore, course delivery method (e.g., computer-based, blended, face-to-face) could influence the relationship between student individual differences and language acquisition. Previous studies have

found significant relationships between individual differences and training outcomes when computer-based instruction is utilized (Surface, Ward, & Associates, 2007, July).

According to ASTM (2005), language training programs should include learning resources, such as audio and video capabilities, and the DLIFLC (1995) suggests technology should be used to support "live instruction" (p. 4).

Conclusion

This section discussed the specific aspects of student individual differences, instructor qualifications, course factors, and training environment factors that may be leveraged to either (1) decrease the current duration of SOF IAT, while expecting SOF operators to achieve the current training objective, or (2) maintain the current duration of SOF IAT, but increase training objective. To further emphasize the importance of examining these four elements of foreign language training in the SOF IAT context, Section IV (pp. 24-55) will present the perspectives of key experts and stakeholders regarding the overall topic of this report and these four elements.

SECTION IV: PERSPECTIVES OF KEY EXPERTS AND STAKEHOLDERS

Purpose

Interviews were conducted with key experts (i.e., academicians, researchers) and stakeholders in the SOF language training community to collect information about their perspectives on elements of foreign language training that must be considered when attempting to decrease the current duration of SOF IAT, while maintaining the current training objective, or maintaining the current duration of SOF IAT, while increasing the training objective. Results from these interviews can be used by SOF leaders and policymakers to determine specific elements of foreign language training that may be leveraged if SOF leaders and policymakers are called upon to decrease the current duration of IAT, while maintaining the current training objective, or maintain the current duration of IAT, while increasing the training objective.

Research Areas and Questions

For the interviews conducted with both key experts and stakeholders, there were six primary research areas: (1) main factors or levers, (2) student or learner characteristics, (3) instruction, (3) learning context or environment, (5) common barriers and mistakes, and (6) additional resources. Research questions for each area included:

Main Factors or Levers

- What are the main factors or levers that could be used to achieve a particular training objective within a specific duration?
- What changes would not be helpful or would not make a significant difference?

Student or Learner Characteristics

- Is it effective to select students or learners for language instruction based on a particular characteristic?

Instruction

- In general, how might instruction affect the amount of time it takes to achieve a particular level of language proficiency?
- Is there a model of instruction that could optimize instructional efficiency/effectiveness so the same training objective may be achieved within a shorter duration, or so that an increased training objective may be achieved within the same duration?

Learning Context or Environment

- What aspects of the learning context or environment are important to the amount of time it takes to achieve a particular level of language proficiency?

Barriers and Common Mistakes

- What barriers would prevent achievement of the training objective if the duration of training was shortened? What barriers would prevent achieving a higher training objective without changing the duration of training?

- What are some common mistakes language program administrators may make when attempting to shorten the duration of training while maintaining the current training objective? What are some common mistakes language program administrators may make when attempting to increase the training objective while maintaining the current duration of training?

Additional Resources

- What additional resources would be needed to facilitate students achieving the same training objective in a shortened amount of time? What additional resources would be needed to facilitate students achieving a higher training objective in the same amount of time?

Main Findings

After interviewing key experts and stakeholders, interview responses were content-coded to summarize experts' and stakeholders' perspectives on this topic. In addition, ratings provided by experts and stakeholders were analyzed. The main findings resulting from these interviews are:

- Main Factors or Levers: *Training environment factors* were the most frequently mentioned category across both participant groups.

- Student or Learner Characteristics: *Language learning motivation, native language,* and *personality* were rated as effective selection characteristics by all participants. Regarding other important characteristics, s*tudent abilities and aptitudes* were the most frequently mentioned category across both participant groups.

- Instruction: *Instructor behavior* was the most frequently mentioned category regarding how instruction may affect time to achieve proficiency. *Homework and self-study time* and *technology* were the most frequently identified aspects of instruction to be leveraged. *Classroom instruction* (e.g., communicative, student-centered) was the most frequently mentioned category regarding a model of instruction that could be used to optimize the efficiency and effectiveness of instruction.

- Training Context: *Opportunities for practice* were rated as *very important* by all participants, followed by instructors, who were rated as *very important* by 85.71% of participants. Other factors identified by respondents included *opportunities for immersion* and *internal stress factors*.

- Barriers and Common Mistakes: *Poorly trained instructors* was the most frequently mentioned barrier for Scenario 1 (i.e., decrease duration, maintain objective). *Time available for language training* was the most frequently mentioned barrier for Scenario 2 (i.e., maintain duration, increase objective).

- Additional Resources: *Technology* was the most frequently mentioned additional resource needed for Scenario 1 (i.e., decrease duration, maintain objective), whereas there was little similarity among responses for Scenario 2 (i.e., maintain duration, increase objective).

- Overall, participants indicated that Scenario 2 (i.e., maintain duration, increase objective) is more realistic and achievable than Scenario 1 (i.e., decrease duration, maintain objective). Indeed, recent findings from the *BLC FY 2012 Training Trend Report* (Technical Report #2012010635) support these findings.

Recommendations

The recommendations based on the main findings from interviews with key experts and stakeholders are:

- Needs assessment – conduct task and knowledge, skills, and abilities (KSA) analyses to create alignment between all training elements in SOF IAT (cf. Surface, 2012).

- Enacting either scenario (i.e., decreasing duration while maintaining objective or maintaining duration while increasing objective) will require stakeholder cooperation and participation. Thus, it is imperative to get stakeholders' buy-in from the beginning of the change process (Cummings & Worley, 2009).

Method

Participant Identification and Contact

To collect information about experts' and stakeholders' perspectives on this topic, it was first necessary to identify participants to be contacted.

Key Experts

Key experts were identified for interview participation based on the literature review that was conducted for this study (Section III, pp. 10-23); these experts were primarily academicians or researchers who presented or published research on one or more of the four elements of foreign language training discussed in the literature review. A total of 14 experts, representing 11 different affiliations, were contacted.

Key Stakeholders

SOF language program administrators and other key SOF personnel were identified for key stakeholder interviews. A total of 11 stakeholders, representing the following SOF affiliations, were contacted (Table 1, p. 28):

- Air Force Special Operations Command (AFSOC)

- Naval Special Warfare (WARCOM)

- Special Operations Forces Language Office (SOFLO)

- U.S. Army John F. Kennedy Special Warfare Center and School (SWCS)

- U.S. Marine Corps Forces Special Operations Command (MARSOC)

Key experts and stakeholders were initially contacted via email to request their participation in an hour-long telephone interview conducted by an SWA researcher. The email detailed the intent of the study and included a statement regarding how SWA researchers would use the data collected during the interviews.

A formal letter, individually addressed to each participant, was attached to the email each participant received. Slightly different versions of this letter were created for individuals in each of the two participant groups: (1) key experts (Appendix A, pp. 77-79) and (2) key stakeholders (Appendix B, pp. 80-81).

Each letter contained a uniform resource locator (URL) for an online interest survey. By completing this interest survey, each participant would indicate his or her interest in participating in the study and general availability for the interview. Participants who did not respond to the online interest survey within several business days were contacted again via email to request their participation.

Interview Protocol Development and Participation

Interview Protocol Development

The protocols for the interviews with key experts (Appendix C, pp. 82-86) and stakeholders (Appendix D, pp. 87-91) were developed by SWA researchers specifically for this study. The protocols were based on a systematic review of theoretical, empirical, and best practices literature in the fields of education, psychology, second language acquisition, and training (Section III, pp. 10-23). These reviews allowed SWA researchers to identify important elements of foreign language training from which to develop interview questions. Although most of the interview questions were open-ended, during two sections of the interview (i.e., student or learner characteristics and learning context or environment), experts and stakeholders were asked to provide ratings in response to close-ended questions.

Upon completion, the interview protocols for both the key expert and stakeholder interviews were submitted to the Deputy Chief of FMD-J9 for an independent review of the study's exemption qualification. Under Title 32, §219 of the Code of Federal Regulations from the Department of Defense Instruction 3216.02, this study qualified as exempt because the information interviewees provided is not published in this report showing how specific individuals responded and identities are protected.

The key expert and stakeholder interview protocols included greetings, introductory statements, interview questions, and closing statements. Though the interview protocols for key expert and stakeholder interviews were largely the same, slightly different phrasing was used for some of the questions in the interview protocols (e.g., expert interview questions used the term "instruction" instead of "training").

Interview Participation

After developing the interview protocols and contacting individuals in the two participant groups, telephone interviews were scheduled with interested participants based on their availability. For each telephone interview that was conducted, there was one interviewer and one scribe from SWA.

A total of 11 interviews were conducted across the two participant groups. Thus, of the 25 individuals contacted, 44% actually participated in interviews. The highest rate of participation was in the key

stakeholders group (*n* = 7; 63.64%). In the expert group, four of the 14 individuals who were contacted actually participated in interviews (28.57%).

Table 1. Participation by Key Stakeholders

SOF Affiliation	Number Contacted	Number Interviewed
AFSOC	2	2
WARCOM	3	0
SOFLO	1	1
SWCS	3	2
MARSOC	2	2
Total	**11**	**7**

Results

Results from the key expert and stakeholder interviews are presented by research area, with exemplar comments provided where appropriate.

Main Factors or Levers

Participants were asked to respond to three open-ended questions regarding two different scenarios: (1) Scenario 1: decreasing the current duration of SOF IAT, while maintaining the current training objective, or (2) Scenario 2: maintaining the current duration of SOF IAT, while increasing the training objective. The comment codes and frequency counts are presented for each question, along with brief descriptions of these results.

Scenario-based Questions

> "If you were tasked with one of the scenarios we just described, what are the main factors or levers you would use to achieve a particular training objective within a specific duration? In other words, what are the most important factors that need to be considered when attempting to achieve a particular training objective within a specific duration?"

In response to theses question, experts' and stakeholders' comments were categorized into five main categories: (1) training environment factors, (2) student individual differences, (3) course factors, (4) instructor qualifications, and (6) other (Table 2, p. 29). Overall, training environment factors were the most frequently mentioned category across both participant groups. The main training environment factors identified by participants were those relating to the training purpose, including ensuring that training is task-specific or mission-relevant. Other responses included reducing distractions (e.g., administrative breaks, time off for physical training). Several exemplar comments from key experts and stakeholders further illustrate these findings:

> *"It definitely needs to be more focused on the objective so that the training that you're providing is relevant to their mission."*
>
> Key Stakeholder Participant

> *"I would want to know what the mission is and do my utmost to teach them specifically the language, grammar to get what they need."*
>
> Key Expert Participant

> *"I hope I don't get tasked to do this but if I was, maybe the class size, maybe less students per class, but in our institution we don't have big classes. That would be one way to have more one on one time. Maybe less administrative breaks in between, like when they have to fly, do PT, or something like that, would help."*
>
> Key Stakeholder Participant

Table 2. Comment Codes and Frequency Counts for Scenario-based Question

	Expert	Stakeholder	Total
Training environment factors	2	5	7
Student individual differences	1	4	5
Course factors	2	3	5
Instructor qualifications	0	3	3
Other	1	1	1

Note. The total number of responses received to this question = 10 (Experts: $n = 3$; Stakeholders: $n = 7$).

Unhelpful Changes

After providing their responses to the scenario-based question, participants were then asked to respond to the following question: "What changes would not be helpful or would not make a significant difference?" Though participants provided a number of divergent responses to this question, the two most frequently mentioned responses included the random use of technology and the use of non-mission-relevant curriculum (Table 3, p. 30). Participants said:

> *"Another thing is random technology, like buying a gadget or software and expecting a miracle, there are advantages to technology, but they have to be used in a thoughtful way with specific goals in mind, weigh costs and benefits."*
>
> Key Expert Participant

> *"In my experience, you give them a lot of technology options and don't train them how to use them or instructors how to use them, some can't email or upload a file…I would say it can make a difference if students are motivated to use it, but we spend a lot of money and they end up collecting dust. I have seen SMART boards with stuff taped to them. If you don't know how to use it, it doesn't add value; people were learning languages before SMART boards."*
>
> Key Stakeholder Participant

> *"What has not worked for us is developing curriculum outside of having input from the Force regarding what is needed, because we are missing what is mission-relevant."*
>
> Key Stakeholder Participant

Table 3. Comment Codes and Frequency Counts for Unhelpful Changes Question

	Expert	Stakeholder	Total
Random use of technology	1	3	4
Use of non-mission-relevant curriculum	0	2	2
Lack of alignment between testing requirements and training objectives	0	1	1
Frequently changing support materials	0	1	1
Simply adding more contact hours	0	1	1
Simply adding more assigned homework hours	0	1	1
Lack of instructor training	0	1	1
Simply reducing class size	1	0	1
Depends on the training context	1	0	1

Note. The total number of responses received to this question = 9 (Experts: *n* = 2; Stakeholders: *n* = 7).

Differences between Scenarios

Next, participants were asked the following questions regarding differences between the two scenarios: "Do the important factors differ between these scenarios? That is, would some factors or levers apply to only one of the scenarios, but not both? If so, which ones and why?" In general, participants' responses to these questions illustrate they believe the important factors do differ between the two scenarios. Participants' responses indicated that student selection based on aptitude and motivation, as well as high-quality instruction, were perhaps more important in the first scenario rather than in the second scenario. Overall, participants indicated the second scenario is more realistic and achievable than the first scenario.

Student or Learner Characteristics

For 10 pre-selected student or learner characteristics, interview participants in both the expert and stakeholder groups were asked to respond to the following question using "Yes" or "No" responses: "Is it effective to select students or learners for language training based on the following characteristic?" For each characteristic to which a "Yes" response was provided, the participant was then asked to provide a rating of the characteristic's effectiveness, using a three-point Likert-type response scale (1 = *To some extent*, 2 = *To a great extent*, 3 = *To a very great extent*). Ratings are presented by characteristic for both experts and stakeholders, with brief discussions of these results.

Age

Experts and stakeholders differed somewhat in their views of age as an effective characteristic for selecting students for language training (Figures 1 and 2, p. 31). All experts (*n* = 3) agreed that age is an effective selection characteristic, while 85.71% of stakeholders (*n* = 6) shared this view. In total, 90% (*n* = 9) of all respondents indicated it is effective, but only 11.11% (*n* = 1) feel it is effective *to a very great extent*. Exemplar comments from interviews further illustrate these findings:

> "*What we're looking at, what we see, it's irrelevant, it's not their age, it's their mission experience, age doesn't matter. We do see that with age comes maturity, but it's kind of a non-factor because you get maturity at difference ages.*"
>
> Key Stakeholder Participant

Figure 1. Expert Ratings of Age

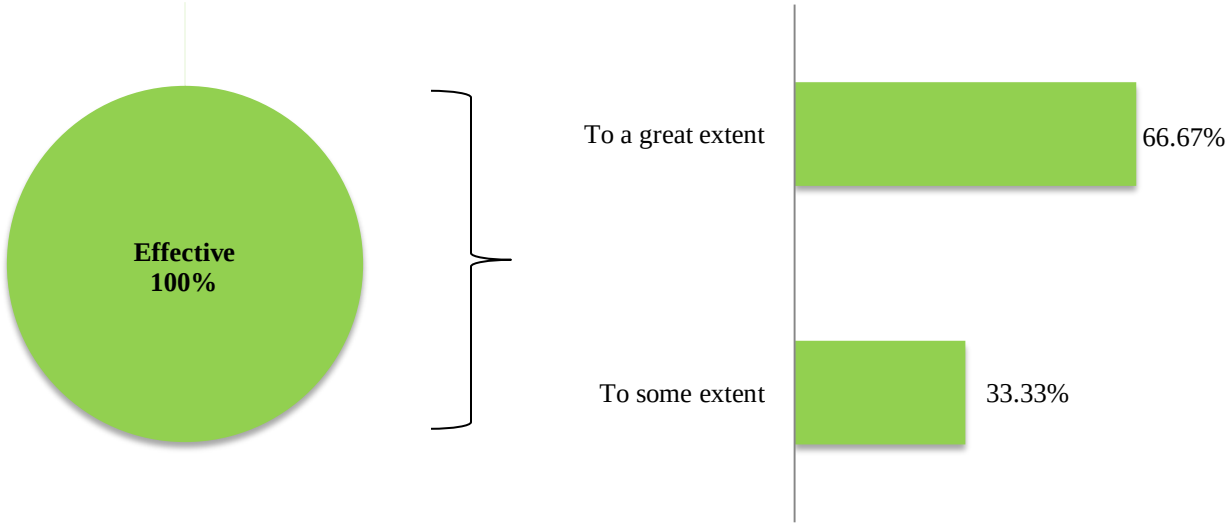
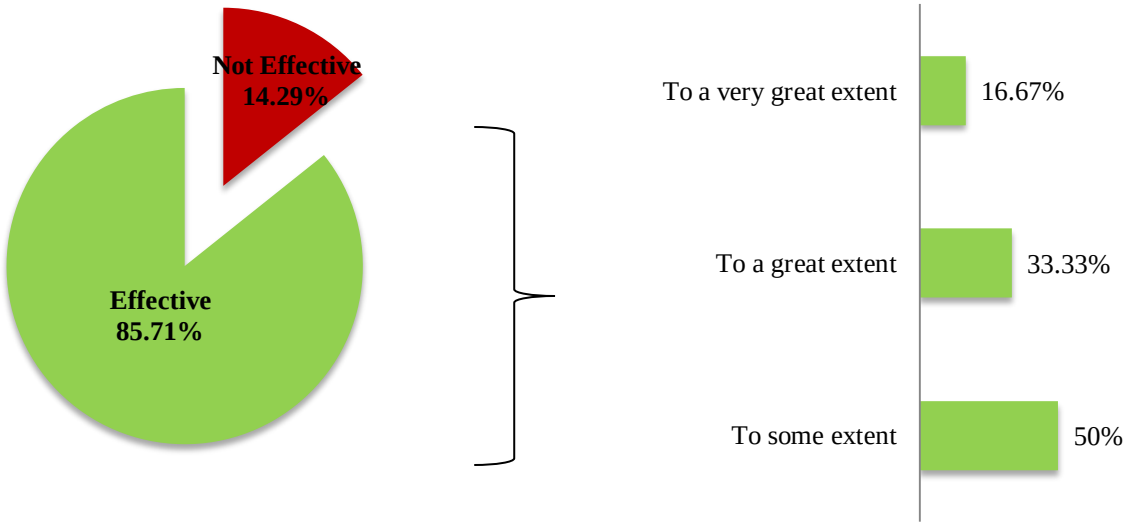


Figure 2. Stakeholder Ratings of Age



Intelligence

For the purposes of this study, intelligence referred to student's general mental or cognitive ability. Experts overwhelmingly (100%, *n* = 3) rated intelligence as an effective selection characteristic, whereas only 71% (*n* = 5) of stakeholders shared this same opinion (Figures 3 and 4, p. 32). In terms of ratings of effectiveness, 33.33% of experts (*n* = 1) and 60% (*n* = 3) of stakeholders rated intelligence as effective *to a very great extent*. In total, 80% (*n* = 8) of all respondents indicated it is effective, but only 50% (*n* = 4) rating it as effective *to a very great extent*. Exemplar comments from interviews further illustrate these findings:

"Evidence in the literature is soft on intelligence; in general I would say it's not a big deal and again we self-select for a group of people who are a certain level or higher."

Key Stakeholder Participant

Figure 3. Expert Ratings of Intelligence

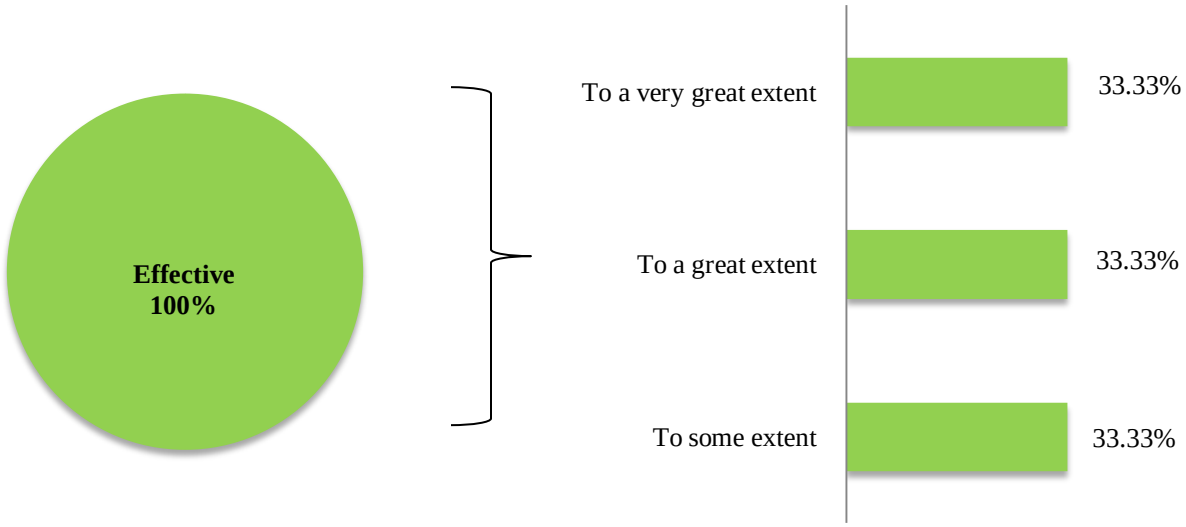
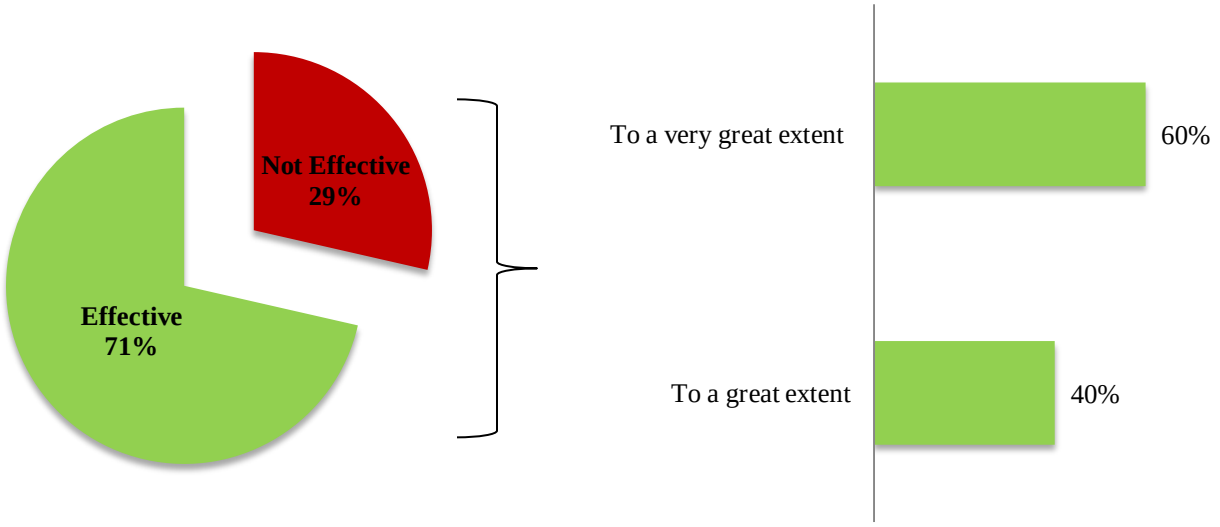


Figure 4. Stakeholder Ratings of Intelligence



Initial Proficiency

In the current study, initial proficiency was defined as students having some level of language proficiency beyond an absolute beginner level. Only 67% (n = 2) of experts rated initial proficiency as an effective selection characteristic, compared to 100% (n = 7) of stakeholders (Figures 5 and 6, p. 33). However, of

those experts who indicated initial proficiency is effective, 100% (*n* = 2) rated it as effective *to a very great extent*, compared to only 28.57% (*n* = 2) of stakeholders. In total, 90% (*n* = 9) of all respondents indicated it is effective, with 37.5% (*n* = 3) rating it as effective *to a very great extent*.

Figure 5. Expert Ratings of Initial Proficiency

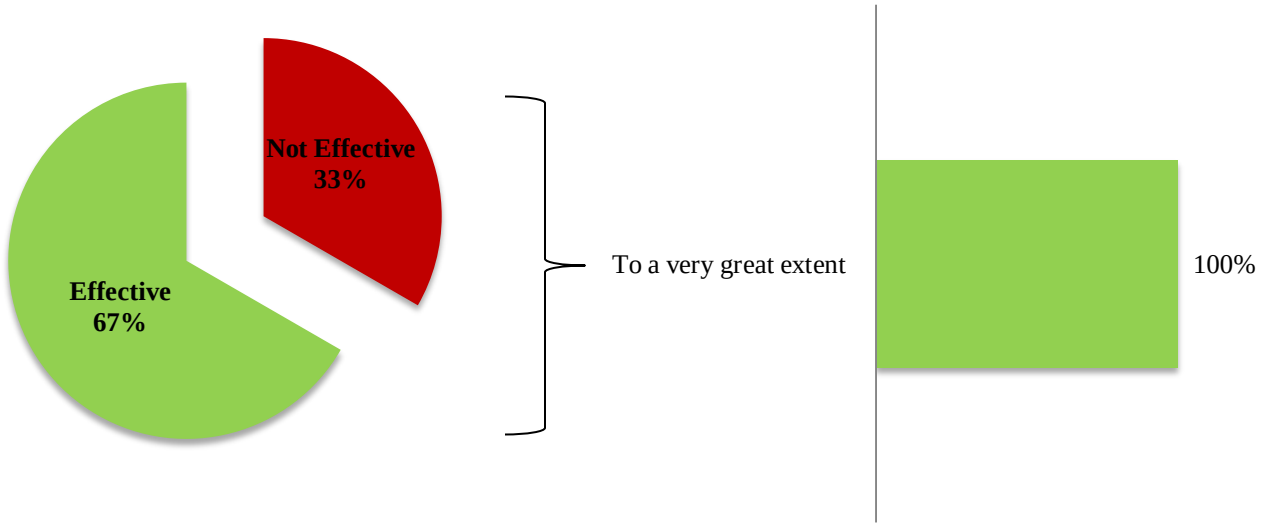
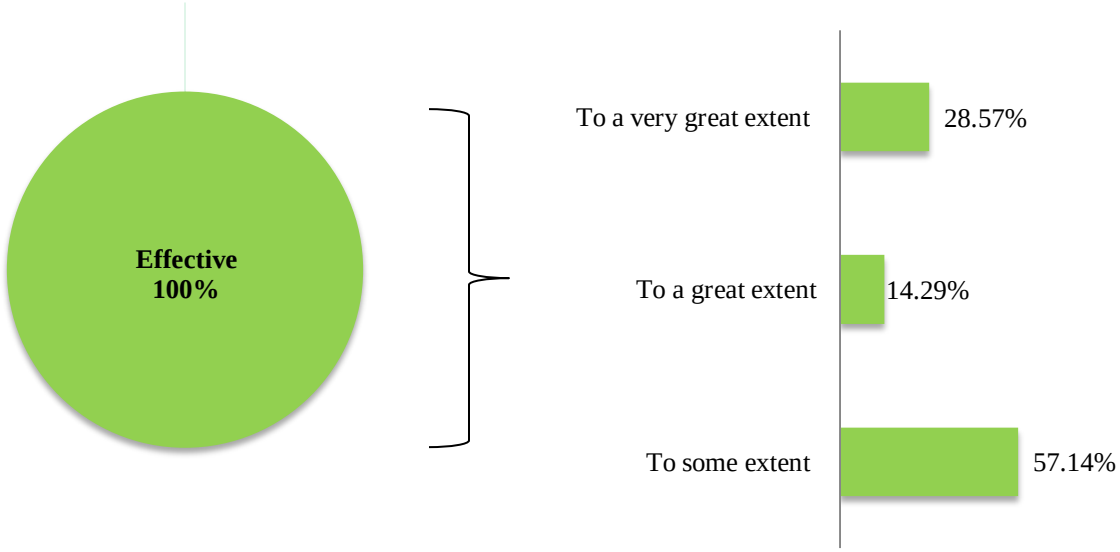


Figure 6. Stakeholder Ratings of Initial Proficiency



Previous Language Training or Experience

Previous language training or experience (e.g., high school course) was defined as students have some previous exposure to the language to which they were assigned for training. Of the experts responding to

this question, 66.67% (*n* = 2) believe previous language training or experience is an effective selection characteristic, whereas 100% (*n* = 7) of stakeholders rated it as effective (Figures 7 and 8, pp. 34-35). All (*n* = 3) experts who rated this characteristic as effective believe it is effective *to a very great* extent, compared to only 28.7% (*n* = 2) of stakeholders. In total, 90% (*n* = 9) of participants indicated it is effective, with 37.5% (*n* = 3) rating it as effective *to a very great extent*. Exemplar comments from interviews further illustrate these findings:

> *"Obviously yes, more experience you have learning a language, the better you are. It is something we should take into account but we don't screen for. If I had a guy that had someone whose mother spoke Korean to him at home, why are we putting him in the IAT Korean class? We should screen him right away and see what his level is."*
>
> Key Stakeholder Participant

Figure 7. Expert Ratings of Previous Language Training or Experience

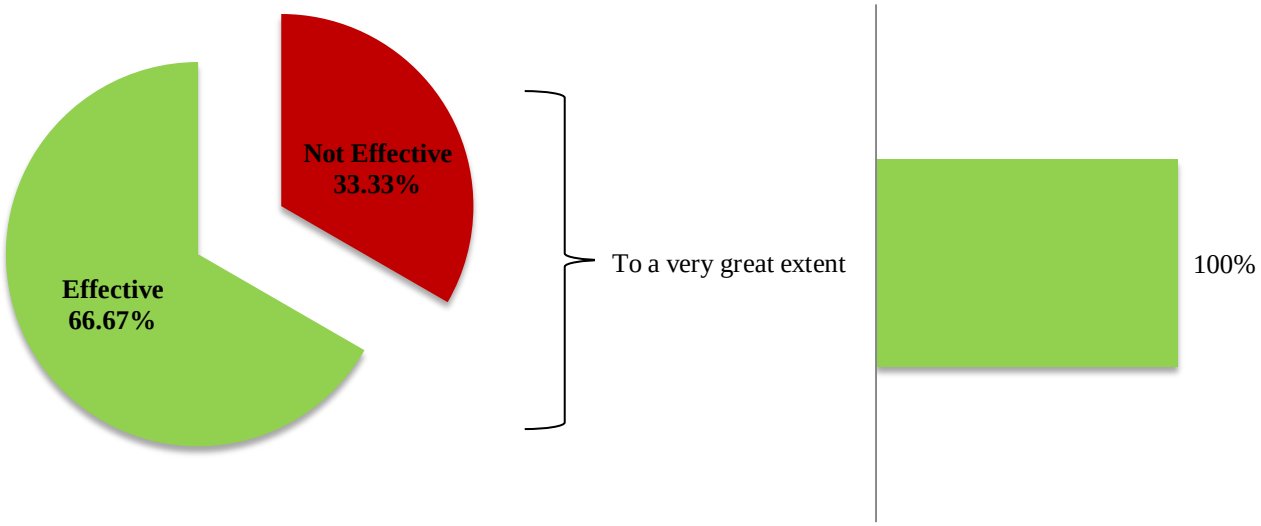
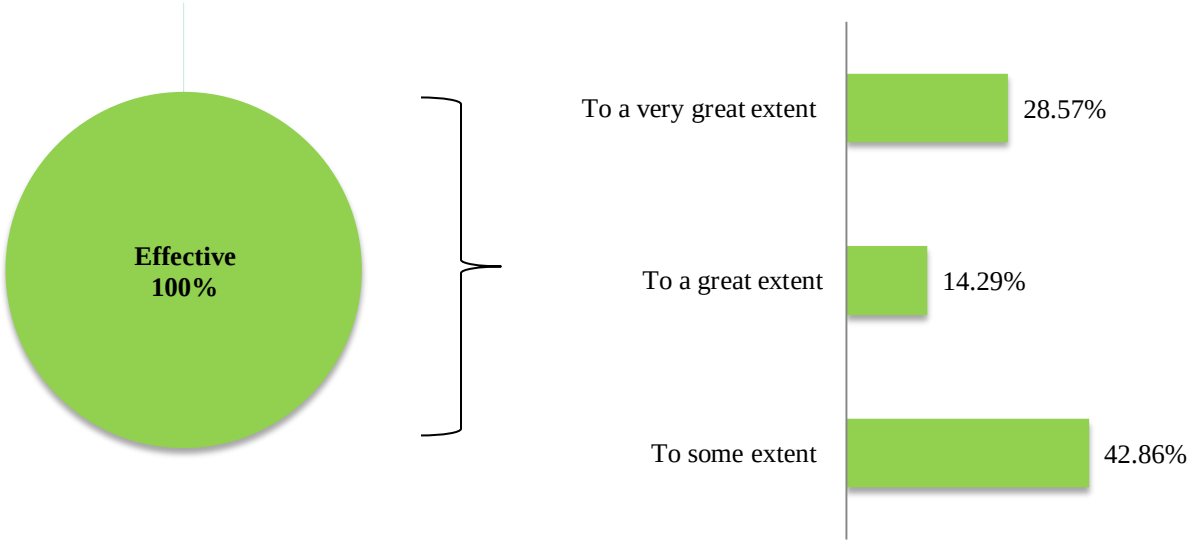


Figure 8. Stakeholder Ratings of Previous Language Training or Experience[1,2]



[1]One respondent provided a rating of 2.5 (14.29%).
[2]Percentages may not add to 100% due to rounding error.

Language Learning Motivation

All experts (*n* = 3) and stakeholders (*n* = 7) indicated language learning motivation is an effective selection characteristic (Figures 9 and 10, p. 36). However, experts were split regarding the extent of its effectiveness, with 50% (*n* = 1) rating it as effective *to a great extent* and 50% (*n* = 1) rating it as effective *to a very great extent*. A larger percentage of stakeholders (85.71%, *n* = 6) rated language learning motivation as effective *to a very great extent*. In total, all respondents (*n* = 10) indicated language learning motivation is an effective selection characteristic, with an overwhelming majority (*n* = 7) indicating it is effective *to a very great extent*.

Figure 9. Expert Ratings of Language Learning Motivation

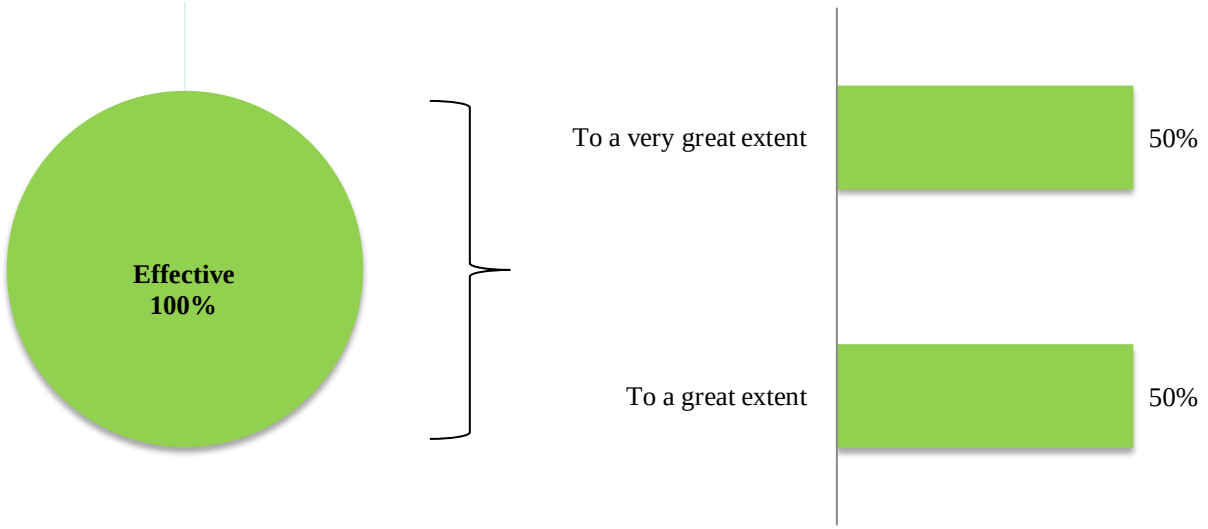
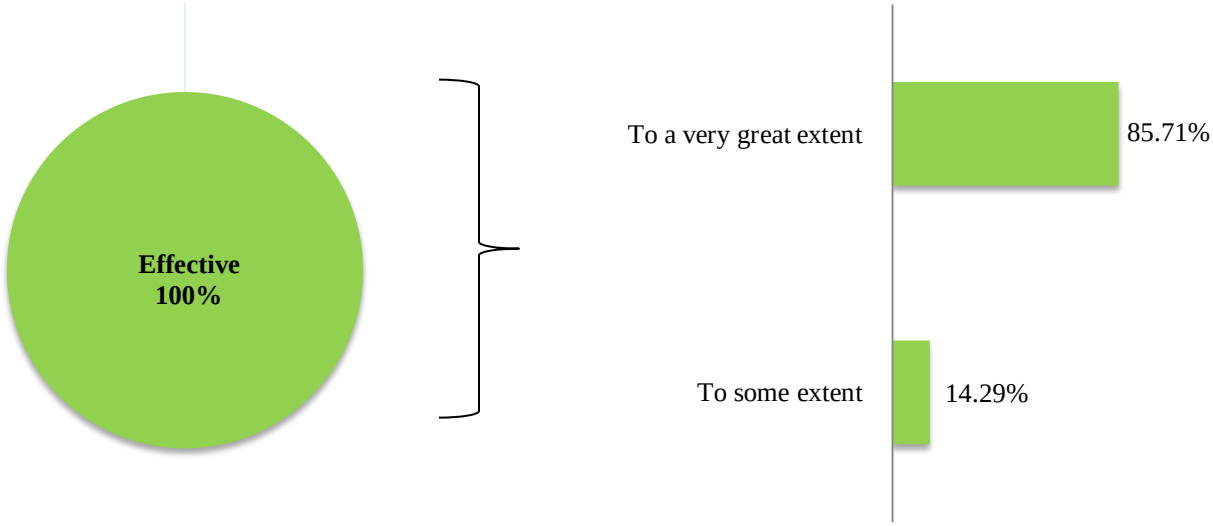


Figure 10. Stakeholder Ratings of Language Learning Motivation



Language Learning Aptitude

All experts (*n* = 3) rated language learning aptitude as an effective selection characteristic *to a very great extent* and fewer stakeholders (86%, *n* = 6) rated it as effective, with 50% (*n* = 3) indicating it is effective *to a very great extent* (Figures 11 and 12, p. 37). In total, over 90% (*n* = 9) of participants rated it as effective, with 62.5% (*n* = 5) rating it as effective *to a very great extent*.

Figure 11. Expert Ratings of Language Learning Aptitude

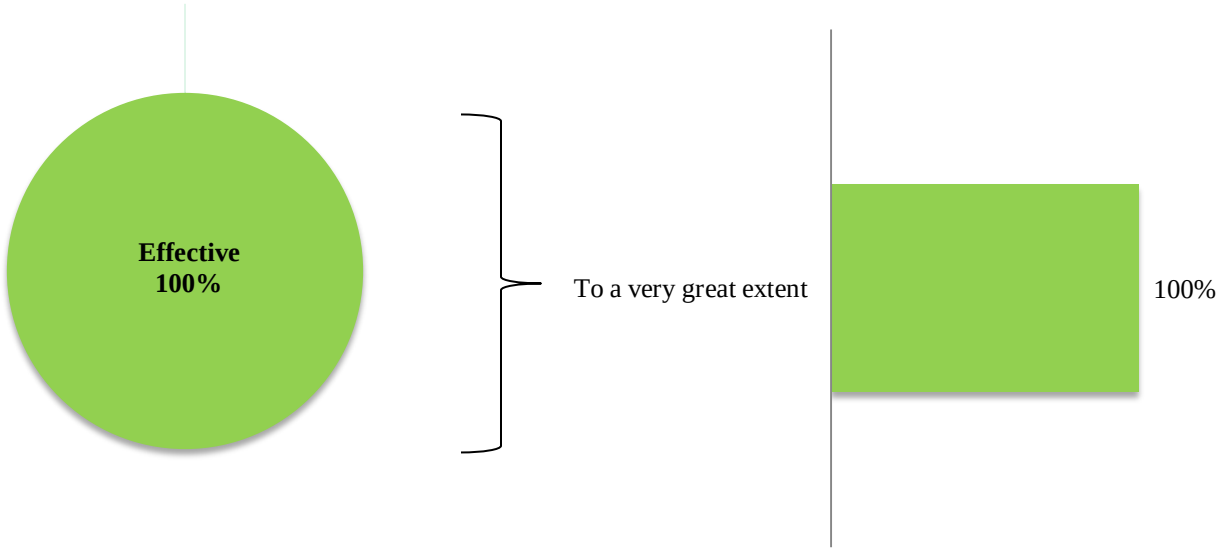
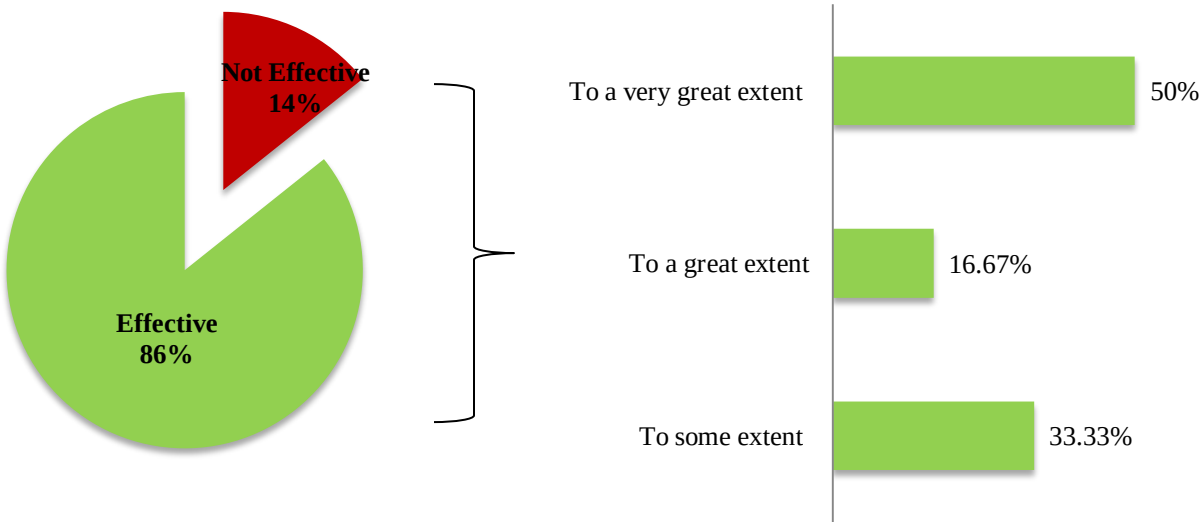


Figure 12. Stakeholder Ratings of Language Learning Aptitude



Native Language

Participants were asked to indicate the effectiveness of native language as a selection characteristic when the student's native language was similar to the language to which he is assigned for training. All experts (n = 2) and stakeholders (n = 7) indicated that native language is an effective selection characteristic; however, the two groups differed on their ratings of effectiveness for this characteristic (Figures 13 and 14, p. 38). Of the experts who provided a rating, 100% (n = 1) believe it is effective *to some extent*, whereas only 50% (n = 3) of stakeholders rated it as effective *to a very great extent*.

Figure 13. Expert Ratings of Native Language

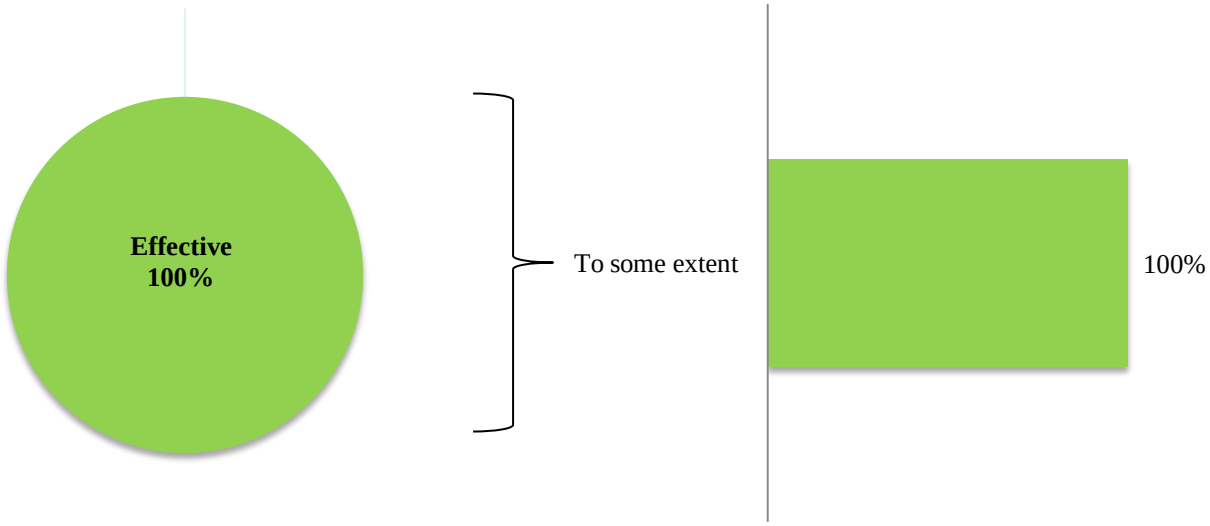
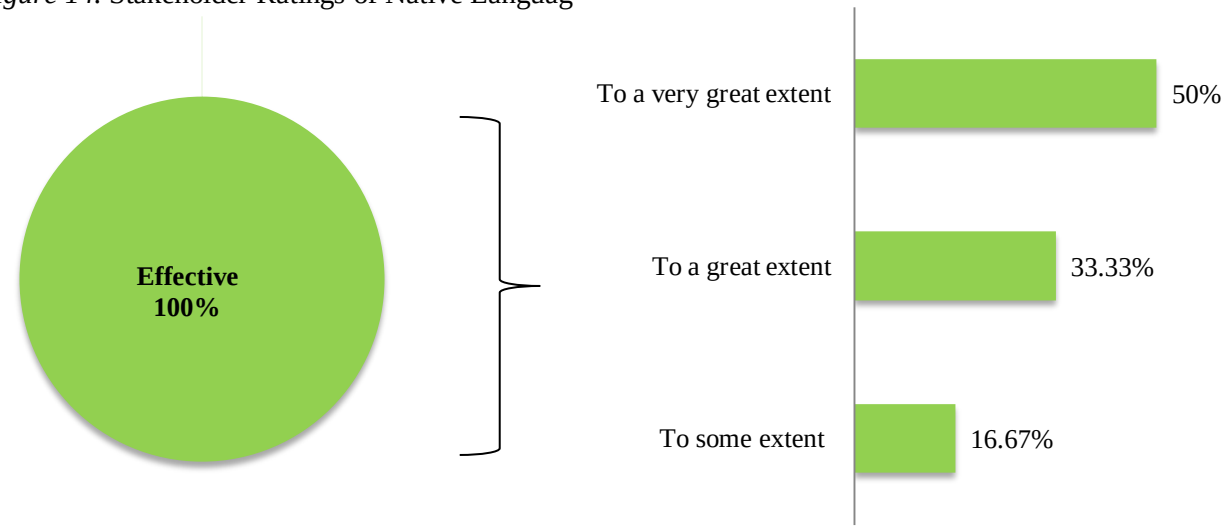


Figure 14. Stakeholder Ratings of Native Languag



Personality

All experts (*n* = 2) and stakeholders (*n* = 7) indicated personality is an effective selection characteristic; however, they differed in their ratings of effectiveness, with 14.29% (*n* = 1) of stakeholders feeling it is effective *to a very great extent*, compared to 0% for experts (Figures 15 and 16, p. 39). In total, 57.14% (*n* = 5) of respondents rated personality as effective *to a great extent.*

Figure 15. Expert Ratings of Personality

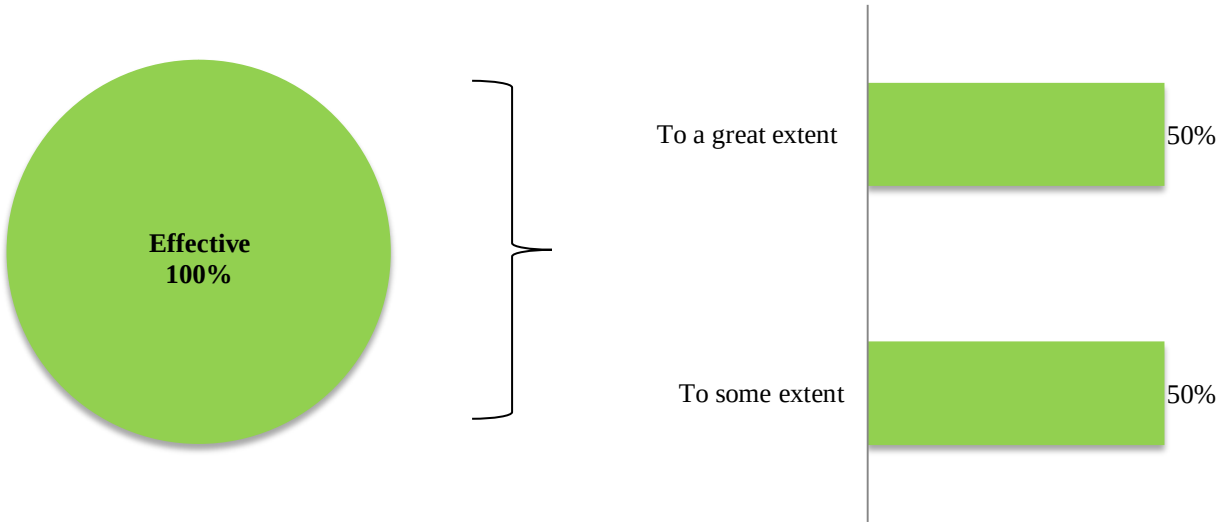
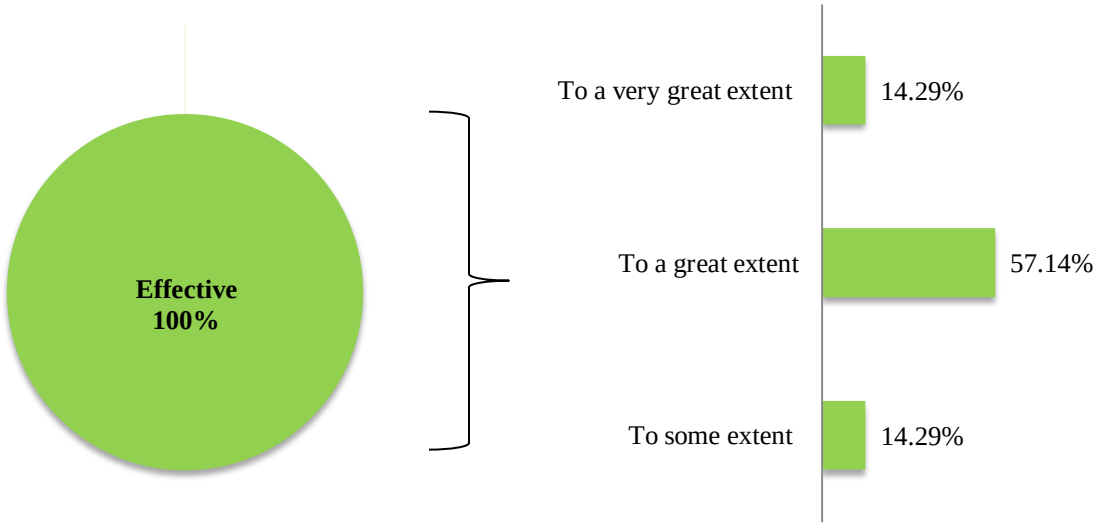


Figure 16. Stakeholder Ratings of Personality[1,2]



[1]One respondent provided a rating of 2.75 (14.29%).
[2]Percentages may not add to 100% due to rounding error.

Learning Styles or Preferences

All experts (*n* = 2) indicated learning styles or preferences are not effective selection characteristics. Over half (57%, *n* = 4) of stakeholders shared this same opinion (Figures 17 and 18, p. 40). However, for all stakeholders who answered yes (*n* = 3), 66.67% (*n* = 2) feel it is effective *to a great extent.* In total,

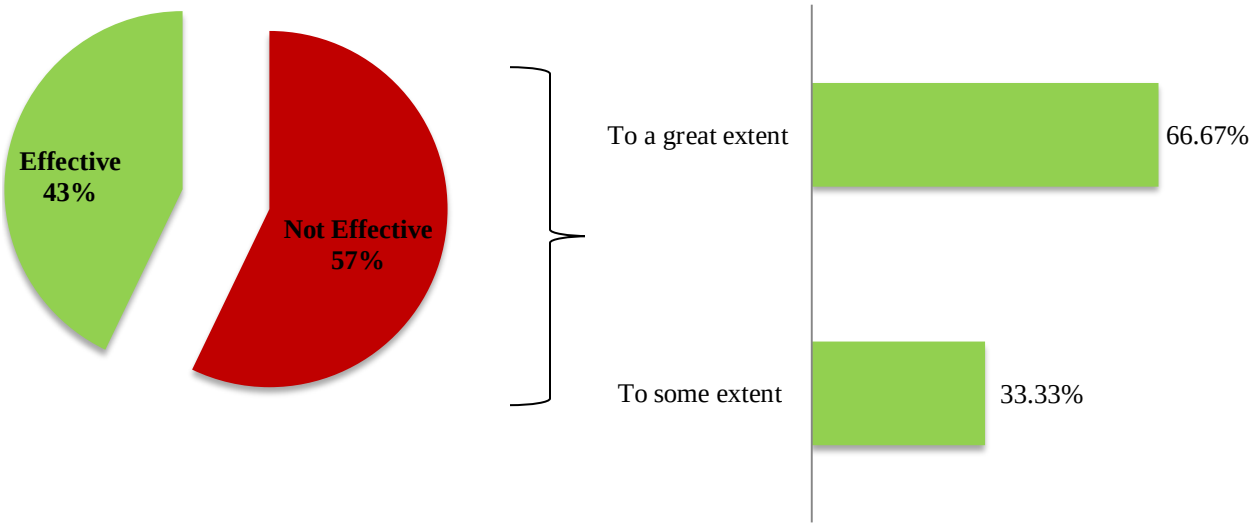
66.67% (*n* = 6) of all respondents do not believe learning styles or preferences are effective selection characteristics. Exemplar comments from interviews further illustrate these findings:

> *"There's no good evidence. There are a million styles and there's no good evidence."*
> Key Expert Participant

> *"No, the instructor's job is to learn their learning styles and adapt to it. Now, you could segregate by styles or preferences if you had a lot of money and instructors available."*
> Key Stakeholder Participant

Figure 17. Expert Ratings of Learning Styles or Preferences

Figure 18. Stakeholder Ratings of Learning Styles or Preferences



Learning Strategies

All experts (*n* = 2) indicated learning strategies are effective selection characteristics, with 50% (*n* = 1) rating them as effective *to some extent* and 50% (*n* = 1) rating them as effective *to a great extent* (Figure 19, p. 41). Only 57.14% (*n* = 4) of stakeholders feel learning strategies are effective selection characteristics (Figure 20, p. 42). In total, 66.67% (*n* = 6) of respondents believe learning strategies are effective selection characteristics, with 50% (*n* = 3) rating them as effective *to some extent* and the other 50% (*n* = 3) indicating they are effective *to a great extent*. Exemplar comments from interviews further illustrate these findings:

> *"Haven't found a correlation, so just don't have enough information."*
>
> Key Stakeholder Participant

Figure 19. Expert Ratings of Learning Strategies

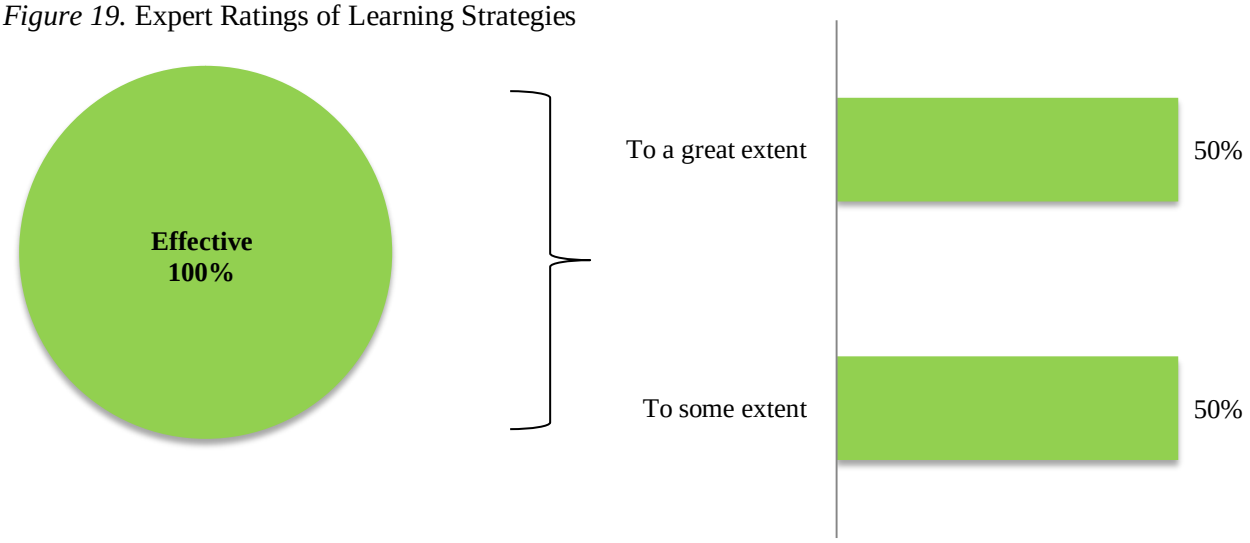
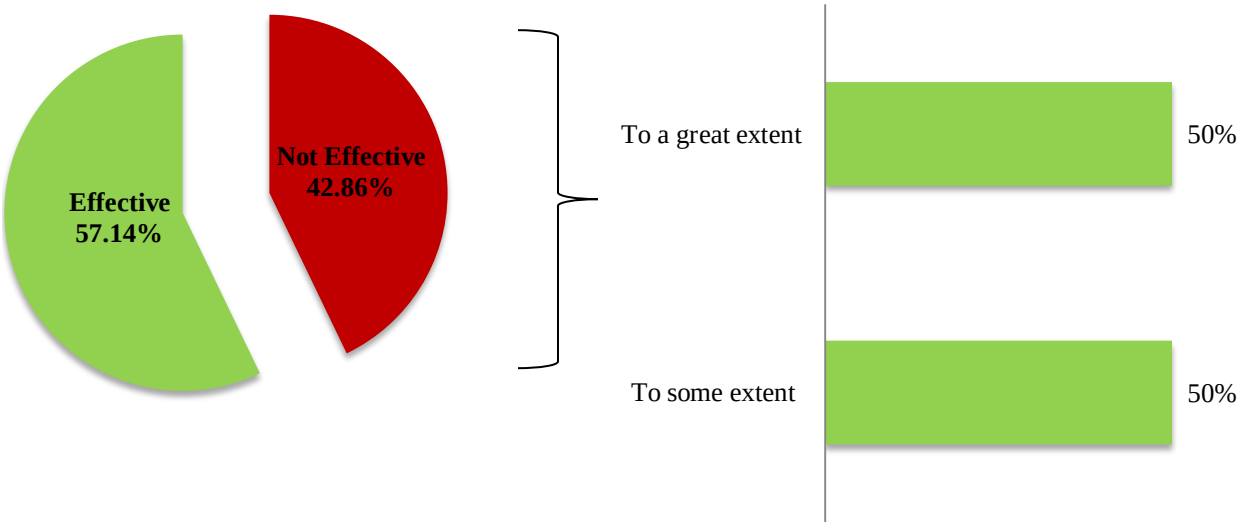


Figure 20. Stakeholder Ratings of Learning Strategies



Other Student or Learner Characteristics

Experts and stakeholders were also asked to identify any other student or learner characteristics that may affect the amount of time it takes to achieve a particular level of proficiency, beyond the 10 pre-selected student or learner characteristics. More specifically, they were asked to respond to the following question:

> "Are there other student or learner characteristics that affect the amount of time it takes to achieve a particular level of proficiency? If so, what are these characteristics and how do they affect the amount of time it takes to achieve a particular level of proficiency?"

In general, a plethora of additional student or learner characteristics were identified, in response to this question. These characteristics were categorized into three main categories: (1) student abilities and aptitudes, (2) stress factors, and (3) other (Table 4, p. 43). Overall, student abilities and aptitudes were the most frequently mentioned category across both participant groups. Several exemplar comments from interviews further illustrate these findings:

> *"The best way to shorten the duration is to reset ability groups, because great frustration comes from those that can move out faster and those who are struggling."*
>
> Key Stakeholder Participant

> *"Attitude is related to motivation, but is a little different, especially towards the language itself, say someone has a negative attitude towards Arabic, all the other factors aren't gonna matter, might as well chuck them out of the window."*
>
> Key Stakeholder Participant

> *"External stress factors, are they married, have they been recently injured, all those things that would distract them from language study."*
>
> Key Stakeholder Participant

Table 4. Comment Codes and Frequencies for Other Student or Learner Characteristics

	Expert	Stakeholder	Total
Student Abilities and Aptitudes	**3**	**5**	**8**
Other language learning aptitudes	2	0	2
Musicality (e.g., for tonal languages)	0	1	1
Hearing ability	0	1	1
Physical ability	0	1	1
Mathematical ability for heavily inflected languages (e.g., Russian)	0	1	1
English proficiency	0	1	1
Working memory span	1	0	1
Stress Factors	**0**	**3**	**3**
Time available for homework and study	0	1	1
External stress factors (e.g., family)	0	1	1
Internal stress factors (e.g., competing training requirements)	0	1	1
Other Characteristics	**1**	**6**	**7**
Use of ability grouping	1	1	2
Ability to engage with acquaintances in target language	0	1	1
Heritage ties	0	1	1
Students' ability to choose the language they learn (motivation)	0	1	1
Students attitudes toward language learning (different than motivation)	0	1	1
Situational awareness and experience	0	1	1

Note. The total number of responses received to this question = 8 (Experts: n = 2; Stakeholders: n = 6).

Instruction

Participants were asked to respond to three open-ended questions regarding the role of instruction in the amount of time it takes to achieve a particular level of language proficiency. The first question participants were asked was: "How might instruction affect the amount of time it takes to achieve a particular level of language proficiency?" In response to this question, experts' and stakeholders' comments were categorized into five main categories: (1) instructor behavior, (2) instructor abilities and characteristics, (3) course and training factors, (4) instructor training, and (6) other (Table 5, p. 44). Overall, instructor behavior was the most frequently mentioned category in the stakeholder group. Interestingly, no experts commented on the importance of instructor behaviors. For the experts, the most frequently mentioned category was instructor abilities and characteristics. Several exemplar comments from interviews further illustrate these findings:

> *"If I go into a class and hear nothing but English, the class is going to fail; I already know."*
>
> Key Stakeholder Participant

> *"My recommendation would be to give them a language teaching method course to give them insight into how language is learned before they go into classroom."*
>
> Key Expert Participant

Table 5. Comment Codes and Frequencies for Role of Instruction Question

	Expert	Stakeholder	Total
Instructor Behavior	**0**	**8**	**8**
Amount of target language speaking in the classroom	0	2	2
Amount of English use in the classroom	0	2	2
Amount of guided practice with feedback	0	1	1
Instructors as facilitators in the classroom	0	1	1
Time on task in the classroom	0	1	1
Instructor preparation for class	0	1	1
Instructor Abilities and Characteristics	**3**	**2**	**5**
Knowledge of second language acquisition or instruction	1	1	2
Ability to adapt to students' learning styles	0	1	1
Ability to motivate students	1	0	1
Ability to teach pragmatics	1	0	1
Course and Training Factors	**1**	**3**	**4**
Mission-relevant curriculum and content	1	1	2
Relevant homework material	0	1	1
Instructor-to-student ratio	0	1	1
Instructor Training	**1**	**2**	**3**
Important to provide training for instructors	1	1	2
Important to provide professional development for instructors	0	1	1
Other	**1**	**1**	**2**
Depends on your goals, objectives	1	1	2

Note. The total number of responses received to this question = 11 (Experts: n = 4; Stakeholders: n = 7).

The second question participants were asked regarding instruction was: "What specific aspects of instruction could be leveraged so the same training objective may be achieved within a shorter duration, or so that an increased training objective may be achieved within the same duration?" In response to this question, experts and stakeholders provided a variety of responses, but the most common responses focused on homework and self-study time, as well as technology use (Table 6, p. 45). Several exemplar comments from interviews further illustrate these findings:

> *"Based on another project I'm working on I would say that the main thing that I would look at would be homework and self-study time. You have only a certain time in the classroom, but a lot of what is going to happen with the learners will happen outside."*
>
> Key Expert Participant

> "*Homework and technology; a well, clearly defined objective statement."*
>
> Key Stakeholder Participant

Table 6. Comment Codes and Frequencies for Specific Aspects of Instruction

	Expert	Stakeholder	Total
Homework and self-study time	1	2	3
Technology	0	2	2
Clearly-defined learning objectives for each class	0	1	1
Mechanics and grammar in English and target language	0	1	1
Instructors who are knowledgeable about operational requirements	0	1	1
Student engagement in the classroom	0	1	1
Integration of task-based activities	0	1	1
Use of simulations and games	0	1	1
Time on task	1	0	1

Note. The total number of responses received to this question = 5 (Experts: n = 2; Stakeholders: n = 3).

The final question participants were asked regarding instruction was: "Is there a model you could use to optimize instructional efficiency/effectiveness so the same training objective may be achieved within a shorter duration, or so that an increased training objective may be achieved within the same duration?" Experts' and stakeholders' responses to this question were categorized into four main categories: (1) classroom instruction, (2) instructor abilities and characteristics, (3) general, and (4) curriculum (Table 7, p. 46). In both the expert and stakeholder participant groups, classroom instruction was the most frequently mentioned category. Several exemplar comments from interviews further illustrate these findings:

> *"Having a more qualified faculty is a big part of the instructional model of increasing proficiency. We never have consistent quality. It's not being implemented here across the spectrum, with some contractors it's more effective than others."*
>
> Key Stakeholder Participant

> *"Limiting the English in the classroom, making everything very communicative. That's the model we want and some instructors do it really well and some just don't get it."*
>
> Key Stakeholder Participant

> "*That model where you have a little bit of traditional instruction but then lots of time where students are actively engaged on their own. Has to be well-designed, based on what we know about language learning."*
>
> Key Expert Participant

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Table 7. Comment Codes and Frequencies regarding Models of Instruction

	Expert	Stakeholder	Total
Classroom Instruction	**1**	**5**	**6**
Student engagement	1	1	2
Limited English use	0	1	1
Use of communicative approach	0	1	1
Student-centered	0	1	1
Integrating 2-3 modalities every hour	0	1	1
Instructor Abilities and Characteristics	**0**	**3**	**3**
Education	0	1	1
English proficiency	0	1	1
Experience	0	1	1
General	**0**	**3**	**3**
Quality of instruction	0	2	2
Alignment between instructor, curriculum, and assessment	0	1	1
Curriculum	**0**	**2**	**2**
Task-based	0	1	1
Provides opportunities to attach form to meaning	0	1	1

Note. The total number of responses received to this question = 7 (Experts: n = 1; Stakeholders: n = 6).

Training Context

Interview participants in both the expert and stakeholder groups were asked to respond to the following question for 13 pre-selected aspects of the training context or environment: "How important is the following aspect of the training context or environment to the issue of the amount of time it takes to achieve a particular level of language proficiency?" For each aspect of the training context or environment, participants rated its importance using a five-point Likert-type response scale (1 = *Not important*, 2 = *Slightly important*, 3 = *Moderately important*, 4 = *Important*, 5 = *Very important*). Results are presented below, both by participant group and overall.

Comparing Expert and Stakeholder Ratings

In the expert participant group, the top five aspects of the training context or environment, all rated as *very important* (M = 5.00) were: (1) availability or quality of resources, (2) homework or independent study hours, (3) curriculum, (4) course content, and (5) opportunities for practice. In the stakeholder participant group, the top five aspects of the training context or environment were: (1) opportunities for practice, (2) instructors, (3) contact hours, (4) course content, and curriculum (Table 8, p. 47). Interestingly, curriculum, course content, and opportunities for practice were in the top five results for both experts and stakeholders. More specific results for the expert and stakeholder participant groups are presented in Tables 9 and 10, p. 48, respectively).

Overall Ratings

Interestingly, across both participant groups, none of the 13 pre-selected aspects of the training context or environment were rated as *not important* and only one (i.e., availability of instructor or tutor) was rated as only *slightly important* (Table 11, p. 49). All aspects were rated as at least important *to some extent* by respondents, with opportunities for practice rated as *very important* by all respondents (n = 9). The

second highest-rated aspect was instructors, with 87.5% (n = 7, M = 4.88) rating it as *very important*. Overall, access to technology or updated technology was rated the lowest, with an average rating of 3.44 and no ratings of *very important.*

Table 8. Top Five Aspects of Training Context, as Rated by Experts and Stakeholders

Expert	*n*	Mean	Stakeholder	*n*	Mean
Availability or quality of resources	2	5.00	Opportunities for practice	7	5.00
Homework or independent study hours	2	5.00	Instructors	7	4.86
Curriculum	2	5.00	Contact hours	7	4.71
Course content	1	5.00	Course content	6	4.67
Opportunities for practice	2	5.00	Curriculum	7	4.57

Table 9. Expert Training Context Ratings

How important is/are….	*n*	Mean	Not Important	Slightly Important	Moderately Important	Important	Very Important
Availability or quality of resources?	2	5	0.00	0.00	0.00	0.00	100.00
Access to technology or updated technology?	2	3.5	0.00	0.00	50.00	50.00	0.00
Instructors?	1	5	0.00	0.00	0.00	0.00	100.00
Frequency of class meetings?	2	3.5	0.00	0.00	50.00	50.00	0.00
Contact hours?	2	4	0.00	0.00	0.00	100.00	0.00
Homework or independent study hours?	2	5	0.00	0.00	0.00	0.00	100.00
Curriculum (scope and sequencing)?	2	5	0.00	0.00	0.00	0.00	100.00
Course content (e.g., learning activities, materials)?	1	5	0.00	0.00	0.00	0.00	100.00
Opportunities for practice?	2	5	0.00	0.00	0.00	0.00	100.00
Informal assessment?	1	4	0.00	0.00	0.00	100.00	0.00
Formal assessments?	1	4	0.00	0.00	0.00	100.00	0.00
Availability of instructor or tutor?	2	3.5	0.00	50.00	0.00	0.00	50.00
Class size?	2	3.5	0.00	0.00	50.00	50.00	0.00

Table 10. Stakeholder Training Context Ratings

How important is/are….	*n*	Mean	Not Important	Slightly Important	Moderately Important	Important	Very Important
Availability or quality of resources?	7	4.43	0.00	0.00	0.00	57.14	42.86
Access to technology or updated technology?	7	3.43	0.00	0.00	57.14	42.86	0.00
Instructors?	7	4.86	0.00	0.00	0.00	14.29	85.71
Frequency of class meetings?	7	4.43	0.00	0.00	14.29	28.57	57.14
Contact hours?	7	4.71	0.00	0.00	0.00	28.57	71.43
Homework or independent study hours?	7	4.29	0.00	0.00	0.00	71.43	28.57
Curriculum (scope and sequencing)?	7	4.57	0.00	0.00	0.00	42.86	57.14
Course content (e.g., learning activities, materials)?	6	4.67	0.00	0.00	0.00	33.33	66.67
Opportunities for practice?	7	5.00	0.00	0.00	0.00	0.00	100.00
Informal assessment?	6	4.50	0.00	0.00	0.00	50.00	50.00
Formal assessments?	4	4.25	0.00	0.00	0.00	75.00	25.00
Availability of instructor or tutor?	7	4.43	0.00	0.00	14.29	28.57	57.14
Class size?	7	4.43	0.00	0.00	0.00	57.14	42.86

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Table 11. Total (Experts and Stakeholders Combined) Training Context Ratings

How important is/are….	*n*	Mean	Not Important	Slightly Important	Moderately Important	Important	Very Important
Availability or quality of resources?	9	4.56	0.00	0.00	0.00	44.44	55.56
Access to technology or updated technology?	9	3.44	0.00	0.00	55.56	44.44	0.00
Instructors?	8	4.88	0.00	0.00	0.00	12.50	87.50
Frequency of class meetings?	9	4.22	0.00	0.00	22.22	33.33	44.44
Contact hours?	9	4.56	0.00	0.00	0.00	44.44	55.56
Homework or independent study hours?	9	4.44	0.00	0.00	0.00	55.56	44.44
Curriculum (scope and sequencing)?	9	4.67	0.00	0.00	0.00	33.33	66.67
Course content (e.g., learning activities, materials)?	7	4.71	0.00	0.00	0.00	28.57	71.43
Opportunities for practice?	9	5.00	0.00	0.00	0.00	0.00	100.00
Informal assessment?	7	4.43	0.00	0.00	0.00	57.14	42.86
Formal assessments?	5	4.20	0.00	0.00	0.00	80.00	20.00
Availability of instructor or tutor?	9	4.22	0.00	11.11	11.11	22.22	55.56
Class size?	9	4.22	0.00	0.00	11.11	55.56	33.33

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Other Training Context Factors

Experts and stakeholders were also asked to identify any other training context or environment factors that may affect the amount of time it takes to achieve a particular level of proficiency, beyond the 13 pre-selected factors. More specifically, they were asked to respond to the following question:

> "Aside from those mentioned above, are there other aspects of the training context or environment that affect the amount of time it takes to achieve a particular level of proficiency? If so, what are these aspects and how do they affect the amount of time it takes to achieve a particular level of proficiency?"

Five additional training context factors were provided by experts and stakeholders (Table 12, p. 50). Overall, the two most frequently mentioned categories included opportunities for immersion and internal stress factors. Several exemplar comments from interviews further illustrate these findings:

> *"More immersion-like the better."*
>
> Key Expert Participant

> *"Realistic settings and learning environments, and make it simulated operational environment, cultural events or cultural activities. When we gear our homework and assignments toward that, they are engaged and they are proud to present them."*
>
> Key Stakeholder Participant

> *"Distractions from command and other training do cause a strain on how many hours they are taught. Our POI is a 5-day rotation, when you take out a day you have to decide what you aren't going to teach, training holidays kill us."*
>
> Key Stakeholder Participant

> *"External stress factors we talked about. The more things we are having these guys do outside of language, the less time they will have to focus on language. That's sort of intuitive."*
>
> Key Stakeholder Participant

Table 12. Comment Codes and Frequencies for Other Training Context Factors

	Expert	Stakeholder	Total
Opportunities for immersion	1	1	2
Internal stress factors (e.g., competing training requirements)	0	2	2
External stress factors	0	1	1
Testing	1	0	1
Positive learning environment (e.g., learners are relaxed, engaged)	1	0	1

Note. The total number of responses received to this question = 4 (Experts: n = 1; Stakeholders: n = 3).

Barriers and Common Mistakes

Participants were asked to respond to open-ended questions regarding barriers and common mistakes for both scenarios. The comment codes and frequency counts are presented for each question, along with brief descriptions of these results.

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Barriers

> "What barriers do you think would prevent achievement of the instructional objective if the duration of instruction was shortened? Are there different barriers that would prevent achieving a higher instructional objective without changing the duration of instruction?"

In response to the question about barriers to the first scenario (i.e., decrease duration, maintain objective), experts' and stakeholders' comments were categorized into four main categories: (1) barriers related to students, (2) barriers related to course factors, (3) barriers related to instructors, and (4) general comments (Table 13, p. 52).

In terms of barriers to the second scenario (i.e., maintain duration, increase objective), experts and stakeholders provided fewer comments, in comparison to the first scenario; however, some of their comments were similar, such as the importance of alignment between all elements of training, poorly trained instructors, and students' cognitive overload (Table 13, p. 52). Several exemplar comments from interviews further illustrate these findings:

> *"The other thing is an issue that comes up when you try to shorten things, you get sort of a cognitive overload situation. You can cram more information into the students' mind but they need time to integrate that into a system or else it's just a bunch of random things coming at them. There needs to be a way to help them integrate that into one useful thing."*
>
> Key Expert Participant, Scenario 1

> *"Inadequate training of instructors, materials that are poorly designed or don't focus on objective, poor use of class time."*
>
> Key Expert Participant, Scenario 1

> *"Poor instruction. And that isn't the instructors fault, they just aren't trained."*
>
> Key Stakeholder Participant, Scenario 1

> *"Student time for SOF because they have to do so many other activities, jumps, PT, they have certain hard gates, physical tasks that they have to do. We don't own the students, so we don't control what they do or their evening time. Competition for priority is a hard one here."*
>
> Key Stakeholder Participant, Scenario 2

Table 13. Comment Codes and Frequencies for Barriers by Scenario

Barriers for Scenario 1: Decrease Duration, Maintain Objective	Expert	Stakeholder	Total
Barriers related to Students	**2**	**4**	**6**
Reductions in time on task	0	2	2
Cognitive overload	1	1	2
External and internal stress factors (i.e., distractions)	0	1	1
Insufficient time to practice and automatize the language	1	0	1
Barriers related to Course Factors	**3**	**2**	**5**
Poorly designed curriculum	1	1	2
Lack of assessment	0	1	1
Poorly designed materials	1	0	1
Poor use of class time	1	0	1
Barriers related to Instructors	**2**	**2**	**4**
Poorly trained instructors	2	2	4
General Comments	**1**	**3**	**4**
All elements of training must be aligned	0	1	1
Depends on the training objective	0	1	1
If only duration is shortened and no other factors are adjusted	0	1	1
Depends on the ILR level	1	0	1
Barriers for Scenario 2: Maintain Duration, Increase Objective	**Expert**	**Stakeholder**	**Total**
Time available for language training	0	2	2
Student individual differences (e.g., ability, motivation, personality)	0	1	1
All elements of training must be aligned	0	1	1
Poorly trained instructors	1	0	1
Cognitive overload	1	0	1

Note. The total number of responses received for Scenario 1 = 10 (Experts: n = 3; Stakeholders: n = 7). The total number of responses received for Scenario 2 = 6 (Experts: n = 2; Stakeholders: n = 4).

Common Mistakes

After discussing barriers, participants were then asked to respond to two open-ended questions regarding common mistakes language program administrators may make in both scenarios. The comment codes and frequency counts are presented for each question, along with brief descriptions of these results. Participants were asked:

> "What are some common mistakes language program administrators may make when attempting to shorten the duration of training while maintaining the current duration of training? What are some mistakes language program administrators may make when attempting to increase the training objective while maintaining the current duration of training?"

In response to the question about common mistakes related to the first scenario (i.e., decrease duration, maintain objective), experts' and stakeholders' comments were categorized into four main categories: (1) general comments related to mistakes, (2) mistakes related to course factors, (3) mistakes related to instructors, and (4) mistakes related to students (Table 14, p. 54).

In terms of mistakes related to the second scenario (i.e., maintain duration, increase objective), experts and stakeholders provided fewer comments, in comparison to the first scenario and none of these comments were mentioned more than once (Table 14, p. 54). Several exemplar comments from interviews further illustrate these findings:

> *"You can shorten then training but you have to expect objectives and outcomes to change."*
>
> Key Stakeholder Participant, Scenario 1

> *"I think that one mistake they might make is not taking into account the different amounts of time that are needed to go between ILR levels…Moving from 1 to 1+ is totally different than moving 2 to 2+, so if you are thinking you can ramp people up from 1 to 1+ you might have a shot, but if you think you are going to go from 2+ to 3 it's impossible. It's not a linear scale. All bets are off."*
>
> Key Expert Participant, Scenario 2

> *"When we are implementing changes, have to determine what changes we need to implement into every area. Monitor, determine weaknesses, positive outcomes, encourage positive, plan of action for weaknesses, implement, evaluate again."*
>
> Key Stakeholder Participant, Scenario 2

Table 14. Comment Codes and Frequencies for Common Mistakes by Scenario

Mistakes for Scenario 1: Decrease Duration, Maintain Objective	Expert	Stakeholder	Total
General Comments related to Mistakes	**0**	**6**	**6**
This is a leadership issue rather than an administrator issue	0	2	2
Looking for a silver bullet	0	1	1
Making hasty decisions without understanding consequences	0	1	1
Not aligning all elements of training	0	1	1
Not evaluating changes that are implemented	0	1	1
Mistakes related to Course Factors	**2**	**4**	**6**
Random use of technology	1	0	1
Not adjusting curricula to new situations	1	1	2
Teaching solely to the test	0	1	1
Lack of time for transfer and reinforcement	0	1	1
More than six hours of instruction and two hours of homework per day	0	1	1
Mistakes related to Students	**1**	**1**	**2**
Student selection	0	1	1
Opportunities for memory consolidation (e.g., sleep)	1	0	1
Mistakes related to Instructors	**2**	**0**	**2**
Not getting instructor buy-in	1	0	1
Poorly trained instructors	1	0	1
Mistakes for Scenario 2: Maintain Duration, Increase Objective	**Expert**	**Stakeholder**	**Total**
Not accounting for different amounts of time to go between ILR levels	1	0	1
Not sustaining students' motivation	0	1	1
Not having in-house expertise for immersion programs	0	1	1
Not determining what changes need to be made to all training elements	0	1	1
Not evaluating changes that are implemented	0	1	1

Note. The total number of responses received for Scenario 1 = 9 (Experts: n = 2; Stakeholders: n = 7). The total number of responses received for Scenario 2 = 4 (Experts: n = 1; Stakeholders: n = 3).

Additional Resources

After discussing common mistakes, participants were then asked to respond to two open-ended questions regarding additional resources that may be needed to be successful in both scenarios. The comment codes and frequency counts are presented for each question, along with brief descriptions of these results. Participants were asked:

> "What additional resources would be needed to facilitate students achieving the same training objective in a shortened amount of time? What additional resources would be needed to facilitate achieving a higher training objective in the same amount of time?"

In response to the question about additional resources needed for the first scenario (i.e., decrease duration, maintain objective), technology was the most frequent theme. No theme was applied more than once for the second scenario (i.e., maintain duration, increase objective); however, the responses were similar to those provided for the first scenario (Table 15, p. 55). Several exemplar comments from interviews further illustrate these findings:

"I think an explicit consideration of which self-study activities are useful for those students and which tech can support them in those activities, including training them in weak areas and consolidating information. Just to pitch my current stuff, instead of learning styles, I am looking at cognitive abilities related to particular learning challenges."

Key Expert Participant, Scenario 1

"If we have ways to have enhanced portability that would be useful, home technology is useful."

Key Stakeholder Participant, Scenario 1

"Some of the same things could apply, but I'd like to see more time downrange, more time sending them in-country. If there's a problem in Afghanistan, send them to learn, but I don't think that's quite there yet. Practice and using what you know is key, when you reach a certain level they are almost able to self-teach."

Key Stakeholder Participant, Scenario 2

Table 15. Comment Codes and Frequencies for Additional Resources by Scenario

Resources for Scenario 1: Decrease Duration, Maintain Objective	Expert	Stakeholder	Total
Technology	2	1	3
Self-study activities	1	0	1
Interventions focused on aptitudes	1	0	1
Ability to assess time on task (quality of interactions)	1	0	1
Guest instructors	0	1	1
Assistant language instructor with a military background	0	1	1
Call center (on-demand tutoring)	0	1	1
Simulated field environment	0	1	1
Objective must change	0	1	1
Overhaul government contracting process for instructor contracts	0	1	1
Training/professional development for instructors	0	1	1
Successful management and leadership	0	1	1
Improving curriculum	0	1	1
Starting with a needs assessment to align curriculum with mission	0	1	1
Resources for Scenario 2: Maintain Duration, Increase Objective	**Expert**	**Stakeholder**	**Total**
Learner training (meta-cognition, learning strategies)	1	0	1
Technology, tools to keep learners engaged (e.g., games)	1	0	1
More time downrange	0	1	1
Call center	0	1	1
Simulated field environments	0	1	1
More and better materials	0	1	1
High-quality curriculum	0	1	1
Better trained instructors	0	1	1

Note. The total number of responses received for Scenario 1 = 8 (Experts: $n = 2$; Stakeholders: $n = 6$). The total number of responses received for Scenario 2 = 4 (Experts: $n = 1$; Stakeholders: $n = 3$).

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SECTION V: SPECIAL OPERATIONS FORCES STUDY

Purpose

The purpose of this original empirical study was to explore the relationship between the duration of SOF language training and language proficiency, measured immediately after training. Results from these analyses can be used by SOF leaders and policymakers to determine the possible influence a change in training duration may have on SOF personnel's post-training language proficiency if SOF leaders and policymakers are called upon to decrease the current duration of SOF IAT, while maintaining the current training objective, or maintain the current duration of SOF IAT, while increasing the training objective.

Research Question

The research question for this investigation was: *How is the duration of SOF language training related to SOF personnel's language proficiency, measured immediately after IAT?*

Main Findings

- SOF personnel in Category I/II languages who received 12 or 14 weeks of language training tended to have lower speaking and listening proficiency scores than personnel who received 15 or more weeks of training, as measured by the OPI and DLPT, respectively. Due to limited data, it is difficult to draw any conclusions regarding the training duration-proficiency relationship for durations greater than 18 weeks.

- SOF personnel in Category III/IV languages who received less than 24 weeks of language training tended to have lower speaking and listening proficiency scores than personnel who received 24 or more weeks of language training. Due to limited data, it is difficult to draw any conclusions regarding the training duration-proficiency relationship for durations greater than 24 weeks.

- Interestingly, when SOF personnel enrolled in Category III/IV language training at SWCS BLC experienced a change in classroom contact hours from five hours of classroom instruction per day to six hours of classroom instruction per day, personnel who received six hours of classroom instruction per day had significantly higher OPI speaking proficiency scores than personnel who received five hours of classroom instruction per day. For Category I/II languages, there was no significant difference in speaking proficiency scores between personnel who received five and six hours of classroom instruction per day.

Recommendations

- For Category I and II languages, the optimal IAT length may be 15 weeks because IAT lengths less than 15 weeks were associated with substantially lower proficiencies. Further, IAT lengths greater than 15 weeks did not result in substantially higher language proficiencies than IAT lengths of 15 weeks.

- For Category III and IV languages, the optimal IAT length appears to be between 20 and 24 weeks. However, it is difficult to make assumptions about the relationship between training duration and language proficiency for durations beyond 24 weeks, due to insufficient data.

- Additional research is needed to further examine the relationship between training duration and language proficiency in SOF language training environments. Recently, IAT for Category I and II languages at SWCS BLC was extended from 18 weeks to 24 weeks. As more data are collected from SOF operators enrolled in these training events, the relationship between training duration and language proficiency can be reexamined to shed additional light on this topic and more specifically, make comparisons in language proficiency scores between SWCS BLC Category I/II trainees who received 24 weeks of language training to SWCS BLC Category I/II trainees who received 18 weeks of language training.

- At some point, an increase in training duration may not result in a practically significant increase in language proficiency for SOF personnel. Unfortunately, due to the limitations of this study it was difficult to determine the most efficient training duration. Thus, as more data become available, additional research should be conducted to examine the relationship between training duration and post-training language proficiency.

Method

From 2004-2012, training effectiveness data were collected from Special Operations Forces (SOF) personnel at 3rd Special Forces Group (SFG), 5th SFG, AFSOC, NSW, MARSOC, and SWCS BLC. The time periods of these data collections, as well as the amount of data collected, differed between these SOF components and units.[1]

The relationship between training duration and post-IAT language proficiency was investigated by comparing the language proficiency scores of SOF personnel for each training duration (in weeks). Language proficiency was measured at the end of IAT by the speaking portion of the OPI (OPI-S), as well as by the listening portion of the DLPT (DLPT-L). There were generally more data available for the DLPT-L than the OPI-S.

The relationship between training duration and post-IAT language proficiency was examined in three ways. First, the training duration-post-IAT language proficiency relationship was examined collectively across all language categories. Following this, a second set of analyses was conducted to control for the influence of language difficulty. Specifically, separate analyses were conducted for SOF personnel who were trained in Category I/II languages and SOF personnel who were trained in Category III/IV languages. A third, supplemental analysis also examined how a change in the number of classroom contact hours at SWCS BLC impacted SOF personnel's post-training language proficiency scores; this supplemental analysis allowed for further control of training design factors, beyond language category.

[1] From 2004-2012, there were notable changes in the structure of language training. For example, from 2007 to 2009, SWCS language training occurred in two short "blocks," with breaks in between, followed by one long "blitz" block. This differed from more recent SWCS language training (as well as SWCS language training that predated 2007), which occurred as one long, continuous training session. Such structural differences were often confounded with the total duration of training and thus could affect the interpretation of results in this study.

Results[2]

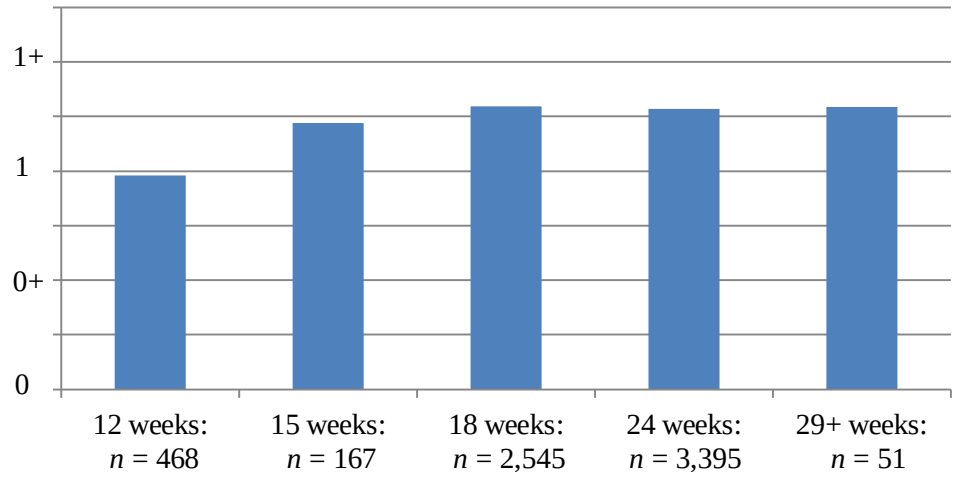
OPI-S scores were compared for five training durations: (1) 12 weeks, (2) 15 weeks, (3) 18 weeks, (4) 24 weeks, and (5) 29-or-more weeks. Table 16 (p. 58) shows the SOF components and units whose data were included for each training duration, and Figure 21 (p. 58) shows the OPI-S scores for each training duration, across all language categories.

Table 16. Sample Size for Each Training Duration across Language Categories for OPI-S Scores

Training Duration in Weeks	*n*	SOF Components/Units
12	468	NSW
15	167	3rd SFG, 5th SFG, AFSOC
18	2,545	SWCS BLC
24	3,395	AFSOC, SWCS BLC
29+	51	AFSOC, MARSOC

As shown in Figure 21 (p. 58), SOF personnel who received 18, 24, or 29-or-more weeks of language training scored similarly on the OPI-S. SOF personnel who received 15 weeks had slightly lower OPI-S scores than those who received 18, 24, or 29-or-more weeks of language training. Those who received 12 weeks of language training had the lowest OPI-S scores of all training durations included in this analysis.

Figure 21. OPI-S Scores for Each Training Duration across All Language Categories



[2] To conduct these analyses, training effectiveness data from different SOF components and units were combined. Thus, any differences in proficiency may be at least partly attributed to factors that varied between SOF components (e.g., instructors, structure and design of the training).

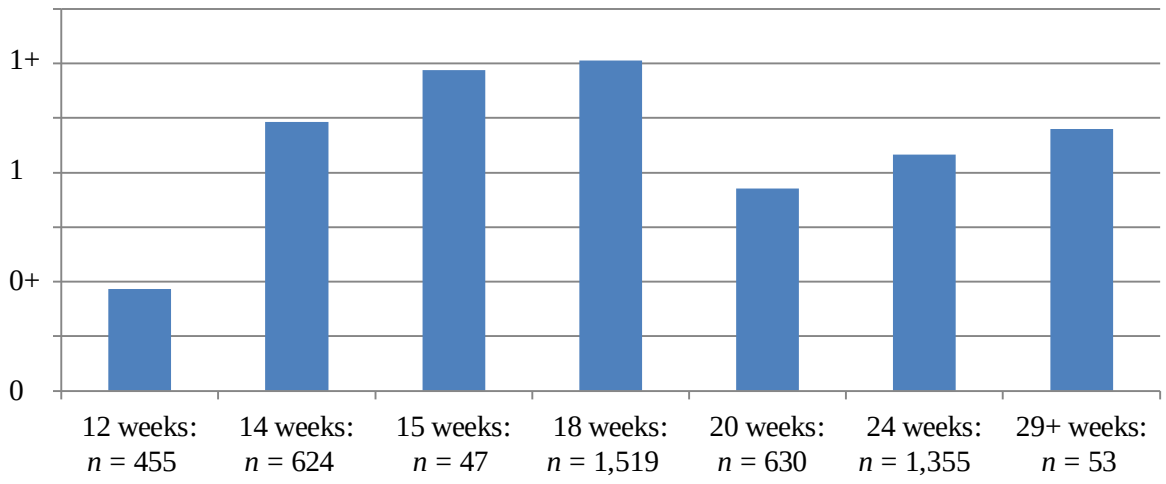
DLPT-L scores were compared for seven SOF IAT durations: (1) 12 weeks, (2) 14 weeks, (3) 15 weeks, (4) 18 weeks, (5) 20 weeks, (6) 24 weeks, and (7) 29-or-more weeks. Table 17 (p. 59) shows the SOF components whose data were included for each training duration, and Figure 22 (p. 59) shows the DLPT-L scores for each training duration, across all language categories.

Table 17. Sample Size for Each Training Duration across Language Categories for DLPT-L Scores

Training Duration in Weeks	*n*	SOF Components
12	455	NSW
14	624	SWCS BLC
15	47	AFSOC
18	1,519	SWCS BLC
20	630	SWCS BLC
24	1,355	AFSOC, SWCS BLC
29+	53	AFSOC, MARSOC

As shown in Figure 22 (p. 59), SOF personnel who received 20 or 24 weeks of language training had lower DLPT-L scores than personnel who received 29-or-more weeks of training. Interestingly, SOF personnel who received 14, 15, or 18 weeks of language training generally had higher DLPT-L scores than personnel who received 20, 24, or 29-or-more weeks of language training; however, these findings are confounded with language category. Specifically, with one exception noted[3], SOF personnel assigned to Category I/II languages for training had training lengths of 14, 15, or 18 weeks, whereas personnel assigned to Category III/IV languages for training had training lengths of 20, 24, or 29-or-more weeks.

Figure 22. DLPT-L Scores for Each Training Duration across All Language Categories



[3] For Category I/II and III/IV languages, NSW personnel (*N* = 455) had 12 weeks of training.

In the following section, results are presented separately by language difficulty to control for its influence on the relationship between training duration and post-training language proficiency. Specifically, data for SOF personnel who studied Category I/II languages were analyzed separately from those who studied Category III/IV languages.

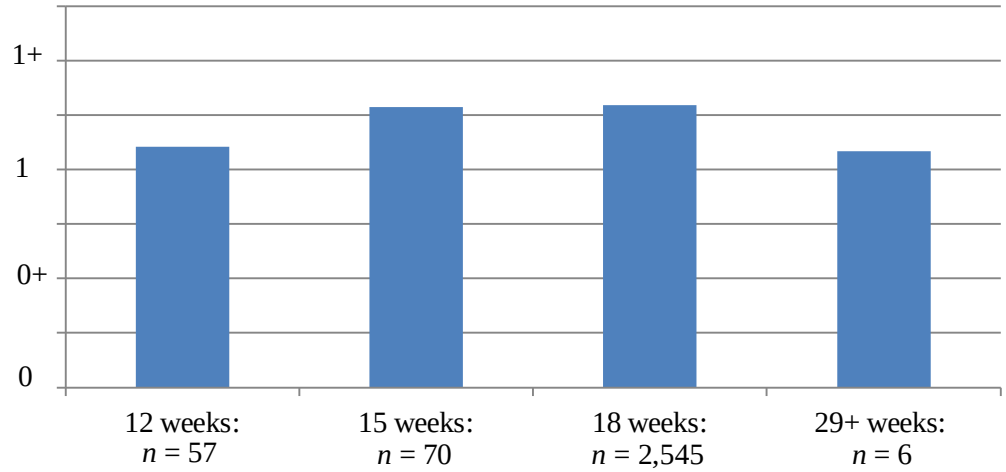
Category I/II Languages

For Category I/II trainees, OPI-S score comparisons were made for four training durations: (1) 12 weeks, (2) 15 weeks, (3) 18 weeks, and (4) 29-or-more weeks. Table 18 (p. 60) shows the SOF components whose data were included for each training duration, and Figure 23 (p. 60) shows the OPI-S score for each training duration for Category I/II languages. Consistent with findings aggregated across language categories (see Figure 21, p. 58), SOF personnel who received 12 weeks of language training had lower OPI-S scores than personnel who received 15 or 18 weeks of language training. The lower OPI-S scores for SOF personnel who received 29-or-more weeks of language training is most likely an artifact of the low sample size for that training duration (i.e., $n = 6$).

Table 18. Sample Size for Each Training Duration for Category I/II OPI-S Scores

Training Duration in Weeks	*n*	SOF Components
12	57	NSW
15	70	AFSOC
18	2,545	SWCS BLC
29+	6	MARSOC

Figure 23. OPIS-S Scores for Each Training Duration for Category I/II Languages



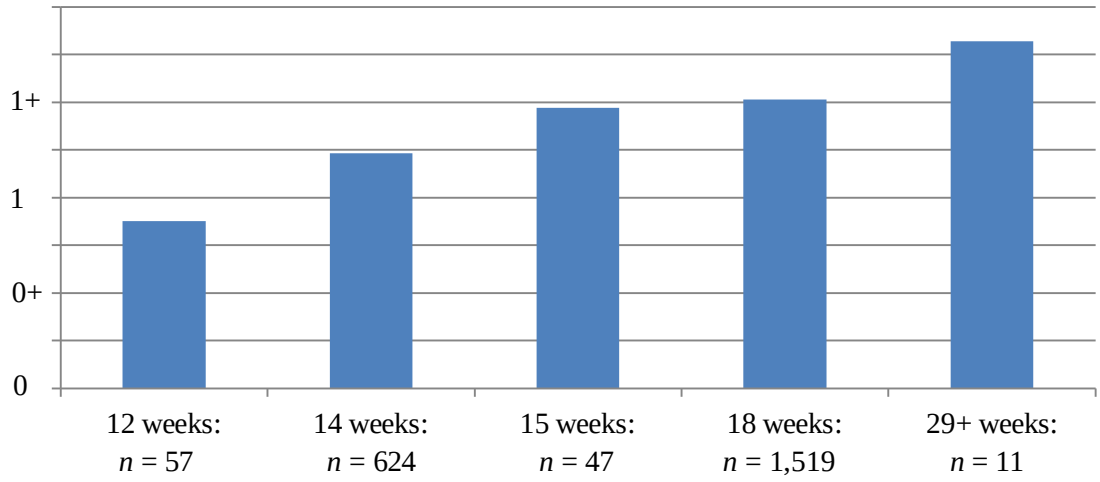
DLPT-L scores were compared for five SOF IAT durations: (1) 12 weeks, (2) 14 weeks, (3) 15 weeks, (4) 18 weeks, and (5) 29-or-more weeks. Table 19 (p. 61) shows the SOF components whose data were included for each training duration, and Figure 24 (p. 61) shows the DLPT-L scores for each training duration for Category I/II languages. In general, lower training durations were associated with lower DLPT-L scores; SOF personnel who received 29-or-more weeks of language training had the highest

DLPT-L scores. It is important to note, however, that there were only 11 SOF personnel who received 29-or-more weeks of training who were included in this analysis; thus, it is difficult to draw strong conclusions based on this limited sample size.

Table 19. Sample Size for Each Training Duration for Category I/II DLPT-L Scores

Training Duration in Weeks	*n*	SOF Components
12	57	NSW
14	624	SWCS BLC
15	47	AFSOC
18	1,519	SWCS BLC
29+	11	MARSOC

Figure 24. DLPT-L Scores for Each Training Duration for Category I/II Languages



Category III/IV Languages

The relationship between training duration and post-training language proficiency was also examined for SOF personnel assigned to Category III/IV languages during training. For Category III/IV trainees, OPI-S score comparisons were made for four training durations: (1) 12 weeks, (2) 15 weeks, (3) 24 weeks, and (4) 29-or-more weeks.

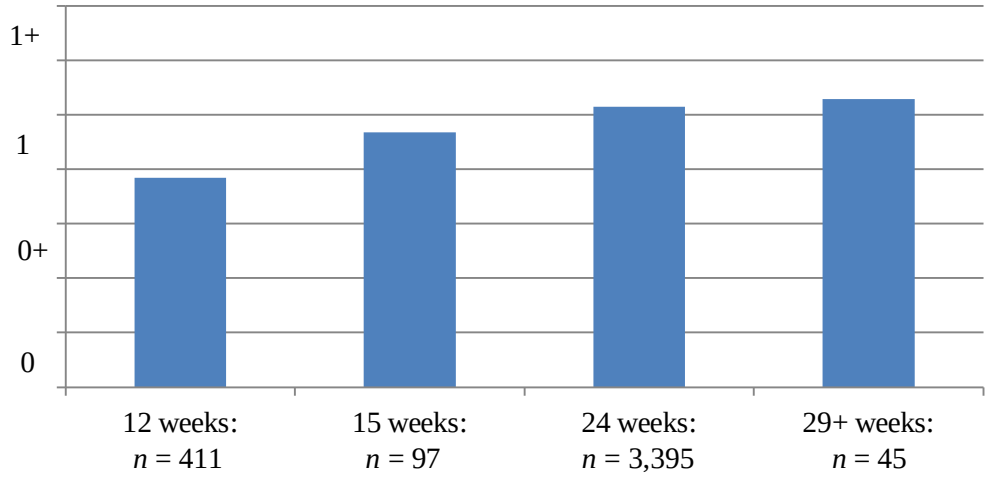
For the OPI-S, Table 20 (p. 62) shows the SOF components and units whose data were included for each training duration, and Figure 25 (p. 62) shows the OPI-S score for each training duration for Category III/IV languages.

Table 20. Sample Size for Each Training Duration for Category III/IV OPI-S Scores

Training Duration in Weeks	*n*	SOF Components/Units
12	411	NSW
15	97	3rd SFG, 5th SFG
24	3,395	AFSOC, SWCS BLC
29+	45	AFSOC, MARSOC

As shown in Figure 25 (p. 62), SOF personnel who received shorter language training had lower OPI-S scores, and those with 29-or-more weeks had the highest OPI-S scores. It is important to note, however, that there were only 45 SOF personnel who received 29-or-more weeks of training who were included in this analysis; thus, it is difficult to draw strong conclusions based on this limited sample size.

Figure 25. OPIS-S Scores for Each Training Duration for Category III/IV Languages



DLPT-L scores were compared for four SOF IAT durations: (1) 12 weeks, (2) 20 weeks, (3) 24 weeks, and (4) 29-or-more weeks. Table 21 (p. 62) shows the SOF components whose data were included for each training duration, and Figure 26 (p. 63) shows the DLPT-L scores for each training duration for Category III/IV languages.

Table 21. Sample Size for each Training Duration for Category III/IV DLPT-L Scores

Training Duration in Weeks	*n*	SOF Components
12	398	NSW
20	630	SWCS BLC
24	1,355	AFSOC, SWCS BLC
29+	42	AFSOC, MARSOC

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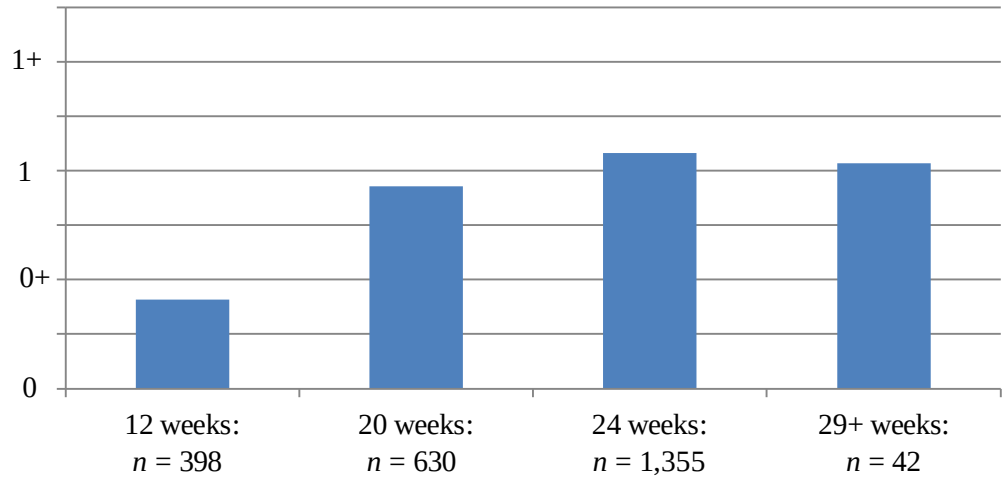
As shown in Figure 26 (p. 63), SOF personnel who received 24 weeks of language training had the highest DLPT-L scores. SOF operators with 20 or 29-or-more weeks of language training had slightly lower DLPT-L scores than personnel who received 24 weeks of language training, and those who received 12 weeks of language training had the lowest DLPT-L scores.

Figure 26. DLPT-L Scores for each Training Duration for Category III/IV Languages



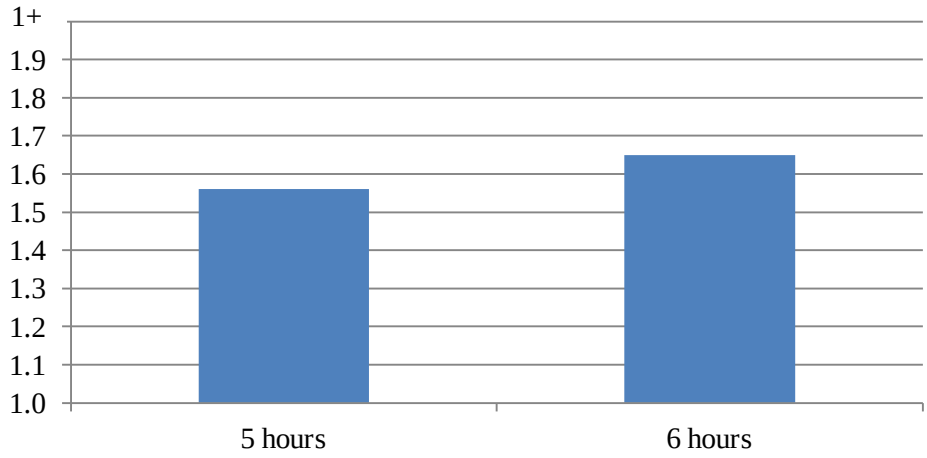
Change in Contact Hours: SWCS BLC Sample

To obtain variability on training duration for all prior analyses, training effectiveness data from different SOF components and units were combined. While interesting and informative, this has the potential to introduce confounding variables (e.g., differences in instruction, training structure) into the analysis due to differences among components and units. To address these potential concerns, further analyses were conducted on a single data set for which there was a change in classroom instruction hours at SWCS BLC. These data were collected from March 2009 to June 2012. Around October 2010, the training was altered from five hours of classroom instruction per day to six hours per day. While this policy change did not increase the number of weeks of language training, a single extra hour per day substantially increased the number of classroom hours of language training over the entire course.

An analysis was conducted to compare the OPI-S scores of SOF personnel who received five hours of classroom instruction per day through SWCS BLC to personnel who received six hours of classroom instruction per day through SWCS BLC. To facilitate interpretation of analyses, ILR scale units were expressed in tenths of a decimal place. For example, a mean score that represents 65% of the distance between an ILR Level 1 and an ILR Level 1+ is read as 1.65. Results for Category III/IV trainees are displayed in Figure 27 (p. 64), and results for Category I/II trainees are displayed in Figure 28 (p. 64).

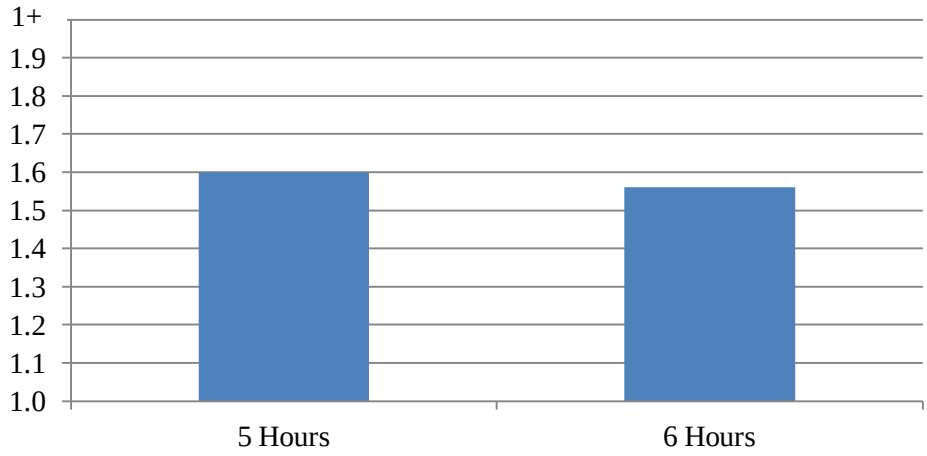
For Category III/IV trainees, those who received six hours of classroom instruction per day (M = 1.65, SD = 0.67, n = 1,217) had slightly higher OPI-S scores than trainees who received five hours of classroom instruction per day (M = 1.56, SD = 0.7, n = 1,389), and this difference was statistically significant ($t(2,604) = 3.43$, $p < .001$).

Figure 27. OPI-S Scores for Category III/IV Trainees by Number of Contact Hours



For Cat I/II personnel, no significant differences in OPI-S scores were observed between personnel who received six hours of classroom instruction per day (M = 1.56, SD = 0.76, n = 825) and personnel who received five hours of classroom instruction per day (M = 1.60, SD = 0.78, n = 1,256), $t(2,079) = 1.12$, p = 0.26.

Figure 28. OPI-S Scores for Category I/II Trainees by Number of Contact Hours



Taken together, these results indicate that more classroom contact hours are associated with a small, yet significant, increase in OPI-S scores for SOF personnel at SWCS BLC who studied more difficult languages.

SECTION VI: OVERALL SYNTHESIS AND RECOMMENDATIONS

The goal of this report was to provide USSOCOM with insights into the elements of foreign language training that must be considered when attempting to decrease the current duration of SOF IAT, while maintaining the current training objective, or maintaining the current duration of SOF IAT, while increasing the training objective. To accomplish this goal, this report gathered and synthesized information across three sources. This type of systematic, multi-modal approach has been advanced as a necessary step in providing evidence-based recommendations for practice (Briner & Rousseau, 2011). The purpose of this section is to synthesize the primary conclusions and recommendations from the following sources of evidence:

1. A thorough review of the current literature on this topic.
2. The perspectives of experts (i.e., academicians, researchers) and SOF language program stakeholders.
3. An original empirical study conducted in SOF language training environments investigating the relationship between training duration and post-training language proficiency.

Overall Conclusions and Recommendations

All sources of evidence examined in the current study suggest that this is not a "silver bullet" issue or a one-size-fits-all solution. In other words, regardless if SOF leaders and policymakers decide to enact Scenario 1 (i.e., decrease duration, maintain objective) or Scenario 2 (i.e., maintain duration, increase objective), there will be barriers to and conditions for success, and these will vary slightly for different SOF training institutions. Accordingly, the following overall actions are recommended for both Scenarios 1 and 2:

- Needs assessment – conduct task and KSA analyses to create alignment between all training elements in SOF IAT (cf. Surface, 2012). Based on a thorough review of the current literature on this topic, as well as the perspectives of experts and SOF language program stakeholders who were interviewed for the current study, these training elements include, but are not limited to, student individual differences, instructor qualifications, course factors, and training environment factors. This should be an institution-specific needs assessment, but a common process across components will identify opportunities for collaboration and sharing.
- Leverage existing research conducted by SWA for SOFLO on these training elements to optimize SOF IAT efficiency and effectiveness. Many of these briefings, research studies, and technical reports are cited in Section III (pp. 10-23) of this report.
- Enacting either scenario will require stakeholder cooperation and participation, particularly for Scenario 1, as many of the stakeholders who were interviewed for the current study indicated that Scenario 1 is less feasible and achievable than Scenario 2. Thus, it is imperative to get stakeholders' buy-in from the beginning of the change process (Cummings & Worley, 2009).

Although SOF leaders and policymakers could theoretically enact either scenario, the goals of Scenarios 1 and 2 are inherently different. For example, Scenario 1 may save money in the short term but might

negatively impact maintenance and improvement in the future, whereas Scenario 2 may save money in the long term because fewer resources have to be used to improve or maintain proficiency if SOF operators leave IAT with higher levels of language proficiency. Higher levels of proficiency post-IAT should translate into higher levels in the field, even with skill decay, and should make maintaining minimum standards easier. Thus, the following conditions for success are recommended separately for Scenarios 1 and 2.

Scenario 1 Conclusions and Recommendations

If it is important for SOF leaders and policymakers to save money in the short term, then Scenario 1 may be preferred over Scenario 2. The following actions are recommended to maximize the success of Scenario 1.

- Regardless of the scenario that is enacted, it is important to conduct task and KSA analyses to create alignment between all training elements in SOF IAT and get stakeholders' buy-in from the beginning of the change process; however, in Scenario 1, these actions are even more critically important to success than in Scenario 2. If Scenario 1 is preferred over Scenario 2, then it is important for SOF leaders and policymakers to:
    - Leverage existing research to optimize student selection for language training and student placement into specific training languages and to target individuals for special interventions when they are less likely to succeed in foreign language courses.
    - Select qualified foreign language instructors and provide them with training so they have the ability to teach efficiently and effectively in the SOF IAT environment.
    - Ensure language training curricula are task-based and mission-specific and include course materials to support SOF operators in achieving their post-IAT training objectives. Likewise, maximize operators' time on task and provide them with opportunities to practice their language skills, particularly in immersive environments.
    - Not assume the same training objective can be achieved in a shorter duration just by making minimal adjustments, such decreasing the class size, increasing homework or self-study hours, and providing additional technology. All experts and stakeholders interviewed for the current study mentioned multiple training elements that must be leveraged for Scenario 1 to be successful. In other words, simply changing a few elements of training will likely not be effective for Scenario 1, in particular.
- Based on a preliminary analysis of SOF language training data, SOF personnel in Category I/II languages who received 12 or 14 weeks of language training tended to have lower speaking and listening proficiency scores than personnel who received 15 or more weeks of training, as measured by the OPI and DLPT, respectively. Similarly, SOF personnel in Category III/IV languages who received less than 24 weeks of language training tended to have lower speaking and listening proficiency scores than personnel who received 24 or more weeks of language training. Thus:

- For Category I and II languages, the optimal IAT length may be 15 weeks. Training durations longer than 15 weeks (e.g., 18 weeks) did not lead to significant improvements in language proficiency.
- For Category III and IV languages, the optimal IAT length appears to be between 20 and 24 weeks.

These results, however, must be interpreted with caution because there were many potential moderators that were unable to be controlled for in the current study. Also, due to limited data, it is difficult to draw any conclusions regarding the training duration-proficiency relationships for durations greater than 18 weeks for Category I-II languages and 24 weeks for Category III/IV languages.

Scenario 2 Conclusions and Recommendations

If it is SOF leaders' and policymakers' goal to save money in the long term, then Scenario 2 may be preferred over Scenario 1. The following actions are recommended to maximize the success of Scenario 2.

- Regardless of the scenario that is enacted, it is important to conduct task and KSA analyses to create alignment between all training elements in SOF IAT and get stakeholders' buy-in from the beginning of the change process. Also, if Scenario 2 is preferred over Scenario 1, then it is important for SOF leaders and policymakers to:
  - Provide SOF operators with training on how to learn a second language. This training could focus on meta-cognitive strategies and other learning strategies to optimize the efficiency and effectiveness of SOF IAT.
  - Provide SOF operators with additional resources (e.g., games) to keep them engaged in language learning, both inside and outside of the classroom, and to sustain their motivation throughout language training.
  - Provide SOF operators with opportunities to practice the target language skills in immersive environments.
- Set realistic post-IAT training objectives and hold SOF operators and language program administrators accountable for meeting these objectives. If post-IAT training objectives are realistic, SOF operators will be more likely to meet them, especially if they are provided with the necessary resources and support and there are mechanisms in place to hold them accountable for meeting these objectives. This point is further supported by previous findings regarding the graduation standard change at SWCS (i.e., changing the graduation standard from an ILR Level 0+/0+/0+ to an ILR Level 1/1/1 resulted in positive impacts on SOF operators' listening, reading, and speaking proficiency scores [Ellington & Surface, 2007, March]). Likewise, SOF operators' proficiency test scores from the BLC at SWCS from July 2011 to July 2012 illustrate that many operators are already achieving an increased training objective within the current training duration; 57% of SOF operators from the BLC at SWCS exceeded the ILR Level 1/1 standard and 10.8% met the ILR Level 2 standard. These findings represent statistically significant

increases of 9% and 5.4%, respectively, from the July 2010 to July 2011 time period (*BLC FY 2012 Training Trend Report* [Technical Report #2012010635]).

Directions for Future Study

A lack of variability in training duration was identified as a substantial problem; however, the recent change made at SWCS BLC that modified the Category I/II language IAT from 18 weeks to 24 weeks offers a unique opportunity to further investigate the relationship between initial training duration and skill-level retention. It is recommended that proficiency data continue to be collected to take advantage of this opportunity. As more data are collected from SOF operators enrolled in these training events, the relationship between initial training duration and language proficiency can be reexamined to shed additional light on this topic and more specifically, make comparisons in language proficiency scores between SWCS BLC Category I/II trainees who received 24 weeks of language training and SWCS BLC Category I/II trainees who received 18 weeks of language training, over both the short- and long-term.

REFERENCES

Abu-Rabia, S. (2003). Cognitive and social factors affecting Arab students learning English as a third language in Israel. *Educational Psychology, 23*, 347-360.

Adair-Hauck, B., Willingham-McLain, L., & Youngs, B. (1999). Evaluating the integration of technology and second language learning. *CALICO Journal, 17*, 269-306.

ACTFL. (1999). *Standards for foreign language learning in the 21st century* (3rd ed.). Yonkers, NY: Author.

Alvarez, K., Salas, E., & Garofano, C. M. (2004). An integrated model of training evaluation and effectiveness. *Human Resources Development Review, 3*, 385-416.

ASTM International. (2005). *Standard guide for use-oriented foreign language instruction.* West Conshohocken, PA: Author.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*, 191-215.

Barrick, M. R., & Mount, M. K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology, 44*, 1-26.

Bonney, C. R., Cortina, K. S., Smith-Darden, J. P., & Fiori, K. L. (2008). Understanding strategies in foreign language training: Are integrative and intrinsic motives distinct predictors? *Learning and Individual Differences, 18,* 1-10.

Bowden, H. W., Sanz, C., & Stafford, C. A. (2005). Individual differences: Age, sex, working memory, and prior knowledge. In C. Sanz (Ed.), *Mind and context in adult second language acquisition: Methods, theory, and practice* (pp. 105-140). Washington, DC: Georgetown University Press.

Briner, R. B., & Rousseau, D. M. (2011). Evidence-based I-O psychology: Not there yet. *Industrial and Organizational Psychology: Perspectives on Science and Practice, 4*(1), 3-22.

Butler, Y. G., & Lee, J. (2006). On-task versus off-task self-assessments among Korean elementary school students studying English. *Modern Language Journal, 90*, 506-518.

Carreker, S. H., Swank, P. R., Tillman-Dowdy, L., Neuhaus, G. F., Monfils, M. J., Montemayor, M. L., & Johnson, P. (2005). Language enrichment teacher preparation and practice predicts third grade reading comprehension. *Reading Psychology, 26*, 401-432.

Carroll, J. B. (1962). The prediction of success in intensive foreign language training. In R. Glaser (Ed.), *Training research and education* (pp. 87-136). Pittsburgh, PA: University of Pittsburgh Press.

Caroll, J. B., & Sapon, S. M. (1959). *Modern Language Aptitude Test (MLAT)*. New York, NY: Psychological Corporation.

Chen, H. (2007). *The relationship between EFL learners' self-efficacy beliefs and English performance.* (Unpublished doctoral dissertation). Florida State University, Tallahassee, FL.

Clifford, R. T. (1995). Reinventing second language instruction. In R. Donato & R. Terry (Eds), *The ACTFL foreign language education series: Foreign language learning: The journey of a lifetime* (pp. 153-166). Lincolnwood, IL: NTC.

Cohen, A. D. (1998). *Strategies in learning and using a second language.* London: Longman.

Colquitt, J. A., LePine, J. A., & Noe, R. A. (2000). Toward an integrative theory of training motivation: A meta-analytic path analysis of 20 years of research. *Journal of Applied Psychology, 83*, 678-707.

Cummings, T. G., & Worley, C. G. (2009). *Organization development and change* (9th ed.). Mason, OH: South-Western.

Diller, K. C. (1978). *The language teaching controversy.* Rowley, Massachusetts: Newbury House.

DLIFLC. (1995). *Selecting and training Special Forces soldiers in foreign languages: Principles and guidelines for commanders and staff* (Research Bulletin 95-03). Monterey, CA: Author.

Eden, D., & Ravid, G. (1982). Pygmalion versus self-expectancy: Effects of instructor- and self expectancy on trainee performance. *Organizational Behavior and Human Performance, 30*, 351-364.

Ellington, J. K., & Suface, E. A. (2009, April). The trainer's impact in the learning environment: A multilevel examination. In A. Towler & S. Bell (Chairs), *The people factor: Considering trainee and trainer effects on learning.* Symposium presented at the 24th annual meeting of the Society for Industrial and Organizational Psychology, New Orleans, LA.

Erhman, M., & Oxford, R. L. (1995). Cognition plus: Correlates of adult language proficiency. *The Modern Language Journal*, 79, 67-89.

Gardner, R. C. (1979). Social psychological aspects of second language acquisition. In H. Giles & R. St. Clair (Eds.), *Language and social psychology* (pp. 193-220). Oxford: Blackwell.

Gardner, R. C. (1991). Second language learning in adults: Correlates of proficiency. *Applied Language Learning, 2*, 1-28.

Gardner, R. C. (1997). Individual differences and second language learning. In D. Corson & G. Tucker (Eds.), *Encyclopedia of language education: Second language education* (Vol. 4, pp. 33-42). Norwell, MA: Kluwer Academic.

Gardner, R. C. (2010). *Motivation and second language acquisition: The socio-educational model.* New York, NY: Peter Lang.

Gardner, R. C., & Lambert, W. E. (1959). Motivational variables in second-language acquisition. *Canadian Journal of Psychology, 13*, 266-272.

Gardner, R. C., Tremblay, P. F., & Masgoret, A. M. (1997). Towards a full model of second language learning: An empirical investigation. *Modern Language Journal, 81*, 344-362.

Goldstein, I., & Ford, K. (2002). *Training in organizations* (4th ed.). Belmont, CA: Wadsworth.

Guilford, J. P. (1959). *Personality*. New York, NY: McGraw Hill.

Heilenman, L. K., & Kaplan, I. (1985). Proficiency in practice: The foreign language curriculum. In C. James (Ed.), *The ACTFL foreign language education series: Foreign language proficiency in the classroom and beyond*. Lincolnwood, IL: NTC.

Hsieh, P. P., & Schallert, D. K. (2008). Implications from self-efficacy and attribution theories for an understanding of undergraduates' motivation in a foreign language course. *Contemporary Educational Psychology, 33*, 513-532.

Huang, S. (2008). Assessing motivation and learning strategies using the motivated strategies for learning questionnaire in a foreign language learning context. *Social Behavior and Personality, 36*, 529-534.

Jackson, C. (2002). *Manual of the Learning Styles Profiler*. Retrieved from www.psi-press.co.uk

Jackson, F. H., & Kaplan, M. A. (2001). Lessons learned from fifty years of theory and practice in government language teaching. In J. Alatis & A-H. Tan (Eds.), *Georgetown University round table on languages and linguistics 1999: Language in our time: Bilingual education and official English, ebonics and standard English, immigration and the Unz initiative* (pp. 71-87). Washington, DC: Georgetown University Press.

Jie, L., & Xiaoqing, Q. (2006). Language learning styles and learning strategies of tertiary-level English learners in China. *Regional Language Centre Journal, 37*, 67-90.

Johns, G. (2006). The essential impact of context on organizational behavior. *Academy of Management Review, 31*, 386-408.

Kichuk, S. L., & Wiesner, W. H. (1998). Work teams: Selecting members for optimal performance. *Canadian Psychology, 39*, 23-32.

Lenneberg, E. (1967). *Biological foundations of language.* New York, NY: Wiley.

Littlewood, W. T. (1984). *Foreign and second language learning.* Great Britain: Cambridge University Press.

Locke, E. A., Shaw, K. N., Saari, L. M., & Latham, G. P. (1981). Goal setting and task performance: 1969-1980. *Psychological Bulletin, 90*, 125-152.

Lombardo, L. (1988). *Language learners' needs, interests and motivation: A survey of EFL students in an Italian economics faculty*. East Lansing, MI: National Center for Research on Teacher Learning (ERIC Document Reproduction Service No. ED 304 006).

MacIntyre, P. D., & Charos, C. (1996). Personality, attitudes, and affect as predictors of second language communication. *Journal of Language and Social Psychology, 15*, 3-26.

Masgoret, A. M., & Gardner, R. C. (2003). Attitudes, motivation, and second language learning: A meta-analysis of studies conducted by Gardner and Associates. *Language Learning, 53*, 123-163.

Mills, N., Pajares, F., & Herron, C. (2007). Self-efficacy of college intermediate French students: Relation to achievement and motivation. *Language Learning, 57*, 417-442.

Mitchell, R., & Myles, F. (1998). Second language learning theories. New York, NY: Oxford University Press.

O'Mara, F. E. (1994). *Training approaches for reducing student attrition from foreign language training (LSCP RII)*. Reston, VA: PRC.

Onwuegbuzie, A., Bailey, P., & Daley, C. (2001). Cognitive, affective, personality, and demographic predictors of foreign-language achievement. *The Journal of Educational Research, 94*, 3-15.

Oxford, R. L. (2002). Sources of variation in language learning. In R. Kaplan (Ed.), *Oxford handbook of applied linguistics* (pp. 245-252). New York, NY: Oxford University Press.

Oxford, R., & Shearin, J. (1994). Language learning motivation: Expanding the theoretical framework. *The Modern Language Journal, 78*, 12-28.

Oya, T., Manalo, E., & Greenwood, J. (2004). The influence of personality and anxiety on the oral performance of Japanese speakers of English. *Applied Cognitive Psychology, 18*, 841-855.

Penfield, W., & Roberts, L. (1959). *Speech and brain mechanisms*. Princeton, NJ: Princeton University Press.

Petersen, C. R., & Al-Haik, A. R. (1976). The development of the Defense Language Aptitude Battery (DLAB). *Educational and Psychological Measurement, 36*, 369-380.

Pimsleur, P. (1963). Predicting success in high school foreign language courses. *Educational and Psychological Measurement, 23*, 349-357.

Pimsleur, P. (1966). *Pimsleur Language Aptitude Battery*. New York, NY: Harcourt Brace Jovanovitch.

Sadera, W., Robertson, J., Song, L., & Midon, N. (2009). The role of community in online learning success. *Journal of Online Learning and Teaching, 5*, 277-284.

Salas, E., & Cannon-Bowers, J. A. (2001). The science of training: A decade of progress. *Annual Review of Psychology, 52*, 471-499.

Sánchez-Herrero, S. A., & Sánchez, M. D. (1992). The predictive validation of an instrument designed to measure student anxiety in learning a foreign language. *Educational and Psychological Measurement, 52*, 961-966.

Schulte, M., Ostroff, C., & Kinicki, A. (2006). Organizational climate systems and psychological climate perceptions: A cross-level study of climate-satisfaction relationships. *Journal of Occupational and Organizational Psychology, 79*, 645-671.

Shapiro, J. R., Quiñones, M. A., & King, E. B. (2007). Expectations of obese trainees: How stigmatized trainee characteristics influence training effectiveness. *Journal of Applied Psychology, 92*, 239-249.

Shirley, C. L. (2007). *Personality and second language learning in a defense program of Modern Standard Arabic studies* (Unpublished doctoral dissertation). Pacific Graduate School of Psychology, Palo Alto, CA.

Silva, J. M., & White, L. A. (1993). Relation of cognitive aptitudes to success in foreign language training. *Military Psychology, 5*, *79-93.*

Smith-Jentsch, K. A., Jentsch, F. G., Payne, S. C., & Salas, E. (1996). Can pretraining experiences explain individual differences in learning? *Journal of Applied Psychology, 81,* 110-116.

Sparks, R. L., Patton, J., Ganschow, L., Humbach, N., & Javorsky, J. (2006). Native language predictors of foreign language proficiency and foreign language aptitude. *Annals of Dyslexia, 56,* 129-160.

Steele, D. (2012, April). Ups and downs in cutting back and moving forward. *Army Magazine, 62*(4), 34-40.

Surface, E. A. (2012). Training needs assessment: Aligning learning and capability with performance requirements and organizational objectives. In M. Wilson, W. Bennett, S. Gibson & G. Alliger (Eds.), *The handbook of work analysis: The methods, systems, applications and science of work measurement in organizations* (pp. 437-462). New York, NY: Routledge.

Surface, E. A., & Ellington, J. K. (2008, April). *Rethinking context in training effectiveness research: Instructor as learning context.* In E. Dierdorff (Chair), *Illuminating the 'murky ground': Linking context theory to empirical research*. Symposium presented at the 23rd annual meeting of the Society for Industrial and Organizational Psychology, San Francisco, CA.

Surface, Ward, & Associates. (2005, February). *A multilevel analysis of language proficiency at the completion of USAJFKSWCS language training: Assessing the impact of individual, class and instructor differences on DLPT and OPI scores* (Technical Report #20050672). Raleigh, NC: Author.

Surface, Ward, & Associates. (2007, March). *Post-training language proficiency at the USAJFKSWCS: Assessing the impact of changing training vendors and proficiency standards*. Raleigh, NC: Author.

Surface, Ward, & Associates. (2007, July). *Foreign language instructor effectiveness at the USAJFKSWCS: A preliminary investigation of the impact of instructor characteristics on student language proficiency.* Invited presentation delivered at the U.S. Special Operations Command's Command Language Program Manager's Course, Fort Bragg, NC.

Surface, Ward, & Associates. (2007, July). *USAJFKSWCS French Legacy language training report: Classes 15 NOV 04 – 12 MAR 07* (Technical Report #2007010103). Raleigh, NC: Author.

SWA Consulting Inc. (2007, December). *SOF language training analysis support project: USAJFKSWCS December brief*. Invited presentation delivered to the Director of Training and Doctrine, USAJFKSWCS, and ARSOF Language Office, USAJFKSWCS.

SWA Consulting Inc. (2008, January). *1st SFG 02-26 OCT 07 cohort report* (Technical Report #2008010601). Raleigh, NC: Author.

SWA Consulting Inc. (2008, November). *Wonderlic personnel test as a predictor of language proficiency* (Technical Report #200810608). Raleigh, NC: Author.

SWA Consulting Inc. (2009, June). *Predictors of proficiency on the OPI: Considering the WPT™, Army GT, AFQT, and DLAB* (Technical Report #2009010612). Raleigh, NC: Author.

SWA Consulting Inc. (2009, October). *Special Operations Forces instructor language needs assessment* (Technical Report #2009010603). Raleigh, NC: Author.

SWA Consulting Inc. (2010, July). *Online language training and the effective instructor* (Technical Report #2010010401). Raleigh, NC: Author.

SWA Consulting Inc. (2010, September). *Defense Language Aptitude Battery (DLAB): Perspectives from the field.* (Technical Report #2010011017). Raleigh, NC: Author.

SWA Consulting Inc. (2010, September). *The role of individual differences in foreign language speaking acquisition.* (Technical Report #2010010620). Raleigh, NC: Author.

SWA Consulting Inc. (2010, October). *Inside AOR use of language* (Technical Report #2010011010). Raleigh, NC: Author.

SWA Consulting Inc. (2010, October). *Outside AOR use of language* (Technical Report #2010011011). Raleigh, NC: Author.

SWA Consulting Inc. (2010, November). *Barriers to language acquisition and maintenance* (Technical Report #2010011024). Raleigh, NC: Author.

SWA Consulting Inc. (2010, November). *Considering language in the promotion process* (Technical Report #2010011043). Raleigh, NC: Author.

SWA Consulting Inc. (2011, July). *Evaluating predictors of foreign language learning* (Technical Report #2011010631). Raleigh, NC: Author.

SWA Consulting Inc. (2011, July). *Naval Special Warfare Command NSW language and cultural training curriculum development project* (Technical Report #2011010609). Raleigh, NC: Author.

SWA Consulting Inc. (2012, February). *Trainee characteristics and achievement during Special Operations Forces initial acquisition foreign language training* (Technical Report #2012010610). Raleigh, NC: Author.

SWA Consulting Inc. (2012, September). *USAJFKSWCS BLC FY 2012 training trend report* (Technical Report #2012010635). Raleigh, NC: Author.

Towler, A. J., & Surface, E. A. (In progress). *How valuable are learning styles? A review.* Unpublished manuscript.

USSOCOM M 350-8. (2009). *Training: The Special Operations Forces language program.* MacDill Air Force Base, FL: Author.

Veidt, F. P. (1973). The dialogue: An aid to oral production in beginning language study. *Modern Language Journal, 57,* 3-8.

Woodrow, L. J. (2006). A model of adaptive language learning. *Modern Language Journal, 90,* 297-319.

Yi, H. (2008). The effect of class size reduction on foreign language learning: A case study. *Language and Linguistics Compass, 2,* 1089-1108.

ABOUT SWA CONSULTING INC.

SWA Consulting Inc. (formerly Surface, Ward, and Associates) provides analytics and evidence-based solutions for clients using the principles and methods of industrial/organizational (I/O) psychology. Since 1997, SWA has advised and assisted corporate, non-profit and governmental clients on:

- Training and development
- Performance measurement and management
- Organizational effectiveness
- Test development and validation
- Program/training evaluation
- Work/job analysis
- Needs assessment
- Selection system design
- Study and analysis related to human capital issues
- Metric development and data collection
- Advanced data analysis

One specific practice area is analytics, research, and consulting on foreign language and culture in work contexts. In this area, SWA has conducted numerous projects, including language assessment validation and psychometric research; evaluations of language training, training tools, and job aids; language and culture focused needs assessments and job analysis; and advanced analysis of language research data.

Based in Raleigh, NC, and led by Drs. Eric A. Surface and Stephen J. Ward, SWA now employs close to twenty I/O professionals at the masters and PhD levels. SWA professionals are committed to providing clients the best data and analysis upon which to make evidence-based decisions. Taking a scientist-practitioner perspective, SWA professionals conduct model-based, evidence-driven research and consulting to provide the best answers and solutions to enhance our clients' mission and business objectives. SWA has competencies in measurement, data collection, analytics, data modeling, systematic reviews, validation, and evaluation.

For more information about SWA, our projects, and our capabilities, please visit our website (www.swa-consulting.com) or contact Dr. Eric A. Surface (esurface@swa-consulting.com) or Dr. Stephen J. Ward (sward@swa-consulting.com).

The following SWA Consulting Inc. team members contributed to this report (listed in alphabetical order):

Mr. Matthew Borneman
Mr. David Fried
Ms. Gwendolyn Good
Ms. Lindsey Jeralds
Ms. Cristina Lambert
Dr. Jenn Lindberg McGinnis
Dr. Eric A. Surface

APPENDIX A: LETTER TO KEY EXPERTS

UNITED STATES SPECIAL OPERATIONS COMMAND
7701 TAMPA POINT BOULEVARD
MACDILL AIR FORCE BASE, FLORIDA 33621-5323

15 August 2012

Director, Special Operations Forces Language Office

[NAME]
[JOB TITLE]
[ORGANIZATION]
[ADDRESS]

Dear [NAME]:

My name is Jack Donnelly, and I work for the United States Special Operations Command (USSOCOM) as the Director of the Special Operations Forces Language Office (SOFLO). This office is currently working in conjunction with SWA Consulting Inc. (SWA) to conduct research that examines ways to decrease the duration of foreign language training or instruction while maintaining the training objective. Although our primary focus is adult learners, this research will be beneficial to all parties who deal with foreign language training or instruction, regardless of learner population. To inform work on this project, SOFLO is assisting SWA in gathering information about factors or levers that may be used to decrease the duration of foreign language training or instruction while maintaining the training objective. These levers will serve as a baseline for research we are conducting on this topic.

I am requesting your assistance in this project by participating in an interview to provide SWA with your expert knowledge regarding the theoretical and research literature on this topic. SWA will begin conducting interviews soon, and any information you can provide would be most appreciated. Our aim is to conduct these interviews by August 24, 2012.

If you elect to participate in an interview, the information you provide will be kept confidential and will be used for the purposes of producing a report for me. This report will be released to me and will include only summary results. The information you provide will not be attached to or associated with your name or organization. Instead, information will be described and summarized across multiple participating organizations. In addition, the information you provide will be integrated with a systematic review of the literature on this topic, as well as appropriate empirical results available from SWA's other research and evaluation efforts. Under Title 32, §219 of the Code of Federal Regulations from the Department of Defense Instruction 3216.02, this study qualifies as exempt because the information you and other interviewees provide will not be published showing how specific individuals responded, identities will be protected, and groupings of responses by external organization will not be shown.

To indicate your interest in participating in an interview and to provide your contact information and general availability, please visit the following link to complete a short survey:

> Click here to take the survey or paste the following URL into your browser: http://swa.us2.qualtrics.com/SE/?SID=SV_bykqUVk38Es98Vv

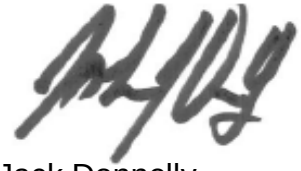
After you complete this short interest survey, you will be contacted by a representative from SWA to answer your questions about the study and confirm your willingness and availability to participate in a one-hour interview that will be conducted over the phone.

Please Note. This project is sponsored by SOFLO and USSOCOM and is conducted under a subcontract with CACI International Inc. as the prime and SWA Consulting Inc. as the technical lead subcontractor (Subcontract # B11-114482; Prime # H92222-10-D-0017/0007). This is not a solicitation, and participation in no way obligates the government to contract with your organization. The feedback received from your organization will be completely voluntary on your part and no payment will be provided by any parties associated with this contract.

If you have any questions about the study, please contact Dr. Jenn McGinnis from SWA Consulting Inc. at (919) 835-1562 ext. 7007, jmcginnis@swa-consulting.com or me at john.donnelly@socom.mil, (813) 826-6040.

Thank you in advance for your time and consideration.

Sincerely,



Jack Donnelly
Department of the Air Force Civilian
Director, SOF Language Office

APPENDIX B: LETTER TO KEY STAKEHOLDERS

UNITED STATES SPECIAL OPERATIONS COMMAND
7701 TAMPA POINT BOULEVARD
MACDILL AIR FORCE BASE, FLORIDA 33621-5323

FMD-J1/7-TL 21 August 2012

SUBJECT: Request for Participation in Study of Foreign Language Training Duration

1. We are currently working in conjunction with SWA Consulting Inc. (SWA) to conduct research that examines ways to decrease the duration of foreign language training while maintaining the training objective. We need your support in collecting relevant information about factors or levers that may be used to decrease the duration of foreign language training while maintaining the training objective.

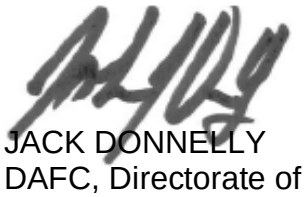
2. I am requesting your assistance in this project by participating in an interview to provide SWA with information regarding your experience on this topic. Any information you can provide would be most appreciated. Our aim is to conduct interviews by August 30, 2012 to facilitate publication of the technical report by the end of the Fiscal Year.

3. To indicate your interest, please visit the following link to complete a short survey:

Click here to take the survey or paste the following URL into your browser:
http://swa.us2.qualtrics.com/SE/?SID=SV_236Pk3IVoGRndch

If you elect to participate in an interview, the information you provide will be kept confidential and will be used for the purposes of producing a report for me. This report will be released to me and will include only summary results. The information you provide will not be attached to or associated with your name. In addition, the information you provide will be integrated with a systematic review of the literature on this topic, as well as appropriate empirical results available from SWA's other research and evaluation efforts. Under Title 32, §219 of the Code of Federal Regulations from the Department of Defense Instruction 3216.02, this study qualifies as exempt.

4. If you have any questions about the study, please contact Dr. Jenn McGinnis from SWA Consulting Inc. at (919) 835-1562 ext. 7007, jmcginnis@swa-consulting.com or me at john.donnelly@socom.mil, (813) 826-6040.
Thank you in advance for your time and consideration.



JACK DONNELLY
DAFC, Directorate of Force Management and Development, J1/7-TL
Director, SOF Language Office

APPENDIX C: INTERVIEW PROTOCOL FOR KEY EXPERTS

Greeting

Hi, this is _____ calling from SWA Consulting. How are you today?

Introductory Statement

During our interview today, I will be asking you some questions about factors or levers that may be used to decrease the duration of foreign language instruction while maintaining the instructional objective. SWA Consulting Inc. (SWA) is currently working in conjunction with the Special Operations Forces Language Office (SOFLO) to conduct research that examines ways to decrease the duration of foreign language instruction while maintaining the instructional objective. Although our primary focus is adult learners, this research will be beneficial to all parties who deal with foreign language instruction, regardless of learner population.

The questions we will be asking will take between 30 minutes to one hour, and will focus on the theoretical and research literature on this topic. As you answer these questions, we will be taking notes.

The information you provide will be kept confidential and will be used for the purposes of producing a report for Mr. John Donnelly, Director of SOFLO. This report will be released to him and will include only summary results. The information you provide will not be attached to or associated with your name or organization. Instead, we will describe and summarize information across multiple participating organizations. In addition, the information you provide will be integrated with a systematic review of the literature on this topic, as well as appropriate empirical results available from SWA's other research and evaluation efforts. Under Title 32, §219 of the Code of Federal Regulations from the Department of Defense Instruction 3216.02, this study qualifies as exempt because the information you and other interviewees provide will not be published showing how specific individuals responded, identities will be protected, and groupings of responses by external organization will not be shown.

Do you have any questions for us before we begin?

Interview Questions

Imagine that you are a language program administrator and have been tasked with doing one of two things. The first possible scenario is that you could decrease the duration of instruction while maintaining the current instructional objective. The second possible scenario is that you could keep the duration of instruction the same but increase the instructional objective. In the questions that follow, we will ask you to share your expert opinions about how best to achieve these scenarios.

1. If you were tasked with the scenarios we just described, what are the main factors or levers you would use to achieve a particular instructional objective within a specific duration? In other words, what are the most important factors that need to be considered when attempting to achieve a particular instructional objective within a specific duration?
    a. Why are these factors or levers important to the issue at hand?
    b. What changes would not be helpful or would not make a significant difference?

c. Do the important factors differ between these scenarios? That is, would some factors or levers apply to only one of the scenarios, but not both? If so, which ones and why?

Student or Learner Characteristics

The next set of questions will focus on student or learner characteristics that may affect the amount of time it takes to achieve a particular level of language proficiency.

For these questions, we will ask you to indicate if it is effective or not to select students or learners for language instruction based on a particular set of student or learner characteristics. For each characteristic, we will first ask you if it is effective to select students or learners for language instruction based on that characteristic. If you indicate, "Yes, it is effective," we will then ask you to rate to what extent it is effective, using a three-point rating scale (To some extent, To a great extent, To a very great extent).

2. Is it effective to select students or learners for language instruction based on:

    a. Age?

        i. If Yes, to what extent is it effective (1 = *To some extent*, 2 = *To a great extent*, 3 = *To a very great extent*)?

    b. Intelligence?

        i. If Yes, to what extent is it effective (1 = *To some extent*, 2 = *To a great extent*, 3 = *To a very great extent*)?

    c. Initial proficiency?

        i. If Yes, to what extent is it effective (1 = *To some extent*, 2 = *To a great extent*, 3 = *To a very great extent*)?

    d. Previous language training/instruction or experience?

        i. If Yes, to what extent is it effective (1 = *To some extent*, 2 = *To a great extent*, 3 = *To a very great extent*)?

    e. Language learning motivation?

        i. If Yes, to what extent is it effective (1 = *To some extent*, 2 = *To a great extent*, 3 = *To a very great extent*)?

    f. Language learning aptitude?

        i. If Yes, to what extent is it effective (1 = *To some extent*, 2 = *To a great extent*, 3 = *To a very great extent*)?

    g. Native language?

        i. If Yes, to what extent is it effective (1 = *To some extent*, 2 = *To a great extent*, 3 = *To a very great extent*)?

h. Personality?

i. If Yes, to what extent is it effective (1 = *To some extent*, 2 = *To a great extent*, 3 = *To a very great extent*)?

i. Learning styles or preferences?

i. If Yes, to what extent is it effective (1 = *To some extent*, 2 = *To a great extent*, 3 = *To a very great extent*)?

j. Learning strategies?

3. Aside from those mentioned above, are there other student or learner characteristics that affect the amount of time it takes to achieve a particular level of proficiency? If so, what are these characteristics and how do they affect the amount of time it takes to achieve a particular level of proficiency?

Instruction

The next set of questions will focus on how instruction may affect the amount of time it takes to achieve a particular level of language proficiency.

4. In general, how might instruction affect the amount of time it takes to achieve a particular level of language proficiency?

5. What specific aspects of instruction could be leveraged so the same instructional objective may be achieved within a shorter duration, or so that an increased instructional objective may be achieved within the same duration?

6. Is there a model of instruction you could use to optimize instructional efficiency/effectiveness so the same instructional objective may be achieved within a shorter duration, or so that an increased instructional objective may be achieved within the same duration?

Learning Context or Environment

The next set of questions will focus on aspects of the learning context or environment that may affect the amount of time it takes to achieve a particular level of language proficiency.

For these questions, we will ask you to indicate how important particular aspects of the learning context or environment are, using a five-point rating scale (Not important, Slightly important, Moderately important, Important, Very Important).

7. How important is the following aspect of the learning context or environment to the issue of the amount of time it takes to achieve a particular level of language proficiency? (1 = *Not important*, 2 = *Slightly important*, 3 = *Moderately important*, 4 = *Important*, 5 = *Very important*)

a. Availability or quality of resources?

b. Access to technology or updated technology?

c. Instructors?

d. Frequency of class meetings?

e. Contact hours?

f. Homework or independent study hours?

g. Curriculum (scope and sequence)?

h. Course content (e.g., learning activities, materials)?

i. Opportunities for practice?

j. Informal assessment?

k. Formal assessment?

l. Availability of instructor or tutor?

m. Class size?

8. Aside from those mentioned above, are there other aspects of the learning context or environment that affect the amount of time it takes to achieve a particular level of proficiency? If so, what are these aspects and how do they affect the amount of time it takes to achieve a particular level of proficiency?

Additional Questions

In this final set of questions, we will ask you some additional questions related to this topic.

9. In your opinion, how many contact or instructional hours does it take for an absolute beginner language learner to achieve a 1/1 level of proficiency, as measured by the two-skill Oral Proficiency Interview?

    a. To what extent is immersion in the target language an effective way to accelerate foreign language proficiency?

10. What barriers do you think would prevent achievement of the instructional objective if the duration of instruction was shortened?

    a. Are there different barriers that would prevent achieving a higher instructional objective without changing the duration of instruction?

11. What are some common mistakes language program administrators may make when attempting to shorten the duration of instruction while maintaining the current instructional objective?

    a. What are some mistakes language program administrators may make when attempting to increase the instructional objective while maintaining the current duration of instruction?

12. What additional resources would be needed to facilitate students achieving the same instructional objective in a shortened amount of time?

    a. What additional resources would be needed to facilitate students achieving a higher instructional objective in the same amount of time?

Closing Statement

That concludes the questions we have for you. Thank you for your time and input. The information you provided is invaluable to our research examining ways to decrease the duration of foreign language instruction while maintaining the current instructional objective. If you have any questions for us later, please feel free to call or email.

APPENDIX D: INTERVIEW PROTOCOL FOR KEY STAKEHOLDERS

Greeting

Hi, this is _____ calling from SWA Consulting. How are you today?

Introductory Statement

During our interview today, I will be asking you some questions about factors or levers that may be used to decrease the duration of foreign language training while maintaining the training objective. SWA Consulting Inc. (SWA) is currently working in conjunction with the Special Operations Forces Language Office (SOFLO) to conduct research that examines ways to decrease the duration of foreign language training while maintaining the training objective.

The questions we will be asking will take between 30 minutes to one hour, and will focus on your experience on this topic. As you answer these questions, we will be taking notes.

The information you provide will be kept confidential and will be used for the purposes of producing a report for Mr. John Donnelly, Director of SOFLO. This report will be released to him and will include only summary results. The information you provide will not be attached to or associated with your name. In addition, the information you provide will be integrated with a systematic review of the literature on this topic, as well as appropriate empirical results available from SWA's other research and evaluation efforts. Under Title 32, §219 of the Code of Federal Regulations from the Department of Defense Instruction 3216.02, this study qualifies as exempt because the information you and other interviewees provide will not be published showing how specific individuals responded, identities will be protected, and groupings of responses by external organization will not be shown.

Do you have any questions for us before we begin?

Interview Questions

As a language program administrator within the SOF IAT community, imagine that you have been tasked with doing one of two things. The first possible scenario is that you could decrease the duration of training while maintaining the current training objective. The second possible scenario is that you could keep the duration of training the same but increase the training objective. In the questions that follow, we will ask you to share your experience about how best to achieve these scenarios.

1. If you were tasked with the scenarios we just described, what are the main factors or levers you would use to achieve a particular training objective within a specific duration? In other words, what are the most important factors that need to be considered when attempting to achieve a particular training objective within a specific duration?

    a. Why are these factors or levers important to the issue at hand?

    b. What changes would not be helpful or would not make a significant difference?

    c. Do the important factors differ between these scenarios? That is, would some factors or levers apply to only one of the scenarios, but not both? If so, which ones and why?

Student or Learner Characteristics

The next set of questions will focus on student or learner characteristics that may affect the amount of time it takes to achieve a particular level of language proficiency.

For these questions, we will ask you to indicate if it is effective or not to select students or learners for language training based on a particular set of student or learner characteristics. For each characteristic, we will first ask you if it is effective to select students or learners for language training based on that characteristic. If you indicate, "Yes, it is effective," we will then ask you to rate to what extent it is effective, using a three-point rating scale (To some extent, To a great extent, To a very great extent).

2. Is it effective to select students or learners for language training based on:

    a. Age?

        i. If Yes, to what extent is it effective (1 = *To some extent*, 2 = *To a great extent*, 3 = *To a very great extent*)?

    b. Intelligence?

        i. If Yes, to what extent is it effective (1 = *To some extent*, 2 = *To a great extent*, 3 = *To a very great extent*)?

    c. Initial proficiency?

        i. If Yes, to what extent is it effective (1 = *To some extent*, 2 = *To a great extent*, 3 = *To a very great extent*)?

    d. Previous language training/instruction or experience?

        i. If Yes, to what extent is it effective (1 = *To some extent*, 2 = *To a great extent*, 3 = *To a very great extent*)?

    e. Language learning motivation?

        i. If Yes, to what extent is it effective (1 = *To some extent*, 2 = *To a great extent*, 3 = *To a very great extent*)?

    f. Language learning aptitude?

        i. If Yes, to what extent is it effective (1 = *To some extent*, 2 = *To a great extent*, 3 = *To a very great extent*)?

    g. Native language?

        i. If Yes, to what extent is it effective (1 = *To some extent*, 2 = *To a great extent*, 3 = *To a very great extent*)?

    h. Personality?

i. If Yes, to what extent is it effective (1 = *To some extent*, 2 = *To a great extent*, 3 = *To a very great extent*)?

i. Learning styles or preferences?

i. If Yes, to what extent is it effective (1 = *To some extent*, 2 = *To a great extent*, 3 = *To a very great extent*)?

j. Learning strategies?

3. Aside from those mentioned above, are there other student or learner characteristics that affect the amount of time it takes to achieve a particular level of proficiency? If so, what are these characteristics and how do they affect the amount of time it takes to achieve a particular level of proficiency?

Instruction

The next set of questions will focus on how instruction may affect the amount of time it takes to achieve a particular level of language proficiency.

4. In general, how might instruction affect the amount of time it takes to achieve a particular level of language proficiency?

5. What specific aspects of instruction could be leveraged so the same training objective may be achieved within a shorter duration, or so that an increased training objective may be achieved within the same duration?

6. Is there a model of instruction you could use to optimize instructional efficiency/effectiveness so the same training objective may be achieved within a shorter duration, or so that an increased training objective may be achieved within the same duration?

Training Context or Environment

The next set of questions will focus on aspects of the training context or environment that may affect the amount of time it takes to achieve a particular level of language proficiency.

For these questions, we will ask you to indicate how important particular aspects of the training context or environment are, using a five-point rating scale (Not important, Slightly important, Moderately important, Important, Very Important).

7. How important is the following aspect of the training context or environment to the issue of the amount of time it takes to achieve a particular level of language proficiency? (1 = *Not important*, 2 = *Slightly important*, 3 = *Moderately important*, 4 = *Important*, 5 = *Very important*)

b. Availability or quality of resources?

c. Access to technology or updated technology?

d. Instructors?

e. Frequency of class meetings?

f. Contact hours?

g. Homework or independent study hours?

h. Curriculum (scope and sequence)?

i. Course content (e.g., learning activities, materials)?

j. Opportunities for practice?

k. Informal assessment?

l. Formal assessment?

m. Availability of instructor or tutor?

n. Class size?

8. Aside from those mentioned above, are there other aspects of the training context or environment that affect the amount of time it takes to achieve a particular level of proficiency? If so, what are these aspects and how do they affect the amount of time it takes to achieve a particular level of proficiency?

Additional Questions

9. In your opinion, how many contact or instructional hours does it take for an absolute beginner language learner to achieve a 1/1 level of proficiency, as measured by the two-skill Oral Proficiency Interview?

    a. To what extent is immersion in the target language an effective way to accelerate foreign language proficiency?

10. What barriers do you think would prevent achievement of the training objective if the duration of training was shortened?

    a. Are there different barriers that would prevent achieving a higher training objective without changing the duration of training?

11. What are some common mistakes language program administrators may make when attempting to shorten the duration of training while maintaining the current training objective?

    a. What are some mistakes language program administrators may make when attempting to increase the training objective while maintaining the current duration of training?

12. As a language program administrator, what additional resources would be needed to facilitate students achieving the same training objective in a shortened amount of time?

a. As a language program administrator, what additional resources would be needed to facilitate students achieving a higher training objective in the same amount of time?

Closing Statement

That concludes the questions we have for you. Thank you for your time and input. The information you provided is invaluable to our research examining ways to decrease the duration of foreign language training while maintaining the current training objective. If you have any questions for us later, please feel free to call or email.

APPENDIX E: INTERVIEW ANALYSIS TECHNICAL APPENDIX

Data analysis was needed to identify themes from the interviews conducted with key experts and key stakeholders. Data analysis began with coding the interview transcripts with structural and content codes. The prevalence of codes was then identified by frequency counts.

Interview Transcript Analysis

The interview transcripts were exported from Microsoft Word into Microsoft Excel, and the data from the interviews were coded in two phases: (1) structural coding, and (2) content coding. Each phase provided a more detailed analysis of the data.

Structural coding works well for data collected through discrete questions and probes (e.g., interviews) that are repeated across multiple files in a data set (MacQueen, McLellan-Lemal, Bartholow, & Milstein, 2008; Saldaña, 2009). Structural coding makes "subsequent analyses easier by identifying all of the text associated with a particular question and its associated probes" (MacQueen et al., 2008, p. 124). This step is essential to prepare for the more detailed content coding phase.

Structural codes were developed using the interview protocols for the key experts and key stakeholders (Appendices X and X, pp. x-x). Across the two interview protocols, each question was assigned a number. Within each segment, the question asked by the interviewer and the complete response provided by the interviewee(s) were included. Additionally, any dialog between the interviewer and the interviewee(s) resulting from the initial question was captured in the segment. Each complete interview question-and-answer segment was exported from Microsoft Word into Microsoft Excel, and the appropriate structural code (i.e., question number) was applied. The structural codes were primarily used to segment the interview data for the codebook development and content coding phases.

Codebook Development Phase

When coding qualitative data, codebooks and coding instructions are developed to create a shared mental model among coders for applying the comment codes. By establishing a detailed guideline for applying content codes, the interchangeability of coders is enhanced (i.e., a new coder could be added to the process at any time without affecting the coding). Furthermore, coding instructions allow others to replicate the results of the study or to apply the same codes to additional data collected at a later date.

To create content codes for this project, text segments assigned to each structural code were reviewed for recurring themes. A research team member created themes and then collaborated with another team member to consolidate and further clarify any unclear themes. Then the coders developed rules about when the codes should and should not be applied, in accordance with established guidelines (MacQueen, McLellan, Kay, & Milstein, 1998). The researchers conducted a final review of the codes for clarity and conciseness.

Content Coding Phase

Content coding further identifies more specific themes that emerge from respondents' answers to the interview questions. Each discrete segment of text identified during structural coding is content coded. Although it is preferable if a single code can be applied to a single unit of text, simultaneous coding (i.e.,

applying multiple codes to a single unit of text) is often necessary with complex topics and discussion. This form of coding can be used when it is impossible to capture the sentiment of the text with a single code (Saldaña, 2009).

The content coding process began by reviewing the codebook and making any necessary modifications. The segments were then coded. Within the content coding phase, simultaneous coding was used to accommodate the need to describe specific segments using multiple codes.

Quality Assurance Phase

During content coding, multiple coders (for 15% of the interview responses) were used to enhance the quality of analysis. Absolute agreement was calculated for the content coding phase. This method assessed intercoder agreement by calculating the percentage of segments that the coders agreed upon (Bernard & Ryan, 2010). Higher levels of absolute agreement were an indication the coders were applying the codes consistently. The coders discussed their coding disagreements to 100% agreement.

References

Bernard, H. R., & Ryan, G. W. (2010). *Analyzing qualitative data: Systematic approaches*. Thousand Oaks, CA: Sage.

MacQueen, K. M., McLellan, E., Kay, K., & Milstein, B. (1998). Codebook development for team-based qualitative analysis. *Cultural Anthropology Methods, 10*, 31-36.

MacQueen, K. M., McLellan-Lemal, E., Bartholow, K., & Milstein, B. (2008). Team-based codebook development: Structure, process, and agreement. In G. Guest & K. MacQueen (Eds.), *Handbook for team-based qualitative research* (pp. 119-135). Lanham, MD: Altamira Press.

Saldaña, J. (2009). *The coding manual for qualitative researchers*. London: Sage.