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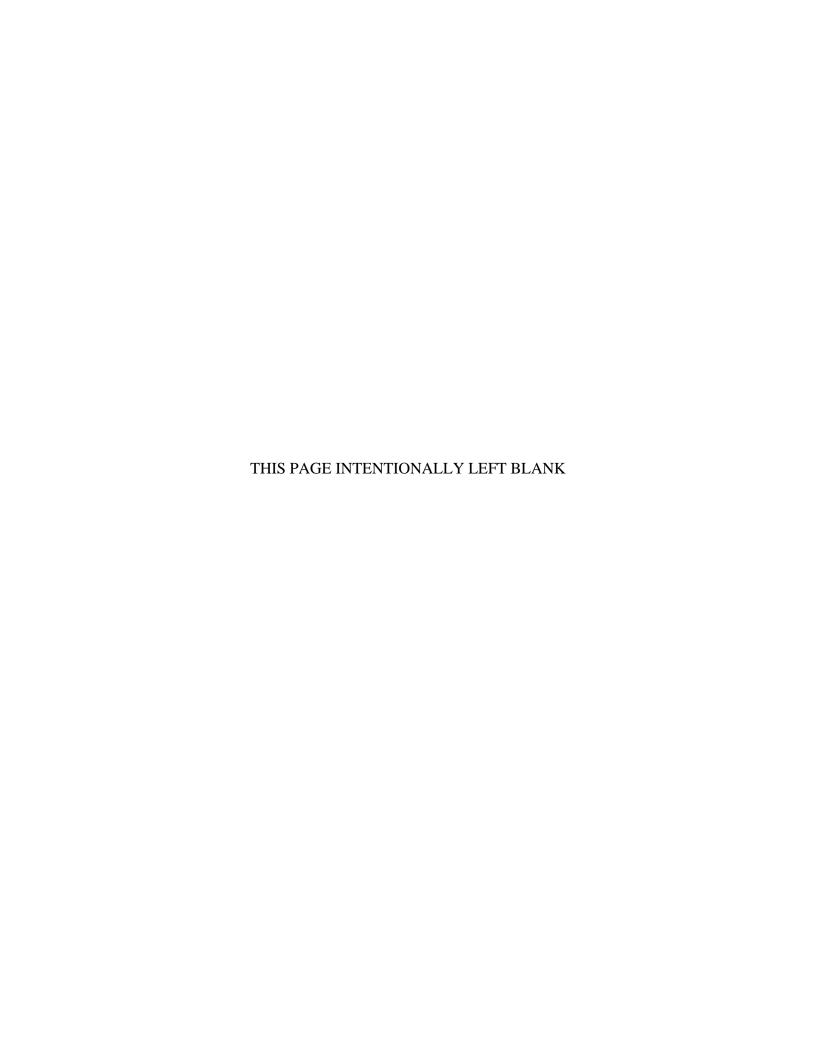**IMPROVING THE OPERATIONAL READINESS OF DEPARTMENT OF DEFENSE FOREIGN LANGUAGE CAPABILITIES**

by

Susan M. Hagan

June 2020

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13. ABSTRACT (maximum 200 words)

The DOD faces challenges in the strategic management of its foreign-language-capable workforce that are inhibiting maximum utilization of non-lethal force multipliers critical to the execution of national security strategies. This thesis forwards a validated methodology for strategic organizational change the DOD can utilize to fill persistent gaps and improve operational readiness measurement of the foreign language workforce. Findings indicate the development of a competency framework will enable the DOD to achieve fidelity of requirements to align workforce capabilities with strategic objectives. Task-oriented and competency-based assessments built upon a competency framework would enable quantified measurement of capabilities most important to operational readiness metrics. Foreign language capabilities are core warfighting skills, and the DOD has the opportunity to improve operational readiness and employ its full strength in support of national security strategies.

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IMPROVING THE OPERATIONAL READINESS OF DEPARTMENT OF DEFENSE FOREIGN LANGUAGE CAPABILITIES

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Submitted in partial fulfillment of the
requirements for the degree of

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ABSTRACT

The DOD faces challenges in the strategic management of its foreign-language-capable workforce, which are inhibiting maximum utilization of non-lethal force multipliers critical to the execution of national security strategies. This thesis forwards a validated methodology for strategic organizational change the DOD can utilize to fill persistent gaps and improve operational readiness measurement of the foreign language workforce. Findings indicate the development of a competency framework will enable the DOD to achieve fidelity of requirements to align workforce capabilities with strategic objectives. Task-oriented and competency-based assessments built upon a competency framework would enable quantified measurement of capabilities most important to operational readiness metrics. Foreign language capabilities are core warfighting skills, and the DOD has the opportunity to improve operational readiness and employ its full strength in support of national security strategies.

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LIST OF ACRONYMS AND ABBREVIATIONS

ARI	Army Research Institute
ASTM	American Society for Testing and Materials
CEFR	Common European Framework of Reference
COE	current operating environment
DCPAS	Defense Civilian Personnel Advisory Center
DEOMI	Defense Equal Opportunity Management Institute
DLNSEO	Defense Language and National Security Education Office
DLP	Defense Language Program
DLPT	Defense Language Proficiency Test
DOD	Department of Defense
ECD	Evidence Centered Design
FLPB	Foreign Language Proficiency Bonus program
GAO	Government Accountability Office
GPF	General Purpose Forces
ILR	Interagency Language Roundtable
KSAO	Knowledge, Skills, Abilities and Other attributes
LREC	Language, Regional Expertise, and Culture
LRI	Language Readiness Index
METLS	Mission Essential Task Lists
MOSAIC	Multipurpose Occupational Systems Analysis Inventory-Close-Ended
OPM	Office of Personnel Management
SLD	Skill Level Descriptors
SLL	Strategic Language List
SOF	Special Operation Forces
STAGNAG	Standardization Agreement
UGSP	Uniform Guidelines on Selection Procedures

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Words cannot express the gratitude I have for my family, David, Alexander, and Hailey, for their tireless support toward my achievement of this milestone.

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I.   INTRODUCTION

> In the 21st century, military strength will be measured not by the weapons our troops carry, but by the languages they speak and cultures they understand.
>
> —President Barack Obama, 2009[1]

The Department of Defense (DOD) considers foreign language proficiency a capability critical to national security within current operating environments (COE).[2] Wisecarver et al. argue that foreign language capabilities are paramount to the DOD's ability to maximize the use of nonlethal forces within these COEs.[3] In 2005 the DOD published the Defense Language Transformation Roadmap and asserted that foreign language competencies are "warfighting skills as important as critical weapons systems."[4] Language capabilities are emphasized in national strategies focused on the employment of this core warfighting skill.[5]

This thesis will analyze the current approach and evaluate an alternative approach to the management of foreign language capabilities for the DOD that is research based and offers tangible precedents, a competency framework. Furthermore, this thesis will analyze scholarly literature to establish a path for DOD reformation of foreign language benchmarks, to overcome challenges faced in connecting personnel assessment with

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[1] White House, "Remarks by the President at the Veterans of Foreign Wars Convention," Washington, DC: Office of the Press Secretary, August 17, 2009, https://obamawhitehouse.archives.gov/video/President-Obama-Speaks-to-the-Veterans-of-Foreign-Wars#transcript.

[2] Allison Abbe and Melissa Gouge, "Cultural Training for Military Personnel: Revisiting the Vietnam Era," *Military Review* 92, no. 4 (July 2012): 9–17, http://search.proquest.com/docview/1284079725/.

[3] Michelle Wisecarver, Gonzalo Ferro, Hannah Foldes, Cory Adis, Tim Hope, and Marc Hill, *Regional Expertise and Culture Proficiency* (Arlington VA: Personnel Decisions Research Institute, 2012), http://www.dtic.mil/docs/citations/ADA565673.

[4] Department of Defense, *Defense Language Transformation Roadmap*, (Washington, DC: Defense Language and National Security Education Office, 2005), 3, http://www.dtic.mil/docs/citations/ADB313370.

[5] For example, the Army, please see: Department of the Army, *The U.S. Army Human Dimension Concept*, TRADOC Pamphlet 515–3-7 (Fort Eustis, VA: Department of the Army, 2014) http://adminpubs.tradoc.army.mil/pamphlets/TP525-3-7.pdf.

operational readiness factors, and enhance the department's ability to support goals of national security policy.

A. BACKGROUND AND SIGNIFICANCE

Since World War II, the DOD has recognized the need for foreign language competencies to meet national security interests.[6] Historically, the DOD has pursued classification of foreign language capabilities in terms of general proficiency to enable flexibility to meet demands as they arise.[7] The landscape has changed. For the past fifteen years, the DOD has sustained prolonged humanitarian, peacekeeping, counterinsurgency and counter-terrorism operations, and these experiences have highlighted deficiencies in the utilization and application of language capabilities within foreign operating environments.[8] The success of our soldiers' missions relies upon effective interactions in foreign languages and cultures; as one during stability operations succinctly stated "I found myself not only translating from one spoken language to another, but across a gulf of meanings and significances."[9]

The warfighting environments of the 21st century underscore the need for the for DOD to understand adversary operating environments. Leon Panetta asserted that it is vital for the DOD to understand the languages, backgrounds, cultures, mentalities and geographic terrain of operating environments.[10] One of the three 2018 National Defense Strategy (NDS) pillars is to *Strengthen Alliances and Attract New Partners.* This strategy makes frequent mention of goals relevant to operating in foreign environments such as:

[6] John E. Kruse, Suzanne Mckenna, Noah B. Bleicher, Thomas E. Hawley, Andrew Hyde, Sashe Rogers, and Lorry M. Fenner, *Building Language Skills and Cultural Competencies in the Military: DOD's Challenge in Today's Educational Environment* (Washington, DC: Committee on Armed Services, 2008), http://www.dtic.mil/docs/citations/ADA494470.

[7] Rachel Brooks and Mika Hoffman, "Government and Military Assessment," in *The Companion to Language Assessment,* ed. Antony Kunnan (Hoboken, NJ: John Wiley & Sons, 2013).

[8] Richard Outzen, "Language, Culture, and Army Culture: Failing Transformation," *Small Wars Journal* 20 (2012): https://smallwarsjournal.com/jrnl/art/language-culture-and-army-culture-failing-transformation.

[9] Prisco Hernandez, "Developing Cultural Understanding in Stability Operations: A Three-Step Process," *FA Journal* (January 2007): 5–10, http://search.proquest.com/docview/218356011/.

[10] Under Secretary of Defense, *Strategic Management of the Defense Intelligence Enterprise Workforce* (Washington, DC: Under Secretary of Defense, 2011).

expand regional consultative mechanisms and collaborative planning; expand Indo-Pacific alliances and partnerships; form enduring coalitions in the Middle East; and, support relationships to address significant terrorist threats in Africa.[11] Uses of foreign language capabilities within the DOD, such as those needed to support these goals, have evolved from largely intelligence collection and analysis requirements, to operational and tactical requirements across a much broader spectrum of DOD forces.

The model for training, assessing and quantifying foreign language capabilities within the DOD may be better served through the development of a competency framework. A competency framework helps organizations develop a clear strategy for understanding, organizing and leveraging personnel competencies as capabilities to meet organizational objectives through a process of outlining and forecasting strategic requirements, modeling competencies, defining competency dimensions and developing competency indicators.

B.   OPERATIONAL READINESS SIGNIFICANCE

The DOD's application of force within the COEs, in particular with non-kinetic force multipliers such as foreign language capabilities, can be understood to operate as a precision warfighting skill as opposed to the gross saturation of force achieved with the ejection of a cluster bomb. However, the DOD's existing pipeline to develop foreign language capable resources selects, trains and assesses members according to a generalized, or one size fits all approach, and lacks the fidelity required to achieve operational readiness.[12]

The DOD's current approach in its Defense Language Program (DLP) and associated selection, assessment and maintenance practices, can be further elucidated in an accessible, yet simplified, analogy. Through its Foreign Language Proficiency Bonus (FLPB) program the DOD expends $7M monthly to maintain a generalized inventory of

[11] Department of Defense, *Summary of the 2018 National Defense Strategy of the United States of America*, accessed November 19, 2018, https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf.

[12] Office of the Under Secretary for Personnel and Readiness, "Priorities," accessed April 15, 2020, https://prhome.defense.gov/Readiness/Priorities/.

30,000 linguists who achieve a specified Interagency Language Roundtable (ILR) classification score on the Defense Language Proficiency Test (DLPT).[13] Yet DOD-wide understanding regarding the circumstances of language use, and the association of the ILR classifications to performance of foreign language duties is unclear.

One can think of this inventory of proficient linguist as general-purpose traditional curve-claw hammers.[14] This collection of 30,000 service members are a product of the DOD's one-size-fits all approach to foreign language capability management. However, as uncovered in this thesis, language skills required by the DOD in the COEs are diverse and demand refinement or specialization to execute national security strategy. The DOD does invest in this specialization, adding weight to the handle of a sub-set of their hammer inventory, narrowing the claw on others, and transforming the neck and face to meet cryptologic, translator or foreign area officer language requirements.[15] However, the DOD persists in experiencing gaps in its ability to meet foreign language requirements within its COEs.

The DOD has leaned to contract local foreign national support to fill this gap, and to meet operational readiness requirements. Figures linked to contracted support suggest that the DOD does not have the information needed to properly plan for or achieve operational readiness. A 2013 Government Accountability Office (GAO) study of foreign language costs discovered that the Army, which serves as the executive agent "for foreign language support for all components" obligated $5.2B for contracted translation and

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[13] Please refer to Department of Defense, *Military Foreign Language Skill Proficiency* Bonus, DOD Instruction 1340.27 (Washington, DC: Department of Defense, 2013). https://dlnseo.org/sites/default/files/DODI_7280.03_____1340.27.pdf. Metrics accessed November 23, 2018 from: https://dlnseo.org/content/flpb. Please also note that the counts reported for service members do not reflect the number of DOD civilians who are also receive foreign language proficiency pay as prescribed in Department of Defense, *DOD Civilian Personnel Management System: Administration of Foreign Language Pay for Defense Civilian Intelligence Personnel System (DCIPS) Employees* DOD Instruction 1400.25 (Washington, DC: Department of Defense, 2016). https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/140025/140025_vol2016.pdf.

[14] Special thanks to COL Mike Lee for sharing this relatable analogy in describing his experience with the DOD foreign language pipeline from the perspective of a Foreign Area Officer practitioner.

[15] Department of the Air Force, "517th Training Group, Goodfellow Airforce Base," accessed April 17, 2020. https://www.goodfellow.af.mil/Units/517th-Training-Group/.

interpretation services for contingency operations.[16] Concurrent with this expenditure, multiple DOD components contracted independently for an additional $1.2B in foreign language support.[17] Serious deficiencies in the execution of contracted support have been documented, in particular when the services are provided by inadequately skilled or hostile linguist.[18]

The understanding of requirements derived from a foreign language competency framework could improve the DOD's ability to develop and inventory linguistic capabilities needed for a particular mission, as well as contract foreign language support most suited for the work, with fidelity in quantified mission-related skills, like medical, legal, engineering, and military operations. Competency can be directly related to operational readiness, which is defined in the Chairman of the Joint Chief of Staff Guide to Chairman's Readiness System as "the ability of U.S. military forces to fight to meet the demands of the National Military Strategy."[19] Within the context of foreign language capabilities, DOD strategy demands the "required combination of language skills, regional expertise and cultural capabilities to meet current and projected needs."[20] What would the operating environment look like if commanders could accurately predict their soldier's performance on the battlefield?

The DOD faces challenges within established systems in determining operationally oriented competencies due to the absence of a standardized approach to qualify requirements to operate and demonstrate readiness in the COEs. A Joint Staff study

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[16] U. S. Government Accountability Office, *Defense Contracting: Actions needed to explore opportunities to gain efficiencies in acquiring foreign language support*, GAO-13-251R (Washington, DC: Government Accountability Office, 2013). https://www.gao.gov/assets/660/652298.pdf.

[17] U. S. Government Accountability Office, *Defense Contracting: Actions needed to explore opportunities to gain efficiencies in acquiring foreign language support*.

[18] Defense Industry Daily, "Lend Me Your Ears: U.S. Military Turns to Contractor Linguists," last modified August 22, 2013, http://www.defenseindustrydaily.com/lend-me-your-ears-us-military-turns-to-contractor-linguists-05934/.

[19] Chairman of the Joint Chiefs of Staff, *CJCS Guide to the Chairman's Readiness System,* 3401D (Washington, DC: Joint Chiefs of Staff, 2010), 1, https://www.jcs.mil/Portals/36/Documents/Library/Handbooks/g3401.pdf?ver=2016-02-05-175742-457.

[20] Department of Defense, *DOD Strategic Plan for Language Skills, Regional Expertise, and Cultural Capabilities,* 2011–2016 (Washington, DC: Department of Defense, 2011), http://prhome.defense.gov/RFM/READINESS/DLNSEO/files/STRAT%20PLAN.pdf.

commissioned to research a capabilities based assessment identified that no universally accepted baseline existed for foreign language capabilities, and that existing guidance insufficiently articulated the requirements.[21] Evidence suggests that the DOD is not adequately responding to these challenges, in part, because there is no comprehensive or common understanding across the DOD regarding what competencies are important for foreign language nor what constitutes operational readiness.[22] This thesis will forward a method for improving the operational readiness of DOD foreign language capabilities through strategic organizational change.

C.   MAJOR RESEARCH QUESTIONS

This thesis will evaluate whether a competency framework for foreign language capabilities would enhance the DOD's ability to support goals of national security policy through quantifying task-oriented operational readiness objectives. A competency framework is strategically driven, and seeks to integrate, organize and align workforce competencies with DOD priorities and policies, providing a path to refining the DOD's conceptualization of foreign language requirements.[23] Within the context of DOD foreign language policy, a competency framework could seek to maximize core warfighting foreign languages capabilities and enable commanders to exploit nonlethal force capabilities in the interest of national security. Decamp et al. argued that a competency framework could assist the DOD to translate foreign language strategy into readily understood workforce requirements.[24]

[21] Chairman of the Joint Chiefs of Staff, *Language and Regional Expertise and Culture (LREC) Capability Requirements DOTmLPF Change Recommendation, Version 1* (Arlington, VA: Joint Staff, J-1 Manpower and Personnel Directorate Foreign Language Branch, 2009).

[22] Jennifer Decamp, Sarah O. Meadows, Barry Costa, Kayla M Williams, John Bornmann, and Mark Overton, *An Assessment of the Ability of the U.S. Department of Defense and the Services to Measure and Track Language and Culture Training and Capabilities Among General Purpose Forces* (Santa Monica, CA: RAND, 2012), http://www.dtic.mil/docs/citations/ADA565668.

[23] Krista L. Ratawani, Jeffrey M. Beaubien, Eileen B. Entin, Rachel J. Feyre, and Jessica A. Gallus, *Identifying Dynamic Environments for Cross-Cultural Competencies* (Fort Belvoir VA: Army Research Institute for The Behavioral and Social Sciences, 2014), http://www.dtic.mil/docs/citations/ADA607189.

[24] Decamp et al., *An Assessment of the Ability of the U.S. Department of Defense and the Services to Measure and Track Language and Culture Training and Capabilities Among General Purpose Forces*.

Secondary to responding to this primary research question, this thesis will evaluate options to modernize foreign language assessment and classification policies, and investigate whether improvements in DOD operational readiness can be achieved through the explicit connection of foreign language strategies with workforce capabilities through competency-based assessments. Wisecarver argued that service members who are proficient in foreign languages are better able to achieve nonlethal effects and can serve as force multipliers.[25] This thesis will further this contention and present evidence supporting the introduction of a competency framework to improve operational readiness measurement.

D. LITERATURE REVIEW

This review will provide a roadmap through the most important academic literature and policy of relevance to management of the DOD's DLP and identify weaknesses in the current strategic implementations. Three themes within the literature are explored: the change in foreign language requirements; challenges in meeting operational readiness; and implications in the assessment of foreign language capabilities. Each of these themes are presented within the current landscape: inarticulate requirements and the absence of a common understanding of foreign language capabilities critical to the strategic advancement of national security policy.

1. Requirements Evolution

In the years since 9/11, Congress bolstered funding for the DOD to advance foreign language capabilities.[26] Major challenges exist in defining language, regional expertise and culture competencies and the DOD grapples to develop policies accordingly while the strategic landscape is constantly changing.[27] The DOD signaled the importance of foreign language competencies in thier Language, Regional Expertise and Culture (LREC)

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[25] Wisecarver et al., *Regional Expertise and Culture Proficiency.*

[26] U.S. Congress, House Intelligence Authorization Act for Fiscal Year 2005, 108th Cong., 108–487, Title VI—Education, https://congress.gov/bill/108th-congress/house-bill/4548/text?overview=closed.

[27] Department of the Navy, *U. S. Navy Language Skills, Regional Expertise and Cultural Awareness Strategy* (Washington, DC: Chief of Naval Operations, 2008), https://apps.dtic.mil/dtic/tr/fulltext/u2/a503388.pdf.

program, but as asserted by Decamp et al. in their evaluation of General Purpose Forces (GPF) capabilities tracking, the DOD it is not sufficiently advancing the refinement of requirements within the contexts of operational readiness.[28]

In his review of DOD transformation, Outzen asserted that long-standing institutional consumers of DOD linguists, such as embassies and intelligence centers, are recipients of capable language-enabled operators; however, the delivery of proficient linguists to the combatant commanders and GPF was identified as a gap that the DOD is not sufficiently addressing.[29] When evaluating language and culture training, the GAO emphasized that the DOD should measure foreign language capabilities through a common language for the GPF.[30] Unfortunately, this common language does not currently exist. The model for training, assessing and quantifying foreign language capabilities within the DOD, in the interest of national defense strategy may be better served through the development of a competency framework.

2.   Operational Readiness Challenges

In their historic review of the DOD's use of foreign language capabilities within theaters of operation, Abbe et al. asserted that existing systems used by the DOD to determine effective operational readiness foreign language capabilities are insufficient due to the absence of a standardized approach needed to qualify and validate these requirements.[31] Gaps in the DOD's ability to maximize foreign language utility and support the strategic interests of the United States are being experienced. For example,

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[28] Decamp et al., *An Assessment of the Ability of the U.S. Department of Defense and the Services to Measure and Track Language and Culture Training and Capabilities Among General Purpose Forces* and Robert G. Sands and Pieter DeVisser, "Narrowing the LREC Assessment Focus by Opening the Aperture: A Critical Look at the Status of LREC Assessment Design & Development in the Department of Defense," *Journal of Culture, Language and International Security* 2, no. 2 (December, 2015), http://www.cultureready.org/sites/default/files/publications/JCLISV2E2Final.pdf.

[29] Outzen, "Language, Culture, and Army Culture."

[30] U. S. Government Accountability Office, *Language and Culture Training: Opportunities Exist to Improve Visibility and Sustainment of Knowledge and Skills in the Army and Marine Corps General Purpose Forces*, GAO-12-50 (Washington, DC: Government Accountability Office, 2012), https://www.gao.gov/assets/590/585990.pdf.

[31] Abbe and Gouge, "Cultural Training for Military Personnel: Revisiting the Vietnam Era."

Outzen asserted that the DOD was unable to demonstrate critical language mastery or adequate population-knowledge in the prolonged Iraq and Afghanistan operations.[32]

The need for the DOD DLP to address operational readiness gaps is longstanding. A 2007 joint operating concept identified foreign language capability gaps impacting mission accomplishment, which serve as the basis for measuring operational readiness objectives.[33] Five years on from this doctrinal change recommendation, a GAO study asserted that no agreement on common foreign language skills had been reached within the DOD, which continues to lead to considerable fragmentation across the Military services' approaches.[34]

Specific and pressing challenges the DOD faces when it comes to foreign language capabilities have been highlighted within the literature. The Director of the Institute for the Study of Culture and Language at Norwich University, Dr. Robert R. Sands, asserted that there is formal acknowledgement that linguistic competence is a critical component of DOD missions, yet the operational requirements are inadequately articulated.[35] The DOD's DLP has actively pursued transformation toward achieving the foreign language competencies needed to adapt to dynamic operational readiness capabilities.[36] A technical report published by the Army Research Institute (ARI) scientists forwarded a roadmap to refine the DOD's conception of foreign language uses and utility to national security through developing metrics and establishing a DOD-wide lexicon.[37] Institute for Defense Analysis researchers claimed that these common understandings could then in turn be

[32] Outzen, Language, Culture, and Army Culture."

[33] Decamp et al., *An Assessment of the Ability of the U.S. Department of Defense and the Services to Measure and Track Language and Culture Training and Capabilities Among General Purpose Forces*.

[34] U. S. Government Accountability Office, *2012 Annual Report: Opportunities to Reduce Duplication, Overlap and Fragmentation, Achieve Savings, and Enhance Revenue*, GAO-12-342SP (Washington, DC: Government Accountability Office, 2012), 40, https://www.gao.gov/assets/590/588818.pdf.

[35] Sands and DeVisser, "Narrowing the LREC Assessment Focus by Opening the Aperture."

[36] Department of Defense, *Defense Language Transformation Roadmap* and Department of Defense, *Defense Language, Regional Expertise and Culture (LREC) Program*, DOD Directive 5160.41E (Washington, DC: Department of Defense, 2016), https://dlnseo.org/sites/default/files/DODD%205160.41E_0.pdf.

[37] Ratawani et al., *Identifying Dynamic Environments for Cross-Cultural Competencies*.

incorporated within the management and reporting systems that catalogue mission readiness requirements and capabilities for the DOD.[38] ARI scholars asserted that achieving a service-wide standardized approach may ultimately be unsatisfactory, but argued that the alignment of core features, and establishment of common terminology is likely to be highly beneficial and advance a DOD capabilities based approach to foreign languages.[39] The context of foreign language use within the COEs has fundamentally changed, as Ratwani et al. highlighted, "from a more traditional force protection approach to an emphasis on counter-insurgency techniques used during stability, security, transition and reconstruction operations."[40]

The DOD is not alone in experiencing challenges in the management of the foreign language proficiency requirements. The GAO recently reported that the Department of State had a gap, greater than twenty percent in meeting foreign language requirements.[41] When focusing on the DOD, the GAO concluded that DOD tracking systems fail to comprehensively represent data on language or corresponding proficiency.[42] Challenges exist today in defining and achieving common understanding, let alone meeting the critical skill sets required to maximize foreign language utility in the COEs. Information that would serve to inform the development of policies for the DOD DLP, to optimize the operational readiness of foreign language capabilities, and to maximize its availability to use as a nonlethal force multiplier, could become available through the development of a competency framework.

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[38] Pertinent systems for the DOD include the Defense Readiness Reporting System (DRRS) and the Language Readiness Index (LRI). James Belanich, Franklin L Moses and Priya Lall, *Review and Assessment of Personnel Competencies and Job Description Models and Methods* (Alexandria, VA: Defense Analyses, 2016), 19, http://www.dtic.mil/docs/citations/AD1021552.

[39] Jessica A Gallus, Melissa C Gouge, Emily Antolic, Kerry Fosher, Victoria Jasparro, Stephanie Coleman, Brian Selmeski, and Jennifer L Klafehn, *Cross-Cultural Competence in the Department of Defense: An Annotated Bibliography* (Fort Belvoir VA: Army Research Institute for The Behavioral and Social Sciences, 2013), http://www.dtic.mil/docs/citations/ADA599260.

[40] Ratawani et al., *Identifying Dynamic Environments for Cross-Cultural Competencies*, iv.

[41] U. S. Government Accountability Office, *Department of State: Foreign Language Proficiency Has Improved, but Efforts to Reduce Gaps Need Evaluation*, GAO-17-318 (Washington, DC: Government Accountability Office, 2017), https://www.gao.gov/assets/690/683533.pdf.

[42] U. S. Government Accountability Office, *Language and Culture Training.*

3. Assessment Challenges

Some academics have asserted that the DOD language program is sufficiently entrenched and responsive to operational readiness requirements. Independently, researchers Jewell from the Army War College and Sebrell from the Army Command and Staff College, describe the DOD language program as mature with well-developed strategies in place.[43] The basis of these conclusions largely surround the existence of the DLPT system which currently provides the DOD the ability to classify foreign language proficiency based on the ILR Skill Level Descriptors (SLDs), as prescribed in DOD Directive 5160.41E.[44]

As elucidated in this thesis, the DLPT was not developed to be task-oriented or tuned to operational readiness. The DLPT utilizes the ILR SLDs as the officially recognized DOD-wide criteria for awarding proficiency scores.[45] In their summation of the DOD's approach to military foreign language assessment, Brooks and Hoffman assert that DLPT measures multipurpose language proficiency, but does not indicate a soldier's ability to execute specific foreign language tasks.[46] Mission oriented foreign language uses within the DOD, such as those required of the Special Operation Forces (SOF), have been studied extensively. Research sponsored by the SOF Culture and Language Office, and conducted by the Principle Scientist of ALPS Solutions, Dr. Eric Surface, asserted that there is a "misalignment between the DLPT and SOF operators' language-related mission

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[43] David Jewell, "Sustaining Foreign Language and Cultural Competence Among U.S. Army Officers," Master's thesis (United States Army War College, 2012), http://www.dtic.mil/docs/citations/ADA560449; Shawn A. Sebrell, "Cross-Cultural Competence: Leader Requirements for Intercultural Effectiveness in the Human Domain," Master's thesis (US Army Command and General Staff College, 2014), http://www.dtic.mil/docs/citations/ADA611659.

[44] Jewell, "Sustaining Foreign Language and Cultural Competence Among U.S. Army Officers," Sebrell, "Cross-Cultural Competence: Leader Requirements for Intercultural Effectiveness in the Human Domain," and Department of Defense, *Defense Language, Regional Expertise and Culture (LREC) Program*.

[45] Office of the Undersecretary of Defense for Intelligence. *Foreign Language Programs Guidebook*. Version 3 (Washington, DC: Office of the Undersecretary of Defense for Intelligence, 2016), https://dcips.defense.gov/Portals/50/Documents/FAQ_Docs/OUSDI_Foreign_Language_within_DIE_Reference_2016_Update.pdf.

[46] Brooks and Hoffman, "Government and Military Assessment."

needs."[47] In their review of the DOD's measurement of language capabilities, Decamp et al. recommended that the DOD establish linkages between task-based effectiveness and assessment methods.[48] At present, a clear correlation between DLPT scores, operational readiness and soldier's ability to perform critical foreign language tasks, has not been demonstrated.[49] This exhibits a gap in the DOD's measurement of foreign language capabilities that relates directly to operational readiness.

E.   POTENTIAL EXPLANATIONS AND HYPOTHESES

The application of a competency framework to foreign language management within the DOD may increase the fidelity in requirements and positively impact the DOD's ability to advance strategic and operational interests. This research seeks to investigate a widely adopted and established method for the DOD to articulate requirements and connect foreign language strategies with workforce competencies. With its broad and distributed foreign language needs, the DOD could capture comprehensive yet ambiguated requirements, without compromising surreptitious operational requirements. Aligning foreign language requirements and establishing qualifiers for operational readiness is argued in this thesis to advance the DOD's ability to leverage nonlethal options, seize upon foreign language capabilities as a force multiplier, and improve their support of national defense strategy goals.

The hypothesis of this research is that DOD can maximize the employment and utility of foreign language capabilities' in service of national security interests through the adoption of a competency framework. Research indicates that a competency framework could enhance the DOD's ability to quantify mission-essential tasks, which can be leveraged to improve classification benchmarks of foreign language capable soldiers, and maximize opportunities to utilize core warfighting skills.

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[47] Eric A. Surface, *Special Forces Language and Culture Needs Assessment: Defense Language Proficiency Test (DLPT)* (Raleigh, NC: SWA Consulting, 2010), abstract, http://www.dtic.mil/docs/citations/ADA618284.

[48] Decamp et al., *An Assessment of the Ability of the U.S. Department of Defense and the Services to Measure and Track Language and Culture Training and Capabilities Among General Purpose Forces.*

[49] Decamp et al.

F.   RESEARCH DESIGN

The objective of this research was to determine if sufficient evidence existed to support the use of a competency framework for foreign language capabilities within the DOD to improve operational readiness capabilities. The tiers of investigation undertaken evolved from an initial and rigorous examination of the literature that asserted the DOD's inability to achieve foreign language readiness, or to maximize the use of foreign language as a nonlethal force multiplier in the interest of national security. An extensive survey of alternate approaches available to the DOD in the management of the DLP revealed a research-based and methodological sound system available for use, a competency framework.

The comprehensive and scholarly evaluation of competency frameworks within this thesis establishes precedent for use within governmental structures, and analyzes cases chosen for their relationship and transferability to DOD foreign language requirements. A competency framework could provide the DOD with a pathway to resolve foreign language capability gaps, exploit core warfighting capabilities, and quantify operational readiness.

This thesis culminates in an extensive evaluation of educational measurement literature to establish whether a competency framework for foreign language can enhance the DOD's ability to support goals of national security policy through uncovering the relationship between psychometrically valid assessments and DOD task-oriented requirements for foreign language use. This analysis will evaluate whether enabling linkage of job tasks to test specifications would enable the DOD to advance benchmarks and quantify the measurement operational readiness.

Ultimately, this thesis evaluates how a competency framework can address the current absence of a connection between DOD foreign language assessments and the foreign language tasks identified as mission essential. Outcomes from these analyses present evidence demonstrating that a competency framework can improve operational readiness and enhance competency management, to serve national security interests.

G. THESIS AND CHAPTER OVERVIEW

This thesis will explore whether the DOD needs a competency framework for foreign language, whether it could serve to improve operational readiness, and evaluate if it can address the current absence of a connection between assessments and tasks that are mission critical to the COEs. Clarification of these areas through the methodological approach in this thesis, further distills understanding of how requirements for a particular mission can be satisfied and national defense goals can be advanced.

This thesis is formatted to respond to the research questions and will offer conclusions on methods to improve understanding of DOD foreign language capabilities and address gaps identified in the current program. Focus is placed on the investigation of existing and unexplored capabilities to calculate the operational readiness of DOD foreign language requirements. Chapter II describes and provide a background on competency frameworks and their past use through the analysis of principal scholarly literature. Chapter III evaluates and compares competency framework purposes and approaches adopted within the Federal government and the DOD, and identifies organizational gaps intended to be addressed through these strategic organizational changes. Chapter IV extends the investigation of competency frameworks to explore the applicability and suitability of this type of system to the assessment of DOD foreign language capabilities through the synthesis of educational measurement scholarly concepts. The DOD's current approach, the DLPT, is investigated and alternate taxonomies that may lend themselves to an operational readiness tuned assessment through a competency-based approach. The thesis will conclude with a summary, discussion of conclusions and recommendations, and further research opportunities.

This research will argue in concert with scholars and policy analysts who have asserted that the DOD has not reformed, clearly conceptualized, or indoctrinated foreign language capabilities—even with their investment in transforming the DLP. A path that the DOD can take to maximize foreign language core warfighting skills to meet operational readiness objectives, and adequately respond to national defense strategies is presented.[50]

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[50] Outzen, "Language, Culture, and Army Culture."

II.   COMPETENCY FRAMEWORK BACKGROUND

This chapter will examine competence, typologies, structured competency frameworks, models, dimensions and indicators. The relationships of each of these components to the measurement of DOD foreign language operational readiness and past use is analyzed. Over thirty years of cross-culturally validated research on competency has reaffirmed and endorsed the understanding that competence is a human trait that can predict important behaviors, such as on-the-job-performance.[51]

Evidence uncovered in this chapter concludes that a competency framework can be used to equip the DOD to maximize the use of operationally tuned foreign language competencies as a non-lethal force multiplier. A competency framework provides a theoretically sound and proven way to calculate, measure and to ultimately predict on-the-job performance. This framework targets operational readiness through strengthening personnel processes and systems, addressing strategic goals and contributing to national security strategies.[52]

A competency framework is a top-down broad framework that integrates, organizes and aligns competencies representative of organizational objectives, strategy and vision. As argued by Decamp et al. in a study conducted to assess the DOD's ability to measure and track foreign language capabilities, a competency framework can enable the translation of strategy into readily understood workforce requirements.[53] A competency framework is a strategically driven structure that is composed of competency models, dimensions (which include Knowledge, Skills, Abilities and Other attributes (KSAOs)) and

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[51] David Mcclelland, "Testing for Competence Rather Than for 'Intelligence,'" *American Psychologist* 28 (January 1, 1973): 1–14, http://search.proquest.com/docview/1289775308/ and Graham Cheetham and Geoff Chivers, "Towards a Holistic Model of Professional Competence," *Journal of European Industrial Training* 20, no. 5 (July 1, 1996): 20–30, https://doi.org/10.1108/03090599610119692.

[52] Department of Defense, *DOD Strategic Plan for Language Skills, Regional Expertise, and Cultural Capabilities.*

[53] Decamp et al., *An Assessment of the Ability of the U.S. Department of Defense and the Services to Measure and Track Language and Culture Training and Capabilities Among General Purpose Forces.*

indicators.[54] Competency models are intended to depict and sometimes define the future operating environment and to clearly express the circumstances and conditions of performance.[55] Wolters et al. describe competency systems to screen, develop and reward personnel who are capable of excelling at desired competencies that have been successfully employed within the DOD.[56] Yet the DOD has not pursued a competency framework for foreign language requirements.

A.   BACKDROP

Competency frameworks, originated from human resource management theories and industrial organizational psychology, and are designed to help organizations develop a clear strategy for understanding, organizing and leveraging personnel competencies as capabilities to meet organizational objectives. Uniform guidelines compliant competency models are used by the federal government to proactively develop competencies in the workforce before they are needed, signifying that these types of structures have successfully been used to identify competency gaps, define key roles carried out, establish profiled characteristics of the program to meet operational readiness requirements.[57]

Introducing competency management through a competency framework is a strategic choice, and "is not an objective itself but a means to achieve an objective," generally addressing a problem or need.[58] A competency framework can translate strategy into readily understood workforce requirements and capabilities, and it is possible that the

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[54] Michael A Campion, Alexis A. Fink, Brian J. Ruggeberg, Linda Carr, Geneva M. Phillips, and Ronald B. Odman, "Doing Competencies Well: Best practices in competency modeling," *Personnel Psychology* 64, no. 1 (March 22, 2011): 225–262.

[55] Vikram S. Chouhan and Sandeep Srivastava, "Understanding Competencies and Competency Modeling a Literature Survey," *ISOR Journal of Business and Management* 16, no. 1 (January 2014), 14–22.

[56] Heather M. Wolters, Trevor Conrad, Christopher Riches, Robert Brusso, Kenny Nicely, Ray Morath, and Heidi Keller-Glaze, *Identification of Knowledge, Skills, and Abilities for Army Design* (Fairfax VA: ICF International Inc, 2014), https://apps.dtic.mil/dtic/tr/fulltext/u2/a601309.pdf.

[57] Clifford Whitcomb, Corina White and Rabia Khan, *Development of a System Engineering Competency Career Model: Verification of the Model Using OPM Method* (Monterey, CA: Naval Postgraduate School, 2015).

[58] Organisation for Economic Co-operation and Development, *Public Servants as Partners for Growth Toward a Stronger, Leaner and More Equitable Workforce* (Paris: Organisation for Economic Co-operation, 2011), 145.

development of this structure for DOD foreign language capabilities would be of considerable benefit to meeting DOD strategies and operational readiness objectives.

B. COMPETENCY TYPOLOGIES

Competence was first researched in 1911 by German psychologist Stern who developed a "psychography" of the attributes demanded by an occupation as described in Sanchez and Levine's research into job analysis.[59] In 1959, White described characteristics of elevated motivation and exceptional performance, and introduced the term competence.[60] Competencies can be learned or improved upon, are praxis-oriented and are strongly contextual or situational.[61] They transcend the possession of knowledge and skills and imply the ability to take action, and to perform the most appropriate action through internalization and use of instinct.[62] Being competent was described by Grant and Young as a disposition, or latent attribute and defined, situationally, within a community of practice.[63] A key piece of data that is uncovered during the development of a competency framework is the relationship between competencies and their contexts of use—of particular interest to planning within dynamically changing operating environment and uncovering meaningful operational readiness characteristics.[64]

The complexities of competency can be expressed in a typology based on features applicable to operational readiness. Figure 1 depicts a conceptual typology relevant to

[59] W Stern, "Otto Lipmann: 1880–1933," *American Journal of Psychology* 46 (January 1, 1934), http://search.proquest.com/docview/1289817644/ as indicated in Juan I. Sanchez and Edward L. Levine, "The Rise and Fall of Job Analysis and the Future of Work Analysis," *Annual Review of Psychology* 63, no. 1 (January 1, 2012): 397–425, https://doi.org/10.1146/annurev-psych-120710-100401.

[60] Robert W. White, "Motivation Reconsidered: The Concept of Competence," *Psychological Review* 66, no. 5 (September 1959): 297–333, https://doi.org/10.1037/h0040934.

[61] Donald Ipperciel and Samira Elatia, "Assessing Graduate Attributes: Building a Criteria-Based Competency Model." *International Journal of Higher Education* 3, no. 3 (2014): 27–38, https://doi.org/10.5430/ijhe.v3n3p27.

[62] Simon Grant and Rowin Young, "Concepts and Standardization in Areas Relating to Competence," *International Journal of IT Standards and Standardization Research (IJITSR)* 8, no. 2 (2010): 29–44, https://doi.org/10.4018/jitsr.2010070103.

[63] Grant and Young, "Concepts and Standardization in Areas Relating to Competence."

[64] Ratawani et al. *Identifying Dynamic Environments for Cross-Cultural Competencies* and Françoise Delamare Le Deist and Jonathan Winterton, "What Is Competence?" *Human Resource Development International* 8, no. 1 (March 1, 2005): 27–46, https://doi.org/10.1080/1367886042000338227.

foreign language competencies adapted from Le Deist and Winteron's research on structures to define competence.[65]

	Occupational	Personal
Conceptual	Cognitive competence	Meta competence
Operational	Functional competence	Social competence

Figure 1.   Competence Typology[66]

The cognitive dimension reflects Knowledge (know-that), Skills (know-how), Abilities (know-why) and Other characteristic (know-how-to-behave) which includes the ability to make sound judgements, an on-the-job demand of DOD language professionals.[67] At the cross-section of conceptual and personal, are meta-competencies. Meta-competencies manifest differently than KSAOs. They represent the acquisition and employment of other substantive competencies, and depend on the ability to cope with uncertainty.[68] In her research on communicative competence, Savignon asserted that the meta-competencies specific to the use of language can be defined through its purpose, the negotiation of meaning and the interpretation of communications.[69]

The definition of competency adopted for this thesis aligns with Office of Personnel Management (OPM) and DOD definitions:

> Competency is the capability of applying or using knowledge, skills, abilities, behaviors and personal characteristics to successfully perform

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[65] Le Deist and Winterton, "What Is Competence?"

[66] Adapted from Le Deist and Winterton, "What Is Competence?"

[67] Le Deist and Winterton.

[68] Graham Cheetham and Geoff Chivers, "The Reflective (and Competent) Practitioner: A Model of Professional Competence Which Seeks to Harmonise the Reflective Practitioner and Competence-Based Approaches," *Journal of European Industrial Training* 22, no. 7 (October 1, 1998): 267–76, https://doi.org/10.1108/03090599810230678.

[69] Sandra J. Savignon, "Communicative Competence," in *The TESOL Encyclopedia of English Language Teaching* (New York: John Wiley & Sons, 2018).

critical work tasks, specific functions, or operate in a given role or position. Competencies are thus underlying characteristics of peoples that indicate ways of behaving or thinking, which generalizes across a wide range of situations and endure for long periods of time.[70]

Applied researchers have describe competencies as inherently compound, and have asserted that they serve as a connector between effective performance and KSAOs.[71] Knowledge is information and learning residing in a person.[72] Skills represent an individual's ability to perform explicit tasks.[73] Abilities represent more general and enduring capabilities that a person possesses when performing a task, such as regulation and the use of judgement.[74] Other attributes or characteristics include motives and traits, or initiators of behavior.[75] Collectively KSAOs have been argued as the preferred way to define observable actions resulting from the utilization of competencies.[76]

C.   COMPETENCY FRAMEWORK

A competency framework is an overarching structure that is composed of competency models, dimensions and indicators. Figure 2 depicts the structure of a validated competency framework adapted from Campion.[77]

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[70] Chouhan and Srivastava, "Understanding Competencies and Competency Modeling A Literature Survey," Clifford A. Whitcomb, Rabia Khan and Corina White, "Curriculum Alignment Use Case for Competency Frameworks at the Naval Postgraduate School," INCOSE, 2016 and Gallus et al., *Cross-Cultural Competence in the Department of Defense.*

[71] Chouhan and Srivastava, "Understanding Competencies and Competency Modeling A Literature Survey," Terrence Hoffmann, "The Meanings of Competency," *Journal of European Industrial Training* 23, no. 6 (August 1, 1999): 275–86, https://doi.org/10.1108/03090599910284650, Le Deist and Winterton, "What Is Competence?" and Corina White, Clifford Whitcomb and Rabia Khan, *Development of a System Engineering Competency Career Development Model: An Analytical Approach Using Bloom's Taxonomy* (Monterey, California. Naval Postgraduate School, 2014).

[72] Chouhan and Srivastava, "Understanding Competencies and Competency Modeling A Literature Survey."

[73] Gallus et al., *Cross-Cultural Competence in the Department of Defense.*

[74] Gallus et al.

[75] Grant and Young, "Concepts and Standardization in Areas Relating to Competence."

[76] Grant and Young.

[77] Campion et al., "Doing Competencies Well."

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Figure 2.   Competency Framework[78]

A competency framework, at its highest level, represents a mechanism for intervening to affect organizational change. Leadership's participation ensures that the strategy the framework is built upon reflects what is desired and that models resulting from the work are used.[79] This approach drives measurement of the human dimension and demands the alignment of terminology across the DOD to establish contextual meaning.[80] Byham's research indicates that utilizing a common set of competencies organizationally produces substantial benefits because the subsystems (i.e., the Services) reinforce one another in the total system (i.e., the DOD) unifying requirements and achieving a shared understanding.[81] This chapter will examine each of the three elements of a competency framework, competency models, competency dimensions and competency indicators.

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[78] Adapted from Campion et al., "Doing Competencies Well."

[79] Campion et al.

[80] Belanich, Moses and Lall, *Review and Assessment of Personnel Competencies and Job Description Models and Methods*; Department of the Army, *The U.S. Army Human Dimension Concept*.

[81] William C. Byham, *Developing Dimension-/ Competency-Based Human Resource Systems*, (Pittsburgh, PA: Development Dimensions Institute, ND), http://u.camdemy.com/sysdata/doc/d/d85676e3485f349c/pdf.pdf.

1. Competency Models

Competency modeling is completed to uncover and specify the competencies that distinguish high performance and success in task execution. Models represent a collection of competencies and critical success factors that are relevant to the organizational strategies and objectives as defined in the higher-level framework. Competency models are intended to depict and sometimes define the future operating environment and to clearly express the circumstances and conditions of performance.[82] The U.S. Department of State developed a competency model for their Foreign Service Officer cadre to integrate and align human resource systems, targeting readiness factors for success in the ever-changing international environment.[83]

Competency models assist in partitioning competencies into common and differentiating sets.[84] This distinction enables competency models to span across jobs or work functions, and efficiently enables job analysis which includes the dissection of work activities, worker attributes and working context.[85] Modeling in this capacity lends itself as a measurement tool for an organization to develop agreement on common language and requirements, and to identify the crucial success factors driving performance.[86] Competency models serve as effective measurement tools, identify competency gaps, and enable alignment of internal skills with leadership's strategic direction.[87]

The utility of competency models has been challenged in the literature. Sackett and Laczo argued that competency models can be perceived as a hodge-podge of attributes that

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[82] Chouhan and Srivastava, "Understanding Competencies and Competency Modeling A Literature Survey."

[83] Campion et al., "Doing Competencies Well."

[84] Carrie Olesen, David White, and Iris Lemmer, "Career Models and Culture Change at Microsoft," *Organization Development Journal* 25, no. 2 (July 1, 2007): 25, 31–36, http://search.proquest.com/docview/197997509/.

[85] Sanchez and Levine "The Rise and Fall of Job Analysis and the Future of Work Analysis"; Campion et al., "Doing Competencies Well."

[86] Antoinette D. Lucia and Richard Lepsinger, "The Art and Science of Competency Models: Pinpointing Critical Success Factors in Organizations" (San Francisco, CA: Jossey-Bass/Pfeiffer, 1999).

[87] Antoinette D. Lucia and Richard Lepsinger, "The Art and Science of Competency Models: Pinpointing Critical Success Factors in Organizations," and Chouhan and Srivastava, "Understanding Competencies and Competency Modeling A Literature Survey."

are ill-defined and offer minimal meaning.[88] This may be contended when the competency models are not built under a competency framework and strategic organizational goals, in a specific time and place, are not connected.[89] When part of a framework, competency models do not simply highlight KSAOs anticipated to boost performance, they provide the operational construct.[90] Competency models have been widely used by organizations to complete task alignments—that is to line up individual capabilities with the competencies considered fundamental to an organizations performance.[91]

2. Competency Dimensions

Embedded within competency models are competency dimensions. Dimensions are clusters of related KSAOs that affect major parts of organizational mission execution, can be correlated with task performance, and are measurable against standards.[92] Research conducted by Byham at Development Dimensions International forwards the concept that past and present behaviors forecast future behavior and leads to more accurate predictions.[93]

In their organizational research, Katz and Kahn grouped dimensions into three categories: technical, associated with functional expertise, managerial, for resource

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[88] Sackett, Paul R. and Roxanne M. Laczo, "Job and work analysis," in *Handbook of Psychology: Industrial and Organizational Psychology*, eds. W.C. Borman, D. R. Ilgen, and R. J. Klimoski (Hoboken, NJ: Wiley, 2003): 21–37.

[89] Joseph Kasser, Derek Hitchins, Moti Frank and Yang Zhao, "A Framework for Benchmarking Competency Assessment Models," *Systems Engineering* 16, no. 1 (March 2013): 29–44, https://doi.org/10.1002/sys.21217.

[90] William. K Gabrenya, Rana G. Moukarzel, Marne H. Pomerance, Richard L. Griffith and John Deaton. *A Validation Study of the Defense language Office Framework for Cultural Competence and an Evaluation of Available Assessment Instruments*, (Patrick Air Force Base: FL, Defense Equal Opportunity Management Institute, Directorate of Research Development and Strategic Initiatives, 2013), https://apps.dtic.mil/dtic/tr/fulltext/u2/1070234.pdf

[91] William J. Rothwell and John E. Lindholm, "Competency Identification, Modelling and Assessment in the USA," *International Journal of Training and Development* 3, no. 2 (June 1999): 90–105, https://doi.org/10.1111/1468-2419.00069.

[92] John G. Veres, Mary Anne Lahey and Ricki Buckly, "A Practical Rationale for Using Multi-Method Job Analyses," *Public Personnel Management,* 16, no. 2 (June 1987): 153–57, https://doi.org/10.1177/009102608701600206.

[93] Byham, *Developing Dimension-/ Competency-Based Human Resource Systems.*

utilization, and conceptual, which is required for abstract thinking.[94] Fractioning dimensions like this has been argued to be consistent with empirical work on the interrelationship of human task performance.[95] Expressing the operational definition of KSAOs within dimensions was submitted by Veres, Lahey and Buckley as a way to bridge KSAOs with measurable outcomes.[96]

3.   Competency Indicators

Competency indicators are highly specific and observable actions that indicate the skill or performance levels needed. Indicators anchor proficiency through a clear linkage to organizational goals.[97] Indicators specific to communicative competence were grouped by Savignon into five areas: task-based, interactive, process-oriented, inductive-oriented and discovery oriented.[98] Establishing small units of ability through the development of competency indicators, a competency framework enables these units to be built up in different ways within models and dimensions to express the needs of different roles and positions.[99] Indicators can be used to ensure criterion, content and construct validity and can be used to develop task-oriented and competency-based assessments tuned for operational readiness.[100] As argued by Dr. John Lett, there is no conveniently at-hand external criterion for foreign language needs, and foreign language proficiency indicators for any given occupational community are of low fidelity.[101]

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[94] Daniel Katz and Robert Louis Kahn, *The Social Psychology of Organizations,* 2nd ed (New York: Wiley, 1978).

[95] Edwin A. Fleishman and Michael S. Pallak, "Systems for Describing Human Tasks," *American Psychologist* 37, no. 7 (July 1982): 821–834.

[96] Veres, Lahey and Buckly, "A Practical Rationale for Using Multi-Method Job Analyses."

[97] Campion et al., "Doing Competencies Well."

[98] Savignon, "Communicative Competence."

[99] Grant and Young, "Concepts and Standardization in Areas Relating to Competence."

[100] Sanchez and Levine "The Rise and Fall of Job Analysis and the Future of Work Analysis."

[101] John Lett, "Foreign Language Needs Assessment in the U.S. Military" in *Second Language Needs Analysis*, ed. Michael H. Long (Boston, MA: Cambridge University Press, 2005), 105–124.

D. OPERATIONAL READINESS METRICS

A 2016 GAO report on operational readiness asserted that "without metrics against which to measure the services' progress toward agreed-upon, achievable readiness goals, the DOD will be unable to determine the effectiveness of readiness efforts or assess its ability to meet the demands of the National Military Strategy, which may be at risk."[102] Mission performance research completed by Abbe and Gallus cited Officer's assertion of insufficient foreign language performance within "roles on deployment that were not typical for their branch, or for which they had not trained."[103] In their conceptual and empirical investigation into competence, ARI researchers concluded that a competency framework can predict and measure the readiness of soldiers.[104] When defined in a framework, competency elucidates what effective performance is to an organization, describes what really matters in terms of task performance to achieve success, and can be used to predict and explain success across domains and operating environments.[105]

E. SUMMARY

A competency framework can be used as an instrument of change in an organization which seeks to articulate operational requirements, and to promote operational readiness competencies amongst their workforce. The structure of a competency framework generally includes four hierarchical levels. The top level is a broad framework of the construct and requires the capture of organizational mission, vision, values and strategy which drive definition of foundational competencies. Competency models are the second level down, are often job specific and represent a collection of competencies that are critical factors to the success of the organization. The third level in the hierarchy are competency

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[102] U. S. Government Accountability Office, *Military Readiness: DOD's Readiness Rebuilding Efforts May Be at Risk without a Comprehensive Plan*, GAO-16-841 (Washington, DC: Government Accountability Office, 2016), https://www.gao.gov/assets/680/679556.pdf.

[103] Allison Abbe and Jessica A. Gallus, *The Socio-Cultural Context of Operations: Culture and Foreign Language Learning for Company-Grade Officers* (Fort Belvoir, VA: Army Research Institute for the Behavioral and Social Sciences, 2012), http://www.dtic.mil/docs/citations/ADA565311.

[104] Allison Abbe, Lisa M. V. Gulick and Jeffrey L. Herman, *Cross-Cultural Competence in Army Leaders a Conceptual and Empirical Foundation* (Arlington, VA: U.S. Army Research Institute for the Behavioral and Social Sciences, 2007).

[105] Campion et al., "Doing Competencies Well."

dimensions, which are clusters of defined and characterized knowledge, skills, abilities and other attributes. The final level contains indicators, which are observable and measurable indicators of skill and performance levels. Organizations across the world have adopted competency frameworks to improve and benchmark organizational success, and to build mission-oriented personnel systems capable of screening, developing and rewarding personnel who excel in crucial competencies and can provide reliable predictions of desired outcomes.[106]

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[106] Sylvia C. Melancon and Martha S. Williams, "Competency-Based Assessment Center Design: A Case Study," *Advances in Developing Human Resources* 8, no. 2 (May 2006): 283–314, https://doi.org/10.1177/1523422305286157, Mcclelland, "Testing for Competence Rather Than for 'Intelligence'" and Cheetham and Chivers, "Towards a Holistic Model of Professional Competence."

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III. COMPETENCY MANAGEMENT APPROACHES

This chapter illustrates relevant examples of competency management available for the DOD to consider when addressing problems surrounding requirements evolution and operational readiness challenges in the management of DOD foreign language capabilities. The development of a competency framework is a long, complicated, and iterative process—yet it can aid the DOD's ability to maximize the use of foreign language competencies as a non-lethal force multiplier.[107]

Competency management approaches pursued by comparable government structures and within the DOD are analyzed. Cases have been chosen for their relevance to operational readiness requirements and alignment with distributed, dispersed and embedded requirements as applicable to DOD foreign language capabilities. The evaluation of cases are sequenced to build from a higher-level Federal case, the OPM Multipurpose Occupational Systems Analysis Inventory - Close-Ended (MOSAIC) project, to the DOD civilian competency management approach, to a case that involves both DOD civilian and military personnel in the Security Cooperation workforce, and then the culminate to the most relevant case for comparison, one within the LREC triad, culture competency.

To provide a foundation regarding the utility of a competency framework to the operational readiness of foreign language capabilities within the DOD, the organizational goals expressed and benefits achieved are highlighted within each case examined— generally these seek to address capability gaps and enable a responsive workforce. Getting it right, as will be elaborated upon, depends on a clear vision of the future, and accurate picture of present conditions.[108]

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[107] M. Wade Markel, Jefferson P. Marquis, Peter Schirmer, Sean Robson, Lisa Saum-Manning, Katherine Hastings, Katharina Ley Best, Christina Panis, Alyssa Ramos and Barbara A. Bicksler. *Career Development for the Department of Defense Security Cooperation Workforce* (Santa Monica, CA: RAND Corporation, 2018).

[108] Markel et al., *Career Development for the Department of Defense Security Cooperation Workforce*.

A. OPM MOSAIC PROJECT

The OPM provides the DOD with a baseline, and benchmarks for specific occupational classifications in competency management through their MOSAIC methodology project.[109] Examining this case initially, when considering the implications of competency management to foreign language capabilities, is important not only as a precedent, but also as a reference point for the Mission Essential Task Lists (METLS) utilized by the DOD for operational preparation.

Connecting job-related competencies and activities to an organizations mission facilitates an observable relationship between individuals' performance and organizational success. In 1990, OPM established an empirical foundation in the utilization of competencies in their MOSAIC methodology.[110] OPM utilizes a multi-step methodology in MOSAIC: completing literature and position reviews, classifying tasks and competencies, establishing rating scales, developing task-to-competency linkages, and defining benchmarks.[111] The OPM vision for MOSAIC is to make available uniform, competency-based common language and generalized tasks, that aid in understanding critical elements across a variety of jobs that endure throughout integrated human resource management practices.[112]

Through the life of the MOSAIC project, OPM has established, reviewed, and achieved consensus on 885 competencies.[113] Rodriguez et al. in their research on integrating competency models claim that OPM achieved a balanced framework in

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[109] Donna Rodriguez, Rita Patel, Andrea Bright, Donna Gregory and Marilyn K. Gowing, "Developing Competency Models to Promote Integrated Human Resource Practices," *Human Resource Management* 41, no. 3 (September 2002): 309–24, https://doi.org/10.1002/hrm.10043.

[110] Rodriguez et al., "Developing Competency Models to Promote Integrated Human Resource Practices."

[111] Rodriguez et al.

[112] Please note: these human resource practices include selection and promotion procedures, needs assessments, performance management, and planning, as described in Rodriguez et al., "Developing Competency Models to Promote Integrated Human Resource Practices."

[113] U. S. Office of Personnel Management, *Multipurpose Occupational Systems Analysis Inventory – Close-Ended (MOSAIC) Competencies*, (Washington, DC: Office of Personnel Management, 2013), https://www.opm.gov/policy-data-oversight/assessment-and-selection/competencies/mosaic-studies-competencies.pdf.

MOSAIC through including both traditional KSAOs (e.g., oral communication) and soft skills (e.g., teamwork), in addition to ensuring consistency with the Uniform Guidelines on Employee Selection Procedures (UGSP), and many other professional and legal standards.[114] Thus far, OPM has defined competencies for over 200 Federal occupations, often in response to government-wide strategic prioritization and statutory demands.[115]

OPM partnered with the Chief Human Capital Officers Council and the Chief Information Officer Council, among others, to prioritize competency modeling initiatives.[116] In the late 2000s, changes in initiatives, standards, technologies and systems led OPM to develop models in financial management and cybersecurity. These high priority occupational groups integrated throughout the federal government were modeled to develop comprehensive occupational pictures, identify critical competencies, establish a shared framework of reference and to enable response to the changing landscape of statutory and regulatory demands.[117]

The MOSAIC competency models empower organizations, and could enable the DOD to identify accomplishments directly related to the execution of the national security strategy, incentivizing competencies that directly facilitate enhanced defense capabilities. Through the alignment of competencies with strategic planning, the MOSAIC project has demonstrated that an organization can effectively build integrated systems to structure "job design, classification, recruitment, selection, performance management, and training" in support of projected needs, resulting in "high-performing employees and a high-performance organization."[118]

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[114] For example: job design, recruitment, selection, performance management, training, and career development, Rodriguez et al., "Developing Competency Models to Promote Integrated Human Resource Practices."

[115] For example, the American Recovery and Reinvestment Act (ARRA), Public Law No: 111–5, 123 Stat (2009). https://www.congress.gov/111/plaws/publ5/PLAW-111publ5.pdf.

[116] U. S. Office of Personnel Management, *Competency Model for Cybersecurity*, (Washington, DC: OPM, 2011), https://www.chcoc.gov/content/competency-model-cybersecurity.

[117] U. S. Office of Personnel Management, *Competency Model for Cybersecurity*.

[118] Rodriguez et al., "Developing Competency Models to Promote Integrated Human Resource Practices," 312, 309.

B.   DOD STRATEGIC CAPITAL MANAGEMENT

As of December 2019, the DOD uniformed military population encompassed more than 1.3M active duty and 800K reserve and guard members.[119] The DOD civilian workforce also involves a substantial population, with highly diverse and specialized personnel capabilities required for mission success, and assessment of their competency management achievements are highly relevant to the DOD's management of foreign language capabilities. Uncovering how the DOD pursued, completed and implemented competency management for their civilian employees provides the DLP with a more advanced starting point.

> With over 800000 employees, the DOD civilian workforce is among the world's largest—it is critical to have a clear, understandable and accessible approach for how civilians are trained and developed.[120]

In 2006, as part of a strategic human resource planning effort, Congress mandated the DOD to quantify civilian competency gaps in 22 mission critical occupations.[121] These were intended to minimize shortfalls in the DOD's civilian workforces' ability to achieve vital missions and to maximize preservation of critical skills and competencies. Researchers Harrison et al. from the National Defense University asserted that a well-formed competency framework fixed on the development of human capital, would provide for a sustainable and competitive advantage for the DOD in meeting national security objectives.[122]

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[119] Metrics retrieved February 21, 2020 from: https://www.dmdc.osd.mil/appj/dwp/rest/download?fileName=DMDC_Website_Location_Report_1912.xlsx&groupName=milRegionCountry.

[120] DOD's total civilian workforce includes among other, U. S. Direct Hire, direct funded civilian employees and foreign nationals, please see: David Rude, "Department of Defense: Development Programs & Initiatives for Civilian Leaders," *The Armed Forces Comptroller* 57, no. 1 (January 1, 2012): 11–14, http://search.proquest.com/docview/1151119153/.

[121] Brenda S. Farrell, *Human Capital Critical Skills and Competency Assessments Should Help Guide DOD Civilian Workforce Decisions: Report to the Chairman, Committee on Armed Services, U.S. Senate* GAO-13-188, (Washington, DC: Government Accountability Office, 2013), https://www.gao.gov/assets/660/651341.pdf.

[122] Adam Jay Harrison, Bharat Rao and Bala Mulloth, *Developing an Innovation-Based Ecosystem at the U.S. Department of Defense: Challenges and Opportunities* (Washington, DC: Institute for National Strategic Studies, National Defense University, 2017): 1–15.

1. Civilian Workforce Management

The DOD formalized strategic civilian human capital planning in DOD Instruction 1400.25, "DOD Civilian Personnel Management System: Volume 250, Civilian Strategic Human Capital Planning (SHCP)."[123] Shortly thereafter the Defense Civilian Personnel Advisory Center (DCPAS) published a Strategic Workforce Planning guide and defined the objectives of competency and workforce management: to meet operational readiness requirements and to have the expert capacity to execute existing and projected missions for the DOD.[124] These objectives grew from centralized competency modeling performed to assess gaps in workforce planning and to promote effective strategies, standards and efficiencies in talent management.[125] The metric-based outputs are designed to ensure the appropriate workforce mix and skill sets needed to accomplish the mission are available.

Aligning DOD strategic planning, budgeting cycles, performance management goals and objectives, the DCPAS pursued development of an enterprise competency management framework. This competency-based approach provides for three high level, DOD-wide objectives: establishing a common language; completing an inventory of DOD competencies; and, establishing a common taxonomy driving standardization yet allowing DOD component flexibility as needed.[126] The DCPAS competency framework connects human capital dynamically with relational capital that is underpinned by structural capital.[127]

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[123] Department of Defense, *DOD Civilian Personnel Management System: Volume 250, Civilian Strategic Human Capital Planning (SHCP),* DOD Instruction 1400.25 (Washington, DC: Department of Defense, 2008).

[124] Department of Defense, *Strategic Workforce Planning Guide* (Washington, DC: Defense Civilian Personnel Advisory Service, 2016), https://www.dcpas.osd.mil/Content/documents/OD/2_A_Strategic_Workforce_Planning_Guide.pdf.

[125] Department of Defense, "Defense Competency Assessment Tool (DCAT) Frequently Asked Questions (General)," accessed April 18, 2020, https://www.tecom.marines.mil/Portals/90/EducationCOI/ReferencesEdCOI/Defense%20Competency%20Assessment%20Tool%20(DCAT)%20Frequently%20Asked%20Questions.pdf.

[126] Department of Defense, *DOD Civilian Personnel Management System: Administration of Foreign Language Pay for Defense Civilian Intelligence Personnel System (DCIPS) Employees*, 13.

[127] Human capital (people, skills, networks, ambition, etc.), relational capital (trust, confidence, shared vision, etc.) and structural capital (organizations, funding, infrastructure, etc.) as described in Harrison et al., *Developing an Innovation-Based Ecosystem at the U.S. Department of Defense: Challenges and Opportunities.*

2. Competency Modeling

To prepare for emerging missions, changing work requirements and to identify mission-critical workforce gaps the DCPAS organized its substantial workforce into functional communities to engage in workforce planning. Functional communities are groupings of occupational series or specialties with common competencies and functions. DCPAS identified 34 unique occupational series defined as mission critical, ranging from contracting quality assurance (occupation series 1910), to foreign affairs (occupation series 0130) and explosives safety (occupation series 0017).[128] Through the definition of functional communities, DCPAS published a competency framework and workforce planning competency models to improve operational readiness and mission capabilities across 22 operating areas.[129] The models are five-tiered structures that embrace key features of flexibility and openness, and the DOD can further this work through investing in a competency framework for foreign language capabilities.[130]

Numerous validated competency models have been approved for integration within the DOD civilian human resources life cycle. DCPAS has developed both functional and technical competency models. Functional models, such as one developed for Security Cooperation, are not tied explicitly to an occupation series.[131] Functional models provide somewhat less fidelity in competency description than technical models developed for a specific occupational series, such as the GS-1030 Foreign Affairs technical competency model.[132] For example, the following excerpts demonstrate differences in granularity with regards to the expected depth of competency as described in functional versus technical descriptions, as needed to facilitate mission-oriented interpersonal relationships:

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[128] For more information on occupational communities please see https://www.dcpas.osd.mil/.

[129] Functional communities are defined as: a group of one or more occupational series or specialties with common functions, and career paths to accomplish a specific part of the DOD mission.

[130] Harrison et al., *Developing an Innovation-Based Ecosystem at the U.S. Department of Defense: Challenges and Opportunities*.

[131] Defense Civilian Personnel Advisory Service, S*ecurity Cooperation Functional Competency Model*, (Alexandria, VA: Defense Civilian Personnel Advisory Service, December 2018).

[132] Defense Civilian Personnel Advisory Service, *Foreign Affairs Technical Competency Model*, (Alexandria, VA: Defense Civilian Personnel Advisory Service, November 2014).

- Security Cooperation functional competency description: "Cultivate professional relationships with foreign counterparts to promote collaborative engagement"[133]
- Foreign Affairs technical competency description: "Cultivate professional relationships and reconcile differences with foreign counterparts to facilitate mutual understanding and promote collaborative engagement; inform and advise U.S. Government stakeholders."[134]

Although a great deal of progress has been achieved, the DOD has faced challenges in the implementation of civilian competency structures. Largely these issues were reported to arise from the absence of standardized definitions, variability in the methodologies applied during development and outcome formats adopted.[135] These factors have been asserted, by researchers Werber et al. in their assessment of the DOD acquisition workforce, to obscure competency intersections critical to the definition of uniform indicators, which underpin competency measurement capabilities.[136] The issues quantifying measurement metrics, have for example, made it difficult and sometimes impossible for the DOD to map competencies to industry standards and certifications.[137]

The DOD has and continues to invest in competency management for its civilian workforce, striving to achieve definition of the workforce skills sets required for operational readiness objectives. The work completed may include extensible competency models applicable to foreign language requirements, and offers the DOD another step toward improving the operational readiness of foreign language capabilities and maximizing the use of a core warfighting skill.

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[133] Defense Civilian Personnel Advisory Service, *Security Cooperation Functional Competency Model*.

[134] Defense Civilian Personnel Advisory Service, *Foreign Affairs Technical Competency Model*.

[135] Laura Werber, John A. Ausink, Lindsay Daugherty, Brian M. Phillips, Felix Knutson and Ryan Haberman, *An Assessment of Gaps in Business Acumen and Knowledge of Industry Within the Defense Acquisition Workforce: A Report Prepared for the U.S. Department of Defense in Compliance with Section 843(c) of the Fiscal Year 2018 National Defense Authorization Act* (Santa Monica, CA: RAND, 2019), xii.

[136] Werber et al., *An Assessment of Gaps in Business Acumen and Knowledge of Industry Within the Defense Acquisition Workforce*.

[137] Werber et al.

C. DEFENSE SECURITY COOPERATION COMPETENCY MODELING

The DOD faces unique challenges in managing a foreign language workforce composed of military and civilian personnel, who are vastly dispersed and often employed in positions requiring embedded capabilities, that is, personnel for which foreign language is not the primary function of their position. However, this is not the first time that the DOD has faced these challenges. The next case is selected for precedence and utility to the problems that will be faced by the DOD should it pursue competency management for the DLP.

The security cooperation workforce case involves both civilian and military functions within the DOD. As articulated by Markel et al. in their research on developing a competent security cooperation workforce, the DOD broadly defines security cooperation as "all actions undertaken with foreign partners to further U.S. security objectives."[138] The security cooperation workforce has operational readiness demands for foreign language competency, such as the requirement to communicate with partner nation officials in the local language(s).[139] DOD policies prescribe that security cooperation positions be filled with specific personnel, such as component services' military foreign area officers, and civilian foreign affairs specialists (occupational series 0130).[140]

1. Civilian and Military Competency Management

A 2010 GAO report attributed poor security cooperation outcomes to the lack of competencies within the existing workforce that was compounded by challenges working across agency boundaries.[141] The GAO advised the DOD to develop results-oriented

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[138] Markel et al., *Career Development for the Department of Defense Security Cooperation Workforce*, iii.

[139] Defense Civilian Personnel Advisory Service, *Security Cooperation Functional Competency Model*.

[140] Markel et al., *Career Development for the Department of Defense Security Cooperation Workforce*.

[141] John H. Pendleton, *National Security Key Challenges and Solutions to Strengthen Interagency Collaboration: Testimony before the Subcommittee on Oversight and Investigations, Committee on Armed Services, House of Representatives*, GAO-10-822T (Washington, DC: Government. Accountability Office, 2010), https://www.gao.gov/assets/130/124813.pdf.

performance measures in the management of these critical personnel.[142] The 2017 National Defense Authorization Act highlighted further deficiencies in the administration of the security cooperation workforce, recognized the increased strategic salience of security cooperation, and recommended workforce professionalization.[143] In 2018, the DOD enlisted the RAND Corporation to complete a comprehensive study of career development to ensure the workforce has the required competencies to support U.S. security cooperation efforts for the long run.[144] Markel et al. concluded that a competency framework would enable the DOD to pursue security cooperation strategic objectives, such as operating with a broader range of partners with differentiating sets of tools.[145]

The security cooperation workforce is sprawled across the DOD and its work is often embedded in roles within many other competing functions. The is little demarcation in the characterization of cross-organizational functions and workforce membership—there even remains a lack of consensus within the DOD on what constitutes security cooperation—which pose unique challenges.[146] These challenges are relatable to the measurement of operational readiness foreign language capabilities for the DOD. There are specific and mission critical workforce foreign language competencies embedded within positions that are not traditionally categorized by their language ability (such as the GPF).[147] The challenges are further exacerbated by a deficiency in common definition, and the lack of direct authority overseeing consistency in the implementation of security

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[142] Pendleton, *National Security Key Challenges and Solutions to Strengthen Interagency Collaboration.*

[143] National Defense Authorization Act for Fiscal Year 2017, Public L No. 114–328, 130 Stat 2000 (2016). https://www.congress.gov/114/plaws/publ328/PLAW-114publ328.pdf.

[144] Markel et al., *Career Development for the Department of Defense Security Cooperation Workforce*.

[145] Markel et al.

[146] Markel et al.

[147] Ray Clifford and Donald Fischer, "Foreign Language Needs in the U.S. Government," *The Annals of the American Academy of Political and Social Science* 511, no. Sept (January 1, 1990): 109–21, http://search.proquest.com/docview/58230273/.

cooperation objectives across the services—a challenge also experience by the foreign language capable workforce.[148]

2. Dispersed and Embedded Requirements

Aligning strategic objectives and the future direction is the first step to modeling dispersed and embedded requirements within a distributed workforce, and enables competencies to be partitioned into common and differentiating sets.[149] Methodically, the RAND research tackled issues surrounding extraction and definition of competencies in the security cooperation context and advanced a staged process to respond to this problem: record the current state of the workforce; define competencies and their distribution; identify competency clustering; and establish measurement thresholds.[150]

The RAND research forwarded techniques to identify, classify and enable the assignment of personnel with the combination of competencies required at various points to ensure capability to execute particular functions. Markel et al. identified 21 security cooperation competencies and prioritized five of these as critical within four distinct job families.[151] Due to the absence of data, inferential methods could not be used to uncover classification structures and alternative descriptive methods, such as cluster analysis, were utilized.[152] This approach provided foundational awareness, and enabled the identification and differentiation of competencies within and across organizations.[153] The researchers cautioned, however, that the competency models needed to be aligned with DOD-wide strategies through the top down approach required by a competency framework.[154]

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[148] Markel et al., *Career Development for the Department of Defense Security Cooperation Workforce*.

[149] Olesen, White and Lemmer, "Career Models and Culture Change at Microsoft" and William Rothwell and Rich Wellins, "Mapping Your Future: Putting New Competencies to Work for You," *T + D* 58, no. 5 (May 1, 2004): 94–100.

[150] Markel et al., *Career Development for the Department of Defense Security Cooperation Workforce*.

[151] Markel et al.

[152] Markel et al.

[153] Markel et al.

[154] Markel et al.

Security cooperation requirements bear great structural reference for the DOD when managing the DLP. Security cooperation involves the utilization of capabilities that cross significant organizational boundaries (i.e., both military and civilian) and the management of personnel for whom security cooperation is a primary function and others for whom it is a secondary (or tertiary, etc.) embedded responsibility. This case highlights that these challenges, albeit complex, can be overcome with appropriate investment in a competency framework to meet national security objectives.

D. DOD CULTURE

The final case for review is one of intimate relationship, operationally, to foreign language. Culture forms one component of the DOD LREC triad, and has sister relationships with foreign language and regional expertise. The DOD can exploit lessons learned and successful methods used in culture competency management to capture requirements for capabilities that expand broadly across the service components, and demand a spectrum of competencies.

In their culture competency modeling research, Defense Equal Opportunity Management Institute (DEOMI) investigators asserted that cultural competency management can improve mission effectiveness, and functions as a core warfighting skill within dispersed COEs.[155] Researchers Rasmussen and Sieck, in their investigation of culture-general competencies, asserted that the DOD needs to know the culture relevant competencies that are important, regardless of organizational affiliation or occupational specialty, to meet operational readiness objectives, as is the case for the security cooperation workforce and of great relevance to the DLP.[156]

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[155] Karol Ross, Christine MacNulty, Nic Bencaz, and Carol Thornson, *Framing Cross-Cultural Competence (3C) Learning Outcomes in a Competency Model,* Report Number 15–10 (Patrick Air Force Base, FL: Defense Equal Opportunity Management Institute, 2010), https://www.deomi.org/DownloadableFiles/research/documents/TECR-15-10-Framing_3C_Learning_Outcomes_in_a_Competency_Model-20180730.pdf.

[156] Louise J. Rasmussen and Winston R. Sieck, "Ready, Set, Go Anywhere: A Culture-General Competency Model for the DOD," *Military Intelligence Professional Bulletin* 40, no. 3 (July 1, 2014): 47–52.

The DOD has prioritized that the importance of the information environment, especially within stability operations in which soldiers' knowledge of culture increases their ability to accomplish missions in the COEs, as argued by Hernandez.[157] The non-destructive definition of success in many contemporary missions has increased emphasis on non-kinetic efforts.[158] Consequently, the DOD made the investment in manpower and time to develop a competency framework for culture, tacking the doctrinal and management challenges, and improving their ability to prepare the force to be more effective in foreign environments.[159]

1.   DOD Language, Regional Expertise and Culture Program

Underpinning work toward a culture competency framework is the DOD LREC program, which is administered by the Defense Language and National Security Education Office (DLNSEO).[160] From an oversight perspective, principle research scientists from the National Defense Research Institute asserted it would be of incredible valuable to capture DOD-wide requirements and uncover what cultural operational readiness factors are comprised of, "similar to requirements for weapons training, equipment and other readiness factors."[161]

Defining operational readiness for mission critical and force multiplying competencies such as foreign language and culture are becoming more accessible than ever before. Hancock argued that we are no longer limited by computational capacities which makes it feasible to develop a direct profile within a detailed context for LREC use, both

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[157] Hernandez, "Developing Cultural Understanding in Stability Operations."

[158] P. A. Hancock, J. L. Szalma and M van Driel, *An Initial Framework for Enhancing Cultural Competency: The Science of Cultural Readiness* (Patrick Air Force Base, FL: Defense Equal Opportunity Management Institute, 2007), http://www.dtic.mil/docs/citations/ADA488614.

[159] William E. Ward, Thomas P. Galvin and Laura R. Verhola, "A New Strategic Approach to Managing Our Foreign Area specialists (Viewpoint Essay)," *Army* 61, no. 5 (May 1, 2011): 61–62,64.

[160] For example: Chairman of the Joint Chiefs of Staff, *Language, Regional Expertise, and Culture (LREC) Capability Identification, Planning and Sourcing,* 3126.01A (Washington, DC: Joint Chiefs of Staff, 2013), https://www.jcs.mil/Portals/36/Documents/Library/Handbooks/g3401.pdf?ver=2016-02-05-175742-457 and Department of Defense, *Defense Language, Regional Expertise and Culture (LREC) Program.*

[161] Decamp et al., *An Assessment of the Ability of the U.S. Department of Defense and the Services to Measure and Track Language and Culture Training and Capabilities Among General Purpose Forces*, xxi.

in terms of civilian and military personnel, and to a degree, also of the individuals with whom we expect to directly interact.[162] With this capability, DOD strategists can match individuals, units or higher level organizations to tasks—"in the same way we now operate and target particular weapons systems for particular tasks, we will look to manage particular individuals for particular [cultural] interactive circumstances."[163]

2. Requirements Fidelity

Research conducted by the DOD discovered that soldiers performed roles on deployments requiring cultural competence that were atypical for their branch or military occupation series, and for which they had not been trained.[164] Researchers Rasmussen and Sieck illuminated the importance of the context of interactions, in their assertion that "all of the messages communicated: through words, body language, posture, dress, social context and action (e.g., showing up early or late, showing up alone or with a security detail)" impact message reception.[165] Extensive research and analysis was conducted by the ARI and the DEOMI to identify, define, contextualize and categorize operationally relevant cultural competencies required for mission effectiveness within the DOD.[166]

3. Culture Competency Modeling

Differentiating culture from language and regional expertise was the first step to understanding the culture problem. In 2007, DEOMI produced an initial framework for enhancing cultural competence targeting mission advantage and response adaptability at all levels of the military forces.[167] Shortly thereafter, researchers at the ARI identified

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[162] Hancock, Szalma and M van Driel, *An Initial Framework for Enhancing Cultural Competency*.

[163] Hancock, Szalma and M van Driel, 52.

[164] Abbe and Gallus, *The Socio-Cultural Context of Operations*.

[165] Louise J. Rasmussen and Winston R. Sieck. "Strategies for Developing and Practicing Cross-Cultural Expertise in the Military." *Military Review* 92, no. 2 (March 1, 2012), 79.

[166] For example, Abbe and Gallus, *The Socio-Cultural Context of Operations*, Ross et al., *Framing Cross-Cultural Competence (3C) Learning Outcomes in a Competency Model* and Gabrenya et al., *A Validation Study of the Defense language Office Framework for Cultural Competence and an Evaluation of Available Assessment Instruments.*

[167] Hancock, Szalma and van Driel, *An Initial Framework for Enhancing Cultural Competency*.

empirical and conceptual foundations of cross-cultural competence using the Delphi strategy.[168] With greater understanding of the problem, and potential solutions, DLNSEO expressed a goal of "identifying, developing, measuring and managing cultural capabilities" within the DOD.[169] What followed this stated goal was the Department's aggressive pursuit of comprehensive research, modeling and validation to establish a cultural competence framework.

Similar to security cooperation, the DOD needed to define what cultural competence meant, and the contexts of its use within dispersed operating environments. Similar to foreign language use in the COEs, it is essential that a DOD-wide competency model encompass a vast spectrum of jobs across differing organizational structures, missions and cultures.[170] Therefore, a bottom-up, or task-based approach, was pursued by the Defense Regional and Cross Cultural Assessment Working Group who developed 40 general cross-cultural learning statements.[171] These statements were further refined, grouped, and distinction between enablers (antecedent variables), universal competencies and differentiated competencies were established.

In 2012, DLNSEO published a project report, "Regional Expertise and Culture Proficiency," in which a competency model of 12 competencies within 3 domains were defined.[172] The Chairman of the Joint Chiefs of Staff operationalized the capability guidelines expressed in the DLNSEO report and provided descriptions of core culture competencies with corresponding proficiency levels to aid the services in operational

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[168] The Delphi strategy is a structured communication methodology based on the principle that that forecasts or decisions from a structured group of experts increases accuracy. Abbe, Gulick and Herman, *Cross-Cultural Competence in Army Leaders a Conceptual and Empirical Foundation.*

[169] Donald McDonald, Gary McGuire, Joan Johnston, Brian Selmeski and Allison Abbe, *Developing and Managing Cross-Cultural Competence Within the Department of Defense: Recommendations for Learning and Assessment*, Report Number 17–18 (Patrick Air Force Base, FL: Defense Equal Opportunity Management Institute, 2008), https://www.deomi.org/DownloadableFiles/research/documents/TECR-Developing_and_Managing_3C-20180619.pdf

[170] Ross et al., *Framing Cross-Cultural Competence (3C) Learning Outcomes in a Competency Model.*

[171] Gabrenya et al., *A Validation Study of the Defense language Office Framework for Cultural Competence and an Evaluation of Available Assessment Instruments.*

[172] Wisecarver et al., *Regional Expertise and Culture Proficiency.*

planning in their Instruction 3126.01A.[173] DEOMI subsequently executed an empirical validation study of the DLNSEO model and analyzed the models predictive or concurrent validity, which resulted in recommendations to develop competency measurement methods and to repackage the model in within a competency framework.[174] Enabling measured assessment according to the authors, defines the "more important-indeed [and] critical-need" requirements at a point in time, and developing a competency framework would provide operational readiness insight into competencies at the company, battalion, brigade and at higher levels with an organization.[175]

The DOD is making progress in establishing mastery levels for culture competence. A 2019 study commissioned by DLNSEO published initial definitions for a three-level general culture competence scale that is relevant to DOD job demands and requirements.[176] The technical approach pursued by Sieck et al. involved scenario-based interviews, sampling, coding, qualitative as well as quantitative analysis toward addressing the DLNSEO requirements for a DOD-wide resource.[177] The next steps include development of a causal model to link mastery levels to mission effectiveness, which in turn, define the requirements for operational readiness.[178]

As demonstrated in the analysis of the culture competency case, fidelity of requirements, common language clarity and competency management for a broad spectrum of personnel, can contribute to the achievement of operational readiness. The DOD DLP

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[173] Chairman of the Joint Chiefs of Staff, *Language, Regional Expertise, and Culture (LREC) Capability Identification, Planning and Sourcing.*

[174] Gabrenya et al., *A Validation Study of the Defense language Office Framework for Cultural Competence and an Evaluation of Available Assessment Instruments.*

[175] Gabrenya et al., 103.

[176] Winston Sieck, Loise Rasmussen and Jasmine Duran, *Mastery levels to support the education and training of general cultural competence* (Yellow Springs, OH: Global Cognition, 2019), https://www.globalcognition.org/wp-content/uploads/articles/sieck-GCTR19-cultural-competence-mastery-levels.pdf.

[177] Sieck, Rasmussen and Duran, *Mastery levels to support the education and training of general cultural competence.*

[178] Decamp et al., *An Assessment of the Ability of the U.S. Department of Defense and the Services to Measure and Track Language and Culture Training and Capabilities Among General Purpose Forces*, 41.

benefits from the attainments made in modeling competencies for an operationally related capability, culture.

E.   SUMMARY

As illustrated in this chapter, competency management is an enabler to target the development of mission-driven skills, identify critical competency gaps and to improve organizational performance through connecting competencies with strategic objectives.[179] However, any solution which affords insight into foreign language operational readiness, if it is to be embodied, must be acceptable DOD-wide, and conform to the distinctly different, if overlapping, missions across the services.[180] This chapter reviewed the longstanding OPM MOSAIC initiative, which may afford a nearer-than-distant starting point for the DOD to catalogue agile foreign language requirements aimed toward organizational performance. The DCPAS work toward strategic capital management is highly related to management of the DLP as it involves a substantial population of personnel, and mission critical targeted competency models to inform operational readiness capabilities. Competency modeling within the DOD security cooperation arena tackled dispersed and embedded competency requirements within poorly defined contingency environments, and achieved initial competency differentiation, which is also critical for dispersed operational readiness foreign language capabilities. And lastly, the LREC bound culture competency framework focuses on closely related requirements and populations relevant to foreign language capabilities, and has made significant progress toward understanding and classifying their workforce in terms of requirements for mission achievement. The DOD DLP benefits exponentially from having these precedents, some validated and others under development, to understand ways in which competency management can be leveraged to define and meet foreign language operational readiness objectives.

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[179] Brent Smith, Mike Hernandez and Jerry Gordon, *Competency based learning in 2018* (Alexandria, VA: Advance Distributed Learning, 2018), https://apps.dtic.mil/dtic/tr/fulltext/u2/1077111.pdf.

[180] Ross et al., *Framing Cross-Cultural Competence (3C) Learning Outcomes in a Competency Model*.

It may be helpful, as well, to consider that the DOD is not the only defense organization which is concerned with modeling competencies that are of utility to foreign language operational readiness objectives.[181] In their Coalition Building Guide The Multinational Interoperability Council, identified culture and language-bound barriers to mission accomplishment within traditional and irregular military theaters of operation.[182] Partner nations have sometimes immersed deeper into decoding these barriers. For example, Australia develops its civilian and military workforces whom require contextualized language, culture and regional competencies beyond those capabilities needed to interact with adversaries, but also seek to develop skills needed to bridge differences relevant to their interactions with coalition and partner nations.[183]

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[181] Syaiful Anwar, "Modeling the Competencies Required by Defense Attaches in Accomplishing their Duties: Study on the Indonesian Defense Attaches" *Journal of Defense Management* 6, no. 3 (January 2016), https://www.longdom.org/open-access/modelling-the-competencies-required-by-defence-attaches-inaccomplishing-their-duties-study-on-the-indonesian-defence-attaches-2167-0374-1000152.pdf

[182] Multinational Interoperability Council, *Coalition Building Guide: Cross-cultural awareness and competence, a guide to best practices*, Volume III.2. (2015), https://community.apan.org/wg/msog/m/mic_cbg/144935/download.

[183] Multinational Interoperability Council, *Coalition Building Guide*.

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IV.   ASSESSMENT IMPLICATIONS

> The single most important consideration in both the development of language tests and the interpretation of their results is the purpose or purposes which the particular tests are intended to serve.
>
> — Lichtenberg et al., 2007[184]

Language is one of the most complex human constructs, and as argued by Hernandez, communication not only demands a closely integrated set of skills, it requires proficiency in the specific structures of the language.[185] Foreign language capabilities are diffuse and challenging to control for in operational environments. In their empirically based foundational research on DOD cultural competence, Abbe et al. assert that a competency framework has the potential to inform evidence-based assessments that can predict and measure the operational readiness of individual soldiers, and across the DOD at inter-service and intra-service levels.[186] This capability would directly respond to the Chairman's Readiness Systems requirements for operational readiness through defining the characteristics of foreign language nonlethal force multipliers.[187]

By considering all dimensions of assessment validity, as required under the UGSP and as recommended by the OPM, to include criterion, content and construct, this chapter provides evidence that DOD can be better equipped to realize operational readiness requirements through pivoting from a criterion-referenced to a competency-based approach. A brief background on assessment is provided for context, and then the current DOD approach to foreign language assessment, the DLPT is profiled. Next, this approach is evaluated against standards for validity and score interpretation for high-stakes language assessment. Examination of an alternate approach, a competency-based assessment, will

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[184] James W. Lichtenberg, Sanford M. Portnoy, Muriel J. Bebeau, Irene W. Leigh, Paul D. Nelson, Nancy J. Rubin, I. Leon Smith, and Nadine J. Kaslow, "Challenges to the Assessment of Competence and Competencies," *Professional Psychology: Research and Practice* 38, no. 5 (October 2007): 424, https://doi.org/10.1037/0735-7028.38.5.474.

[185] Hernandez, "Developing Cultural Understanding in Stability Operations: A Three-Step Process."

[186] Abbe, Gulick and Herman, *Cross-Cultural Competence in Army Leaders a Conceptual and Empirical Foundation.*

[187] Chairman of the Joint Chiefs of Staff, *CJCS Guide to the Chairman's Readiness System.*

provide evidence that the DOD can mitigate validity and score use challenges in foreign language capability measurement, and improve operational readiness.

A.   ASSESSMENT CONTEXTUALIZED

Educational measurement research represents a highly specialized area of scholarship. Understanding the context of assessment is useful when analyzing the current approach, and an alternate approach, especially when considering the DOD's measurement of foreign language capabilities important to operational readiness. Testing standards and the three decisive dimensions of validity are outlined to afford clarity of understanding and to reinforce the importance of these components to standardized high-stakes assessments, in particular upon which defense readiness indicators are derived from and upon which national security depends.

1.   Standards

A number of standard paradigms have been developed to provide structure and direct the development of foreign language assessments. As affirmed by OPM, well-developed assessment tools allow agencies to strategically target the competencies and skills they seek to evaluate as job-related competencies.[188] In their Assessment Decision Guide, OPM asserts that assessments should capable of measuring individual performance as well as to "evaluate groups, and individual behaviors in group situations."[189] This is of significance to the DOD in measuring operational readiness. For example, the DOD generally does not base readiness solely on an individual, a squad or platoon, but often the combination of companies, battalions, brigades and so on.[190]

Specific to foreign language proficiency testing, such as the DLPT, standards have been developed internationally and nationally to guide assessment practices. The North Atlantic Treaty Organization (NATO) Bureau for International Language Coordination

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[188] U. S. Office of Personnel Management, *Assessment Decision Guide* (Washington, DC: Office of Personnel Management, ND), https://www.opm.gov/policy-data-oversight/assessment-and-selection/reference-materials/assessmentdecisionguide.pdf.

[189] U. S. Office of Personnel Management, *Assessment Decision Guide*, 17.

[190] Chairman of the Joint Chiefs of Staff, *CJCS Guide to the Chairman's Readiness System.*

describes language proficiency levels associated in their Standardization Agreement (STAGNAG 6001) to support language testing.[191] The American Society for Testing and Materials (ASTM) in their "Standard Practice for Assessing Language Proficiency" (ASTM F2889–11) describes the development and use of language tests with the focus on assessing use of language for communicative purposes.[192]

These standards suffer deficiencies in their reference scale and underlying theory enabling sound choices through the exclusive reference to external criteria. Operational readiness measures must be tied to tasks, context and expectations that are not sufficiently described in the criterion-referenced nature of these standards, or their scales of reference.[193] The "Common European Framework of Reference (CEFR) for Languages" seeks to break down the barriers experienced by criteria-based standards through emphasis on the adaptation of understanding to particular contexts of, and communicative needs for, language use.[194]

2. Validity

When developing an assessment for use in the military there is DOD-wide governance that must be satisfied in addition to the requirements laid out in the UGSP.[195] This Code of Federal Regulations requires the use of studies to assert the validity of an assessment, establishing a requirement for rigor in the development and use of high-stakes

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[191] Richard Tannenbaum and Patricia Baron, "Mapping TOEIC Test Scores to the STAGNAG 6001 language Proficiency Levels" in *The Research Foundation for the TOEIC Tests: A Compendium of Studies; Volume II,* ed. Donald Powers (Princeton, NJ: Educational Testing Services, 2010), https://www.ets.org/Media/Research/pdf/TC2-07.pdf.

[192] American Society for Testing and Materials, "Standard Practice for Assessing Language Proficiency" ASTM F2889 – 11, in *Book of Standard Volumes 14.03* (West Conshohocken, PA: ASTM International, 2020).

[193] Rita Green and Dianne Wall, "Language Testing in the Military: Problems, Politics and Progress," *Language Testing* 22, no. 3 (July 2005): 379–98, https://doi.org/10.1191/0265532205lt314oa.

[194] Council of Europe, "Common European Framework of Reference for Languages," accessed April 26, 2020, https://www.coe.int/en/web/common-european-framework-reference-languages/uses-and-objectives.

[195] Uniform Guidelines on Employee Selection Procedures, 29 C.F.R.1607 (1978), https://www.govinfo.gov/app/details/CFR-2009-title29-vol4/CFR-2009-title29-vol4-part1607.

decision-making assessments, such as is needed for foreign language capabilities.[196] DOD policies and educational measurement scholars demand criterion, construct and content validity, and these important concepts will be revisited in the analysis of the current and an alternate foreign language assessment approaches available to the DOD.

Criterion validity enables the quantification of a set of competencies that are predictive of success in a position.[197] Criterion validity is powerful, and can enable commander's the ability to predict their soldiers' performance on the battlefield, as opposed to their performance on a multiple-choice test.[198] Criterion validity is dependent on the explicit specification of particular elements of knowledge to be tested, and with this data, the assessment can be correlated to job performance.[199]

Construct validity evaluates how an assessment measures examinee ability. Performance in a foreign language manifests through behavior representative of KSAOs, and assessments targeting the measurement of these capabilities are universally based on a test construct. A test construct captures complex and abstract concepts exercised and performed by an examinee through a collection of related events, which can be measured to provide a score.[200] Construct validity, and its importance to tests that directly assess human behavior, like foreign language capabilities, is of the utmost importance. Belanich et al. concluded that construct validity directly ties the characteristics and capabilities important for successful job performance.[201]

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[196] Belanich, Moses and Lall, *Review and Assessment of Personnel Competencies and Job Description Models and Methods.*

[197] Belanich, Moses and Lall.

[198] Belanich, Moses and Lall.

[199] Robert Ebel and Samuel Livingston, "Issues in Testing for Competency," *National Council on Measurement In Education*, 12 no. 2 (Summer 1981), https://files.eric.ed.gov/fulltext/ED208001.pdf and Belanich, Moses and Lall, *Review and Assessment of Personnel Competencies and Job Description Models and Methods.*

[200] Susan E. Embretson, "Construct Validity: A Universal Validity System or Just Another Test Evaluation Procedure?" *Educational Researcher* 36, no. 8 (November 2007): 449–55, https://doi.org/10.3102/0013189X07311600.

[201] Belanich, Moses and Lall, *Review and Assessment of Personnel Competencies and Job Description Models and Methods.*

Content validity refers to the extent that test items included on an assessment represent the comprehensive domain targeted for measurement. OPM has asserted that content validity logically represents those tasks or competencies required by the job.[202] For an assessment to achieve content validity the domains of performance must be clearly articulated, and all relevant areas represented.

B.   DOD FOREIGN LANGUAGE APPROACH

The starting point in profiling the current DOD approach to foreign language measurement, is to discuss the DLPT. The DOD DLP is driven by the DLPT, given that all projections and decisions are based upon DLPT achievement.[203] The DLPT is the DOD's unit of measure for language proficiency, and the score provided from the DLPT is an ILR score (ranging 0+ to 5).[204] DLPTs are developed and administered, largely, in foreign languages that are of relevance to the DOD's Strategic Language List (SLL). The SLL provides a 10- to 15-year strategic planning outlook leveraged for force planning and is intended to inform the DOD of language capabilities that present the greatest utility toward achieving U.S. national security interests.[205]

A major component of the DLP is the FLPB program. This program incentivizes language capabilities within the force through monthly payments of up to $1000—notably exceeding bonus levels for non-aerial hazard pay.[206] Distribution of bonus payments are defined in DOD Instruction 1340.27 "Military Foreign language Skills Proficiency Bonus"

[202] U. S. Office of Personnel Management, *Assessment Decision Guide*.

[203] Kurt D. Fife, "U.S. Military in communication with China: The Role of Chinese Language Training Programs in Shaping Future Capabilities," (PhD diss., The Ohio State University, 2017), https://etd.ohiolink.edu/!etd.send_file?accession=osu1499972338160556&disposition=inline.

[204] United States Air Force, *Student Handbook: For Non-Prior Service Airmen* (San Angelo, TX: 17th Training Wing, 2017), https://www.goodfellow.af.mil/Portals/5/documents/17%20TRW%20NPS%20Enlisted%20Student%20Handbook%20(FINAL)%20-%20Jun%2017%20(002).pdf?ver=2017-06-14-153614-203

[205] Defense Language and National Security Education Office, "Readiness," accessed April 18, 2020, https://dlnseo.org/content/readiness.

[206] Department of Defense, *Foreign Language Proficiency Bonus*, FM 7000.14-R, Volume 7A, Chapter 19 (Washington, DC: Department of Defense, 2019) and Department of Defense, "Military Pay Tables & Information," accessed January 27, 2020 https://www.dfas.mil/militarymembers/payentitlements/Pay-Tables.html.

and are based on a number of factors such as the service members DLPT ILR score and the category of language on the SLL.[207] This system enables the DOD to maintain an inventory of linguists according to strategic planning projections.

1. What Is the DLPT?

The DLPT is a criterion-referenced test designed to gauge performance in terms of predetermined standards and to provide information about what the examinees can actually do with language. The DLPT system includes three separate tests to measure linguists' foreign language proficiency: listening comprehension, reading comprehension and speaking. Computer delivered multiple-choice and constructed response format tests are used for DLPT listening and reading comprehension, and oral proficiency interviews are conducted in person or telephonically to assess speaking proficiency.[208]

The DOD has pursued assessment of foreign language capabilities according to general proficiency through their use of the DLPT. Brooks and Hoffman argued that assessing non-specific proficiency enables the DOD adaptability and flexibility in filling needs as they arise.[209] This is a direct reflection of the DOD's current approach to develop, assess and maintain an inventory of general-purpose linguists.

In 2005, the Defense Language Institute Foreign Language Center (DLIFLC) announced the release of a new generation of DLPT, the DLPT5.[210] This new generation of DLPTs were developed with longer passages, and with an increased emphasis on authentic materials, but the content areas remained the same as previous generations and include geography, science-technology, military-security and cultural-social.[211] All

[207] Department of Defense, *Military Foreign Language Skill Proficiency Bonus*.

[208] Defense Language Institute Foreign Language Center, "DLPT Guides and Information," accessed April 26, 2020, https://www.dliflc.edu/resources/dlpt-guides/.

[209] Brooks and Hoffman, "Government and Military Assessment."

[210] Natela A. Cuter, "DLI Launches New DLPT Generation-DLPT5: Measuring Language Capabilities in the 21st Century," accessed April 26, 2020, http://internetmor92.blogspot.com/2012/03/dli-launches-new-dlpt-generation-dlpt-5.html.

[211] Cuter, "DLI Launches New DLPT Generation-DLPT5: Measuring Language Capabilities in the 21st Century."

DLPT5s undergo the same review processes to ensure that the foreign language stimulus and questions are at the ILR level for which they are intended.[212]

2. DLPT Construct

The DLPT tests receptive skills according to the ILR SLDs as the singular criteria of reference.[213] The ILR functions to describe a range of general (i.e., not mission-focused) foreign language proficiency on a scale of 0 (no proficiency) to 5 (functionally native proficient).[214] Davies asserted that criterion-referenced assessments are dependent on extensive interpretation of the criteria (i.e., the ILR SLDs in the case of the DLPT).[215]

The DLPT test questions become more technical the higher the ILR level, with increasingly greater emphasis on complex concepts.[216] The ILR SLDs are extensively inferred to develop the DLPT and can-do concepts extrapolated from the descriptions, as is the case for criteria-referenced assessments. This design enables elicitation of performance in listening, reading and speaking across the range of levels described targeting generalized aspects of language use.[217] The construct being measured through the existing listening and reading comprehension, and speaking DLPTs, is that of the test-

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[212] Defense Language Institute Foreign Language Center, "DLPT Guides and Information."

[213] Pardee Lowe, "Keeping the Optic Constant: A Framework of Principles for Writing and Specifying the AEI Definitions of Language Abilities," *Foreign Language Annals* 31, no. 3 (October 1998): 358–80, https://doi.org/10.1111/j.1944-9720.1998.tb00582.x and Green and Wall, "Language Testing in the Military." The ILR functions to describe a range of general (i.e., not mission-focused) foreign language proficiency on a scale of 0 (no proficiency) to 5 (functionally native proficient). For more information please see: http://www.govtilr.org/

[214] For more information please see: http://www.govtilr.org/.

[215] A. Davies, "Fifty years of language assessment," in *The Companion to Language Assessment,* ed. Antony Kunnan (New Jersey: John Wiley & Sons, 2013).

[216] Kenneth Hutchinson, "Second Language Capability in the Army Linguistic Community," (PhD diss. Walden University, 2019), 1–70, https://pdfs.semanticscholar.org/36bf/0d18d0915430f8f0a6acea36a72e97882f47.pdf.

[217] Annette Nolan, "Assessing Professional Military English Language Skills in Sweden and its Neighboring States," *Baltic Security & Defense Review*, 16, no. 1 (2014): 234–253.

takers linguistic ability, where the performance of a native speaker of the language represents the end-point maximum of this scale.[218]

3. DLPT Criteria

The DLPT is designed based on the ILR SLDs with the notion that the progression of language skills is hierarchical, and traverses up the scale. The ILR was first developed in 1955 by the Foreign Service Institute to serve as a system to categorize language proficiency that was objective, applicable to all languages and not tied to any particular language curriculum.[219] The ILR has since been designated as an unfunded federal organization with a steering committee consisting of representatives from eight federal agencies.

The current criteria of reference for the DLPT, the ILR SLDs, were published over thirty years ago.[220] In response, a multi-year ILR SLD revision project has been collaboratively pursued by the DOD, Federal Bureau of Investigation, Central Intelligence Agency, National Security Agency, Foreign Service Institute, and others.[221] The rationale posited for these revisions indicates that foreign language use has evolved, and the missions of the agencies utilizing the ILR SLDs have broadened, encompassing intelligence, diplomacy and defense, among other areas.[222]

4. Score Interpretation

The ways of translating what test-takers need to do on DLPT to test into an ILR score are variable, but are guided by judgements of target language and ILR experts.[223]

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[218] Neil B. Carey, Edward J. Schmitz, Zachary T. Miller and Sara M. Russell, *Assessing the Impact of and Needs for Navy Language, Regional Expertise, and Culture Training* (Alexandria, VA: CNA Analysis and Solutions, 2012), http://www.dtic.mil/docs/citations/ADA570490.

[219] Martha Herzog, "History of the ILR: An overview of the history of the ILR Language proficiency skill level descriptions and scale: How did the language proficiency scale get started," accessed November 23, 2018, http://govtilr.org/Skills/IRL%20Scale%20History.htm.

[220] Interagency Language Roundtable, "ILR revisions and the way forward," accessed April 26, 2020. https://www.govtilr.org/Calendars/ILR%20Revisions%20Plenary%20October%202019.pdf

[221] Interagency Language Roundtable, "ILR revisions and the way forward."

[222] Interagency Language Roundtable.

[223] Defense Language Institute Foreign Language Center, "DLPT Guides and Information."

For the multiple choice DLPTs, Item Response Theory is used to calculate an ability indicator that corresponds to an examinee being able to answer seventy percent of questions at a given ILR.[224] For the constructed response DLPTs, every question targets a specific ILR level.[225] Constructed response examinees are required to correctly answer at least seventy percent of the questions correctly at each ILR level to be assigned that level, or to qualify to attempt the next higher level.[226] The OPI holistically assess examinees foreign language proficiency based on strengths and weaknesses exhibited according to task performance, the breadth of topics and settings, accuracy, and text type.[227]

The DLPT uses an additional layer of target language expert judgement to inform cut scores for listening and reading comprehension forms through a process called Standard Setting. This methodology is used to define levels of ILR proficiency and cut scores that correspond to that level, enabling classification of examinees according to an ILR score.[228]

C.   ANALYSIS OF CURRENT APPROACH

Challengers to the current approach question how mission-critical needs can be addressed in the absence of a foreign language assessment that provides tailored, task-oriented or functional evidence of operational readiness competencies.[229] Kane cautioned that general proficiency assessments can lead to misinterpretation of achievement and inappropriate uses of test scores, in particular when the performance domain has not been

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[224] Defense Language Institute Foreign Language Center, "DLPT Guides and Information."

[225] Defense Language Institute Foreign Language Center, "Defense Language Proficiency Test 5 System: Familiarization Guide for Constructed Response Format," accessed April 26, 2020, https://www.dliflc.edu/wp-content/uploads/2014/04/Generic-Fam-Guide-CRT-CBT.pdf.

[226] For CRT exams, the examinees must pass each lower level in order to pass a higher level.

[227] Thomas S. Parry, "OPI Testing at the Defense Language Institute Foreign Language Center." Presentation at Language Education and Resource Network LEARN Workshop (Chevy Chase, MD, September 16, 2014), https://www.fbcinc.com/e/learn/e/assessment/presentations/tuesday/OPI_Workshop_(Parry)_-_LEARN_2014.pdf.

[228] Isaac I Bejar, "Standard Setting: What is it? Why is it important?" *R&D Connections* 7 (October 2008), https://www.ets.org/Media/Research/pdf/RD_Connections7.pdf.

[229] Sands and DeVisser, "Narrowing the LREC Assessment Focus by Opening the Aperture."

carefully specified.[230] Challenges in validity, standards, score interpretation and the impact on operational readiness resulting from the DOD's use of a general proficiency assessment are identified in this section.

1.   Validity Challenges

Validity issues in the DOD's current approach are tracked through a structured path of the three pillars of validity prescribed by DOD policies and educational measurement scholarly works: criterion, construct and content. This analysis reveals a framework with significant gaps, predominantly focused on the criterion-referenced nature of the DLPT. The DOD's use of the ILR SLDs as the single point of reference challenges achievement of validity in all three dimensions of interest.

The criterion benchmark for the DLPT and for classifying DOD foreign language proficiency, the ILR SLDs, do not provide the fidelity of information needed to measure operational readiness. This is evidenced by fact that while multiple government agencies refer to the ILR SLDs for language proficiency tests, each test varies to such a degree that the scores are not interchangeable across agencies.[231] The variation in interpretation of the ILR SLDs—across the organizational affiliation of steering committee members—highlights the challenges in its utilization as a singular criterion for reference for the DOD.

Criterion-referenced assessments, such as the DLPT, also face challenges in translating a numeric criterion into real-life performance, especially when the criteria do not depict well-defined outcomes or demarcate minimal competence.[232] In her detailed

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[230] Michael T. Kane, "Validating the Interpretations and Uses of Test Scores," *Journal of Educational Measurement* 50, no. 1 (March 2013): 1–73, https://doi.org/10.1111/jedm.12000.

[231] Interagency Language Roundtable, "Frequently Asked Questions," accessed November 28, 2018, http://govtilr.org/FAQ.htm.

[232]Thea Reves and Adina Levine, "From needs analysis to criterion-referenced testing" *System* 20, no. 2 (May 1992) 201–210, https://www.sciencedirect.com/science/article/abs/pii/0346251X9290025X and Craig Mills, Gerald J. Melican and Nancy Thomas Ahluwalia, "Defining Minimal Competence," *Education Measurement: Issues and Practice* 10, no. 2, (June 1991), 7–10.

research on military language assessment, Nolan asserted that test design and testing should be based on operational language use, which is not represented within the ILR SLDs.[233]

Even with the ILR SLD revision project, challenges interpreting the criteria are likely to persist. For example, when comparing proposed and current description for listening comprehension ILR level 2, both narratives indicate that a listener is capable of a "remarkable ability and ease of understanding."[234] The ILR SLDs require extensive interpretation for use, and do not provide adequate criterion for reference for use in the DLPT, as argued by a leading Educational Testing Services researcher Kane.[235]

Evidence to assert the construct validity of the DOD, is not currently available to the DOD due to the absence of operationally defined job performance indicators. Construct validity and the underlying traits assumed to be measured through the DLPT are based on examinee general proficiency performance in a foreign language as described in the ILR SLDs.[236] In their validation research of listening comprehension guidelines, Cox and Clifford went as far as to argue that using the ILR scale to evaluate listening comprehension, as is the case for the DLPT, is in violation of academic assessment standards.[237]

Content validity is dependent on clear indication of the important aspects of performance on the job whereas the DLPT, and the ILR SLDs, fail to define foreign language dimensions required for success in military operations or qualify operational readiness measures critical to the pursuit of national defense strategies. Absent a DOD-wide needs assessment, the DOD cannot elucidate critical dimensions, achieve fidelity of

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[233] Nolan, "Assessing Professional Military English Language Skills in Sweden and its Neighboring States."

[234] Interagency Language Roundtable, "Proposed ILR Listening SLDs 5 June 2015," accessed April 26, 2020, https://www.govtilr.org/Publications/ProposedListening.pdf and Interagency Language Roundtable, "Interagency Roundtable Language Skill Level Descriptions – Listening," accessed April 26, 2020, https://www.govtilr.org/Skills/ILRscale3.htm#2.

[235] Michael Kane, "Validating Score Interpretations and Uses," *Language Testing* 29, no. 1 (January 2012): 3–17, https://doi.org/10.1177/0265532211417210.

[236] U. S. Office of Personnel Management, *Assessment Decision Guide*.

[237] Troy L. Cox and Ray Clifford, "Empirical Validation of Listening Proficiency Guidelines," *Foreign Language Annals* 47, no. 3 (September 2014): 379–403. https://doi.org/10.1111/flan.12096.

criterion, explicate requirements for successful performance, or translate these into targeted indicators in foreign language assessment. In fact, research directed at this problem concluded that the DLPT did not meet the assessment needs of a predominant DOD foreign language stakeholder, SOF commanders.[238]

The DOD cannot achieve needed criteria, construct or content validity using the ILR SLDs. The ILR SLDs represent general language use to accommodate a variety of language typologies, therefore the descriptions of functional proficiency have to be sufficiently broad.[239] The SLDs are language-agnostic, representative of a trait-focused approach to functional proficiency and do not provide clarity for special purpose, subsets of language utilization, or sufficient detailed linguistic descriptions of each proficiency level.[240] These factors, and the pervasiveness of inconsistent interpretation of the ILR SLDs has led to their inappropriate application within the performance context.[241]

2. Standards Challenges

DOD faces the same challenges as national and international partners do in their use of criterion-referenced foreign language assessments. Unfortunately, the DOD is without a comprehensive testing standard, or exhaustive criteria, that meets its needs to define, measure and achieve operational readiness through assessment. Neither STAGNAG or ASTM standards reflect military-specific requirements or quantify what is needed for effective foreign language uses within the COEs, but they are linked to what are widely recognized as the key skills needed.[242] The CEFR for Languages expands upon

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[238] Surface, *Special Forces Language and Culture Needs Assessment*.

[239] S. Cook, S. Sweet, A. Lancaster, N. Pandza, S. Jackson, E. Pelzl, K. Gor and C. Doughty, "Linguistic correlates of proficiency (LCP): at the intersection of testing and teaching" in eds. J. Davis, J. Norris, M. Malone, T. Mckay and A. S. Young, *Useful assessments and evaluation in language education* (Washington, DC: Georgetown University Press, 2018).

[240] Carey et al., *Assessing the Impact of and Needs for Navy Language, Regional Expertise, and Culture Training* and Cook et al., "Linguistic correlates of proficiency (LCP)."

[241] Brooks and Hoffman, "Government and Military Assessment."

[242] Nolan, "Assessing Professional Military English Language Skills in Sweden and its Neighboring States."

this by attempting to capture language activities within in the domains in which they occur.[243]

3. Score Interpretation and Use Challenges

The ability of the DLPT to measure foreign language capabilities for operational readiness purposes has been extensively challenged in the literature.[244] In his research on the Navy language program, Carey et al. asserted that the DLPT system uses functional tasks (e.g., carrying out certain types of conversational tasks on different topics, etc.) which results in scores that are not readily interpretable.[245] This research examined if the disparity between the DLPT and the Navy needs for foreign language assessment could be bridged through the institution of a complimentary battery of language specific assessment targeted at performance of explicit linguistic features within a functional (i.e., not general) proficiency scale.[246]

Each DOD service component operationalizes their interpretation of DLPT scores through a patchwork of regulations. Army Regulation 11-6 sets policies for enabling linguistic support to military operations but fails to establish language requirements.[247] The Navy's OPNAVIST 5200.37 defines career and non-career linguists when implementing policies and assigning responsibilities, without specifying the tasks expected to be carried out.[248] The Marine MCO 7220.52 provides policies regarding assignments involving foreign language duties, but does not connect these with expectations of

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[243] Nolan, "Assessing Professional Military English Language Skills in Sweden and its Neighboring States."

[244] Surface, *Special Forces Language and Culture Needs Assessment*, Lichtenberg et al., "Challenges to the Assessment of Competence and Competencies" and Carey et al., *Assessing the Impact of and Needs for Navy Language, Regional Expertise, and Culture Training.*

[245] Carey et al., *Assessing the Impact of and Needs for Navy Language, Regional Expertise, and Culture Training.*

[246] Carey et al.

[247] Department of the Army, *Army Foreign Language Program*, AR-11-6 (Washington, DC: Department of the Army, 2016), https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/r11_6.pdf

[248] Department of the Navy, *Navy Foreign Language Testing Program*, OPNAV 5200.37 (Washington, DC: Department of the Navy, 2010), http://navybmr.com/study%20material/OPNAVINST%205200.37.pdf

performance.[249] The Air Force AFI 36–4002 defines foreign language capabilities as critical for global operational readiness, warfighting missions, security cooperation engagements and peacetime operations, however capabilities of language use are not specified.[250] Foreign language capabilities are governed at the DOD level, and the effort put forth through the development of a competency framework would enable fidelity and alignment of requirements to meet operational readiness objectives across the department.

An ILR score does not address the contexts of language use required for DOD missions. McCleeland contended that incorporating influential and contextualized factors for language use would afford greater understanding and transparency that the ILR SLDs.[251] In his research on assigning an ILR level from a raw score, or number correct, Kane argued the Standard Setting model works especially well when measuring well-defined skills within well-characterized performance domains.[252] However, precision of skills or tasks to be assessed are not available from the ILR SLDs, and the DOD lacks clearly articulated domains of foreign language performance of importance to the execution of national security goals.[253]

At present, DLPT scores do not convey examinees expected on-the-job performance or represent thier ability to execute specific language-related tasks.[254] In evaluating expertise in foreign language communication, Zeng asserts that performance on

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[249] Department of the Navy, Headquarters United States Marine Corps, *Foreign Language Proficiency Pay* Marine Corps Order 7220.52E, (Washington, DC: Department of the Navy, 2006), https://www.marines.mil/Portals/1/Publications/MCO%207220.52E.pdf

[250] Department of the Air Force, *Total Force Language, Regional Expertise and Culture Program*, Air Force Instruction 35–4005 (Washington, DC: Department of the Air Force, 2019), https://www.airuniversity.af.edu/Portals/10/AFCLC/documents/Key%20LREC%20Guidance%20Documents/afi36-4005.pdf?ver=2019-06-06-160459-923

[251] Mcclelland, David. "Testing for Competence Rather Than for 'Intelligence.'"

[252] Cut scores represent the conversion between a raw score, or number correct, and the corresponding ILR level assigned. Michael Kane, "The Argument-Based Approach to validation," *School Psychology Review* 42, no. 4 (December 1, 2013): 448–57.

[253] Kane, "The Argument-Based Approach to validation."

[254] Defense Language Institute Foreign Language Center, "Thai Defense Language Proficiency Test 5 (DLPT5) Multiple Choice Format Familiarization Guide," accessed April 27, 2020, https://www.dliflc.edu/wp-content/uploads/2014/02/THAI_DLPT5_MC_Fam-Guide_Final_27SEPT2017.pdf.

proficiency-based assessments, such as the DLPT, are merely accurate predictors of test performance, not one's ability to perform in an operational environment.[255]

Army Foreign Area Officer Fife completed research into shaping foreign language capabilities, and asserted that the DLPT serves the DOD as an inaccurate goalpost in perceived readiness.[256] Fife provided personal examples of earning scores ranging from ILR 2 to 3 (Limited Working to General Professional Proficiency) on the DLPT even when significant inadequacies in operational language capabilities were revealed:

> I am not able to hold conversations in Amoy. I could not ameliorate nor in any way discuss concerns relating to any matters using Amoy with a Chinese counterpart. I simply have a score reflective of how well I tested, but that score has nothing to do with my ability to "use" Amoy.[257]

The DOD does not have clearly articulated requirements for foreign language capabilities needed for operational readiness. The bottom line is that the DOD cannot be ready for missions within the COEs that depend on effective foreign language use, because they have yet to define these or enabled a high-fidelity assessment. Linguistic capabilities do not just afford our Soldiers ability to communicate and serve as a force multiplier, they serve as a medium to express national security policies and can aid in the strategic trajectory of international relations.[258]

4. Suggestions

The DLPT is underpinned by strategy and guidance, however these policies do not govern or prescribe a path to envisage foreign language use in terms of operational readiness or define what constitutes adequate performance—instead the ILR is used as the performance standard.[259] This is compounded with the absence of a published DOD-wide

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[255] Zhini Zeng, "Demonstrating and Evaluating Expertise in Communicating in Chinese as a Foreign Language," (PhD diss, The Ohio State University, 2015), https://etd.ohiolink.edu/pg_10?::NO:10:P10_ETD_SUBID:106767.

[256] Fife, "U.S. Military in communication with China."

[257] Fife, 124.

[258] Hutchinson, "Second Language Capability in the Army Linguistic Community."

[259] Kane, "Validating Score Interpretations and Uses."

needs analysis, which has been argued to compromise the ability of the DOD to sufficiently measure and target foreign language capabilities across the department.[260]

Without validated and high-fidelity requirements for foreign language uses within the DOD, the DLPT and the ILR SLDs are the only options available for the DOD to establish an inventory. The DOD must consider, to maximize the use of foreign language warfighting skills, the fact that opportunities for improvement in the assessment of foreign language capabilities are supported by scholars. The DOD can realize benefits that become available to operational readiness measurement upon investment in a competency framework.

D.   ALTERNATE APPROACH

The availability of a foreign language competency framework would offer the DOD an alternative to the current system of assessment, and enable, as Sands recommended, the alignment of specific linguistic components that have been contextualized for the operational environment.[261] Competencies can communicate constructs, expectations, and function, and assessments represent evidence that can be used to make assertions of competency.[262] Carey et al. argued that foreign language capabilities cannot "be incorporated into simple input-output models that have been developed to translate traditional military inputs into operational readiness or mission success outcomes."[263]

The utility of competency-based assessments to the DOD has been previously studied. In response to the *Performance Measures for the 21st Century*, the ARI conducted

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[260] Green and Wall, "Language Testing in the Military."

[261] Sands and DeVisser, "Narrowing the LREC Assessment Focus by Opening the Aperture."

[262] Jeffery Horey, "What's wrong with competency measurement?" in *Proceedings of the International Military Testing Association* (2011): 1–9, http://www.imta.info/PastConferences/Presentations_v2.aspx?Show=2011 and Smith, Hernandez and Gordon, *Competency based learning in 2018*.

[263] Carey et al., *Assessing the Impact of and Needs for Navy Language, Regional Expertise, and Culture Training*, 27.

a Demonstration Competency Assessment Program.[264] This research reinforced the axiom that sound job analysis, one component of a competency framework, is the most important part of test development.[265] Ebel and Livingston argued that this is especially vital when capabilities need to be defined not only in terms of job performance but also in categories of performance, as are directly applicable to operational readiness factors.[266] This section uncovers evidence specifying how competency based assessments respond to the challenges faced in DOD foreign language testing with respect validity, standards and score interpretation.

1. Competency-Based Assessment

Competencies have been used by the DOD as the main evaluation construct for many years to simulate job performance conditions.[267] For example, Basic Rifle Marksmanship is measured by the DOD through competencies.[268] If the construct underpinning the assessment of core warfighting foreign language capabilities were competency based, the DOD could realize gains in operational readiness preparation, as they have achieved for other core warfighting capabilities.

A competency-based approach to assessment provides the DOD with a new and comprehensive avenue to capture, measure and prepare for operational requirements for language use within the COEs. Wang, Schnipke and Witt asserted in their educational measurement research that the development of a competency framework, which expresses needs, could appropriately identify the KSAOs that are required for performing needed tasks, which could themselves be tested.[269] The authors' research describes an approach

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[264] Roy Campbell, Karen Moriarty and Tonia Heffner, "Development of an Army Competency Assessment Test: Experiences and lessons learned" in *Proceedings of the International Military Testing Association* (2004): 1–9, http://www.imta.info/PastConferences/Presentations.aspx.

[265] U. S. Office of Personnel Management, *Assessment Decision Guide*.

[266] Ebel and Livingston, "Issues in Testing for Competency."

[267] Horey, "What's Wrong with Competency Measurement?"

[268] Horey.

[269] Ning Wang, Deborah Schnipkem and Elizabeth A. Witt, "Use of Knowledge, Skill, and Ability Statements in Developing Licensure and Certification Examinations," *Educational Measurement: Issues and Practice* 24, no. 1 (March 2005): 15–22. https://doi.org/10.1111/j.1745-3992.2005.00003.x.

to task inventory and job analysis, which results in a methodology for linking job tasks to test specifications, through the development of testable KSAOs.

2. Validity Solutions

All dimensions of validity with respect to criterion, content and construct would be well supported through a competency framework for DOD foreign language capabilities.[270] With comprehensive requirements available from a competency framework, the DOD would gain clear evidence needed to make determinations regarding capabilities and assessment strategies could be informed by critical competencies needed for operational readiness. This evidence is of critically important to the DOD's ability to maximize the spectrum of foreign language uses required across the COEs, in support of national defense strategy.

Criterion validity demands the explicit specification of particular elements of KSAOs to be tested. A competency framework and competency-based assessment would substantively enhance the DOD's ability to assert criterion validity. A DOD sponsored National Defense Research Institute study recommended the development of assessments that are associated with skills linked to operational readiness.[271] Competencies exist on a continuum, and defining these within observable and measurable contexts through a competency framework results in meaningful measurement of operational readiness capabilities.[272] Fidelity at all levels of proficiency could be assured, and the association of these to required activities achieved, resolving the criteria-referenced issues of the DLPT.

A competency framework, through its competency models, dimensions and indicators, distills information and data that expose the substance of a job, and clarifies the important aspects influencing performance on the job, directly supporting claims of construct validity. In his research on validating score uses and interpretations, Kane

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[270] Belanich, Moses and Lall, *Review and Assessment of Personnel Competencies and Job Description Models and Methods.*

[271] Decamp et al., *An Assessment of the Ability of the U.S. Department of Defense and the Services to Measure and Track Language and Culture Training and Capabilities Among General Purpose Forces.*

[272] Horey, "What's Wrong with Competency Measurement?"

asserted that construct validity demands adequate criteria and the operational definition of measured attributes.[273] This outcome information directly enables the development of both construct and content validity arguments, which is a challenge for the DLPT that has been assembled without such clear reference.[274]

Content validity and the predictive relationship between performance on test questions and performance within the operating environment could be achieved with the adoption of a competency framework driven competency assessment approach. This would be of significant departure from the current DLPT, which from its inception faced a major issue with "the lack of precise details within specifications regarding language content."[275] Needs analysis, completed in the initial development of a competency framework, and task inventory analysis, completed during competency dimension development, are argued by Wang et al. to elucidate contextualized requirements needed to establish content validity and provide needed evidence supporting the use and interpretation of scores.[276]

Across the three validity measures identified in the UGSP governance, a competency framework would elucidate validity and provide clear evidence for the use and interpretation of test scores. Assessments collect and evaluate evidence used to make determinations regarding capabilities, and assessment strategies inform organizational abilities to fulfill critical competencies demanded for operational readiness.

3.   Standards Solutions

Should the DOD pursue competency-based assessments for foreign language capabilities, issues that have plagued criterion-referenced language testing would be resolved. Assessments collect and evaluate evidence used to make determinations regarding capabilities—pursuit of competency framework from which a competency-based

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[273] Kane, "Validating Score Interpretations and Uses."

[274] Belanich, Moses and Lall, *Review and Assessment of Personnel Competencies and Job Description Models and Methods.*

[275] Cameron Brinkley, "Command History, 2004–2005," (Defense Language Institute Foreign Language Center & Presidio of Monterey, Monterey CA: November 2010), 131.

[276] Wang, Schnipke, and Witt, "Use of Knowledge, Skill, and Ability Statements in Developing Licensure and Certification Examinations."

assessment could be developed against would not be reliant on an external criterion-referenced scale and would embody the CEFR in its focus on contextualization of language use requirements.[277]

Evidence centered design (ECD) is a validated test development approach that is directly supported by the information available from a competency framework. ECD can be considered an alternate approach to existing standards that enables criteria, construct and content validity to be directly embedded in test development effectively leveraging competency indicators uncovered through a competency framework. This approach is championed by leading educational measurement scholars, such as Zieky, Kane and Bejar, and would afford an alternate to the ILR SLDs, among other criteria scales present in national and international testing standards.[278]

4.   Score Interpretation and Use Solutions

Test scores that the DOD currently utilize to amass an inventory of foreign language proficient personnel cannot be interpreted to align with operational readiness factors, due to the fact that the DOD has not invested in organizational-wide needs assessments or a competency framework. In his historic review of foreign language assessment, Davies recommended establishing a clear linkage between the test construct, job tasks and performance on an assessment.[279] This connection enables evidence-based inferences to be made from the test scores, and meaningful capabilities to classify personnel tuned to operational readiness requirements would become available to the DOD.[280]

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[277] Council of Europe, "Common European Framework of Reference for Languages."

[278] Michael J. Zieky, "An Introduction to the Use of Evidence-Centered Design in Test Development," *Psicología Educativa* 20, no. 2 (December 2014): 79–87, https://doi.org/10.1016/j.pse.2014.11.003 and Michael T. Kane and Isaac I. Bejar, "Cognitive Frameworks for Assessment, Teaching, and Learning: A Validity Perspective," *Psicología Educativa* 20, no. 2 (December 2014): 117–23, https://doi.org/10.1016/j.pse.2014.11.006.

[279] Davies, "Fifty Years of Language Assessment"; Wang, Schnipke and Witt, "Use of Knowledge, Skill, and Ability Statements in Developing Licensure and Certification Examinations."

[280] Davies; Wang, Schnipke and Witt.

If an assessment engages the same area of abilities that are required for operational use, it reinforces the relevance of the interpretation of intended use.[281] Smith, Hernandez and Gordon argue that competencies are a bridge to trusted and informed prediction of performance, and asserted that they have the potential to align the service branches' development of mission-capable soldiers.[282] This alignment generates potential for increased readiness and optimization of workforce management across the DOD, in particular as correspondence of the language task use, outside of the task itself, enable extrapolation from universal scores to target domain scores or interpretation.[283]

Competency assessments, built with the clarity available from a competency framework, can reliably measure "the integration of knowledge, skills, and abilities in the performance of professional functions that comprise competence."[284] Should the DOD pursue a competency-based approach to foreign language assessment, reliance on extensive interpretation of the ILR SLDs as the single criterion would no longer be the cornerstone of reference. Instead, well-defined skills within well-characterized performance domains, outcomes of a competency framework, would enable the DOD to define and assess its military and civilian workforce consistent with readiness factors.

5. Operational Readiness Solutions

Educational measurement researchers proposed that the development of a competency framework results in a methodology for linking job tasks to test specifications, which would be a significant advancement from the currently available benchmarks and enable meaningful measurement of operational readiness.[285] Many researchers, across a spectrum of institutions and representing different disciplines, argue that cognitive ability tests, based on causal and integrated competency models, offer the best predictor of

[281] Lichtenberg et al., "Challenges to the Assessment of Competence and Competencies."

[282] Smith, Hernandez and Gordon, *Competency Based Learning in 2018*.

[283] Lichtenberg et al., "Challenges to the Assessment of Competence and Competencies."

[284] Lichtenberg et al., 476.

[285] Wang, Schnipke and Witt, "Use of Knowledge, Skill, and Ability Statements in Developing Licensure and Certification Examinations."

performance and can aid in differentiating between degrees of mastery over time.[286] Davies, in his foreign language assessment analysis, asserts that cognitive models can predict information-processing procedures for a variety of problem-solving behaviors.[287] This is very relevant to foreign language capabilities needed to enable operational readiness for the DOD, in particular as language uses have broadened over time, spanning from low-level special forces speaking requirement to high level reading and listening capabilities of the intelligence communities.[288]

A competency framework for DOD foreign language capabilities could improve the utility of the Defense Readiness Reporting System, and specifically the Language Readiness Index (LRI).[289] The LRI embodies METLS which define activities required for performance and can be related directly to organizational mission.[290] Empowered with common definitions of performance and standards, comparison and transfer of competencies across the department could be realized.[291] A competency-based assessment enables the linkage of test performance to interpretations, and from interpretations to uses, and coherently inform how operational readiness requirements for a particular mission can be achieved.[292]

Gaining fidelity in the measurement of operational readiness metrics relevant to foreign language capabilities would be of significant improvement for the DOD and enable

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[286] Gerald V. Barrett and Robert L. Depinet, "A Reconsideration of Testing for Competence Rather Than for Intelligence," *American Psychologist* 46, no. 10 (October 1991): 1012–24, https://doi.org/10.1037/0003-066X.46.10.1012, Gabrenya et al., *A Validation Study of the Defense language Office Framework for Cultural Competence and an Evaluation of Available Assessment Instruments* and Carey et al., *Assessing the Impact of and Needs for Navy Language, Regional Expertise, and Culture Training.*

[287] Davies, "Fifty Years of Language Assessment."

[288] Sands and DeVisser, "Narrowing the LREC Assessment Focus by Opening the Aperture."

[289] For more information on the LRI, please refer to Defense Language and National Security Education Office, "Readiness."

[290] Belanich, Moses and Lall, *Review and Assessment of Personnel Competencies and Job Description Models and Methods.*

[291] Belanich, Moses and Lall.

[292] Decamp et al., *An Assessment of the Ability of the U.S. Department of Defense and the Services to Measure and Track Language and Culture Training and Capabilities Among General Purpose Forces* and Lichtenberg et al., "Challenges to the Assessment of Competence and Competencies."

alignment of workforce resources with mission requirements within the COEs. Approaching assessment of foreign language capabilities from a competency perspective, as opposed to the current criterion-referenced approach, would enhance the DOD's ability to classify personnel capabilities according to operational readiness requirements. Magnitudes of gain could be realized in the DOD's ability to exploit non-lethal foreign language core warfighting capabilities by competent language practitioners.

6.   Implementation and Challenges

Logistically, and functionally, the existing testing infrastructure providing for 140,000 web-delivered listening and reading assessments, and the telephonically delivered speaking assessments, could be repurposed for competency-based assessment.[293] The important changes, should the DOD pivot away from ILR-referenced to competency-based assessments, would involve substantial updates to the theory behind the development of test content and test items delivered through these same apparatuses.

Defining competencies in precise and measurable terms is critical to assure fidelity in competency assessments, and this is a resource intensive process.[294] Competency frameworks offer clarity of top-down requirements, and demand specificity of indicators from which assessments can appropriately classify foreign language operational readiness KSAOs for the DOD. When defined in a framework, competency describes what really matters in terms of job performance and how to be successful, and can be used to predict success across a wide range of domains and operating environments.[295]

Measuring competence faces challenges, such as unsatisfactory distinction among key model components, multidimensionality and imprecision in construct definition, and

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[293] Seumas Rogan, "Language Proficiency Assessment" (presentation at Berkeley Evaluation and Assessment Research Center, University of California at Berkeley, Berkeley, CA, ND), https://bearcenter.berkeley.edu/sites/default/files/Pt.%202%3ARogan%20presentation.pdf

[294] Lichtenberg et al., "Challenges to the Assessment of Competence and Competencies."

[295] Campion et al., "Doing Competencies Well," 225–262.

causal order.[296] Furthermore, barriers exist in establishing a system that meets department-wide needs while allowing flexibility to the military service components, and the civilian workforce which is increasingly being integrated and deployed within military operations, to determine specific needs.[297] No matter the approach to assessing foreign languages for DOD operational readiness measures, the fidelity in the articulation and comprehension of actual performance circumstances, in particular those faced in combat-related environments, is of the utmost importance.[298] Ultimately the validity of an assessment must be based on a solid and universal understanding of the desired information that tests can speak to, not the test itself, in particular when there are national security strategy decisions being made as a result of the test score.[299]

7. Suggestions

Researchers investigating linguistic correlates of proficiency asserted that the available test types, such as the DLPT, are unsatisfactory in assessing competency to complete a mission, signifying that the DOD would benefit from a new assessment approach. In their research into linguistic correlates of proficiency, Cook et al. claim that empirical assessment of language-specific linguistic features and performance on these features is needed to meet defined operational readiness requirements.[300] Competency-based assessments can be designed to reliably predict the professional language abilities of those assessed in operational settings.[301] There are options available for expanding the assessment of foreign language capabilities beyond the capabilities of the DLPT, and the

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[296] William K. Gabrenya, Richard L. Griffith, Rana G. Moukarzel, Marne H. Pomerance, and Patrice Reid, *Theoretical and Practical Advances in the Assessment of Cross-Cultural Competence* (Melbourne, FL: DEOMI, 2012), http://www.dtic.mil/docs/citations/ADA564931.

[297] Belanich, Moses, and Lall, *Review and Assessment of Personnel Competencies and Job Description Models and Methods* and McDonald et al., *Developing and Managing Cross-Cultural Competence Within the Department of Defense.*

[298] Horey, "What's Wrong with Competency Measurement?"

[299] Kane, "Validating the Interpretations and Uses of Test Scores."

[300] Cook et al., "Linguistic Correlates of Proficiency (LCP)."

[301] Nolan, "Assessing Professional Military English Language Skills in Sweden and its Neighboring States."

development of a competency framework would contribute to uncovering a method for assessment that provides evidence needed to support operational readiness metrics.

E.   SUMMARY

The DLPT assesses general language proficiency, is not underpinned by a needs analysis, domain definition, task inventory or job analysis and modeling, all of which are critical components of a competency framework. The tiered structures of a competency framework provide a clear representation of requirements, and enable the tuned development of an assessment capable of targeting operational readiness objectives. The DOD needs an assessment for foreign language capabilities that can predict performance of communicative needs, the use of the foreign languages and the level of language proficiency that is required in a target situation.[302] A competency framework facilitates the connection of test specifications to the results of these analyses, and enables evidence based test development—answering a predominant challenge faced by DLPT test developers—you have to know what you are trying to test in order to test it.[303]

This chapter has contextualized assessment practices, the DOD current approach to assessing foreign language capabilities, the DLPT, an alternate approach and benefits that the department may realize by moving toward a competency-based assessment. The criteria-referenced benchmark of the DLPT, the ILR SLDs, are ill-equipped to provide the fidelity needed to align resources with operational readiness factors. As Linchtenburg et al. argued, the purpose of the assessment is the accurate interpretation of scores.[304] Achievement of this objective is reliant on requirements fidelity, and most important, the strategic alignment of workforce capabilities with DOD objectives.

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[302] Li Juan, "Literature Review of the Classifications of 'Needs' in Needs Analysis Theory," *International Journal of Education and Literacy Studies* 2, no. 3 (July 1, 2014): 12–16, https://doi.org/10.7575/aiac.ijels.v.2n.3p.12.

[303] Davies, "Fifty Years of Language Assessment"; Mills, Melican, and Ahluwalia, "Defining Minimal Competence."

[304] Lichtenberg et al., "Challenges to the Assessment of Competence and Competencies."

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V. CONCLUSION

This thesis forwards a validated methodology for strategic organizational change the DOD can utilize to fill persistent gaps and improve operational readiness measurement of the foreign language workforce. Through development of a competency framework, the DOD can achieve fidelity of requirements and maximize employment of non-lethal force multipliers critical to mission success within the COEs. Furthermore, aligning assessment strategies with task-oriented requirements needed by the DOD will empower clear conceptualization of capabilities and enable significant gains in the fidelity of operational readiness metrics.

A. RESEARCH FINDINGS

This thesis provided a comprehensive evaluation of competency frameworks and analysis of precedent utilizations of competency-based workforce management approaches. A competency framework would enhance the DOD's ability to support goals of national security policy as quantification of task-oriented operational readiness objectives is established. Evidence of the use and application of competency frameworks within the Federal government expose opportunities to strategically capture and align workforce competencies with DOD priorities and policies. It was surprising to discover that there are numerous competency management precedents available to the DOD to draw from when tackling requirements for a workforce, similar to that of the foreign language workforce, with embedded language requirements that are extensively dispersed amongst a variety of national security functions. The depth of understanding of the domains and contexts of language use required for our soldier's performance would be fully uncovered through the development of a competency framework and enable the DOD to maximize the use of non-lethal force multipliers in pursuit of national security objectives.

The DOD's adoption of competency-based assessments could be achieved with the information available through the development of a competency framework and associated competency models, dimensions and indicators. Transitioning from proficiency-based to competency-based capabilities measurement would enable the DOD to align clearly

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articulated workforce capabilities with operational readiness objectives, and bolster opportunities to match foreign-language-capable personnel, at individual and higher-level groupings, with mission requirements. This research uncovered that exponential gains across the dimensions of criterion, construct and content validity could be realized through pursuit of a competency-based approach, strengthening fidelity in the interpretation and use of test scores.

B. RECOMMENDED ACTION

Foundational to the DOD's advancement of improving the operational readiness of foreign language capabilities, is a DOD-wide needs assessment. In the seventy-five years since the DOD realized the need for foreign language capabilities to meet national security objectives, there has never been a DOD-wide needs assessment conducted. This fundamental exercise could be executed in a manner that obscures specificity of techniques utilized by the intelligence community, due to the breadth of foreign language requirements. A needs assessment would uncover tactical and strategic requirements, and afford the DOD a much-needed starting point with which to evaluate existing workforce management and assessment approaches.

C. RECOMMENDED RESEARCH

The evaluation and analysis processes undertaken in this thesis have revealed a number of areas of further research which would enable the DOD to improve the fidelity of requirements for foreign language usages as applicable to operational readiness measurement.

1. Define Operational Readiness Metrics

Advancement of what matters in the utilization of foreign language usages within the DOD, along with the contexts of use would enable the DOD, for the first time ever, to derive meaningful metrics of operational readiness. These measures could enable the DOD to achieve interoperable readiness across service boundaries, and maximize the utilization of capabilities from the individual solider up and throughout the total force.

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What foreign language operational readiness metrics are most influential to success in DOD missions?

2. Assess Modernization Opportunities for Foreign Language Measurement

Should the DOD invest in a competency framework, and a department-wide needs analysis, opportunities to modernize the DLPT and assessment practices could be realized. Evaluation as to the feasibility and utility of an assessment approach that is task-based and can be used to assert and predict performance within the operating environment would be of direct benefit to the DOD.

What critical considerations are important to expose the impact of the DOD transitioning away from the ILR SLDs as the benchmark for foreign language capabilities?

3. Evaluate the Training Pipeline

Clarity of operational readiness factors could enable the DOD to reform its system from producing general-proficient linguists, to adept practitioners spanning language use requirements from GPF to SOF, to Foreign Area Officers and beyond. Evaluation as to whether the DOD could establish pathways departing from the development of general-purpose language capable inventories, to a tailored approach that customizes the requirements of personnel, could provide additional opportunities to maximize the use of non-lethal force multipliers.

What impacts would reformation of the DOD foreign language management approach have on the Services requirements, human resource systems, evaluation and training processes?

4. Explore Inter-dependency of LREC Capabilities

The relationships between the LREC triad of foreign language capabilities, regional expertise and cultural competence, could be better understood. Uncovering the inter-dependency of these capabilities could enable the DOD to focus on what matters most in the pursuit of national security objectives.

Would the DOD experience improvement in mission effectiveness through adopting a holistic approach to LREC capabilities management?

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LIST OF REFERENCES

Abbe, Allison, and Jessica A. Gallus. *The Socio-Cultural Context of Operations: Culture and Foreign Language Learning for Company-Grade Officers*. Fort Belvoir, VA: Army Research Institute for the Behavioral and Social Sciences, 2012. http://www.dtic.mil/docs/citations/ADA565311.

Abbe, Allison, and Melissa Gouge. "Cultural Training for Military Personnel: Revisiting the Vietnam Era." *Military Review* 92, no. 4 (July 1, 2012): 9–17. http://search.proquest.com/docview/1284079725/.

Abbe, Allison., Lisa M. V. Gulick, and Jeffrey L. Herman. *Cross-Cultural Competence in Army Leaders: A Conceptual and Empirical Foundation.* Arlington, VA: U.S. Army Research Institute for the Behavioral and Social Sciences, 2007.

American Society for Testing and Materials. "Standard Practice for Assessing Language Proficiency." ASTM F2889–11, in *Book of Standard Volumes 14.03*. West Conshohocken, PA: American Society for Testing and Materials International, 2020.

Anwar, Syaiful. "Modeling the Competencies Required by Defense Attaches in Accomplishing their Duties: Study on the Indonesian Defense Attaches." *Journal of Defense Management* 6, no 3 (January 2016). https://www.longdom.org/open-access/modelling-the-competencies-required-by-defence-attaches-inaccomplishing-their-duties-study-on-the-indonesian-defence-attaches-2167-0374-1000152.pdf.

Barrett, Gerald V., and Robert L. Depinet. "A Reconsideration of Testing for Competence Rather Than for Intelligence." *American Psychologist* 46, no. 10 (October 1991): 1012–24. https://doi.org/10.1037/0003-066X.46.10.1012.

Bejar, Isaac I. "Standard Setting: What Is It? Why Is it Important?" *R&D Connections* 7 (October 2008). https://www.ets.org/Media/Research/pdf/RD_Connections7.pdf.

Belanich, James, Franklin L. Moses, and Priya Lall. *Review and Assessment of Personnel Competencies and Job Description Models and Methods*. Alexandria, VA: Defense Analyses, 2016. http://www.dtic.mil/docs/citations/AD1021552.

Brinkley, Cameron. "Command History, 2004–2005." (Defense Language Institute Foreign Language Center & Presidio of Monterey, Monterey CA: November 2010).

Brooks, Rachel, and Mika Hoffman. "Government and Military Assessment." In *The Companion to Language Assessment,* edited by Antony Kunnan. Hoboken, NJ: John Wiley & Sons, 2013.

Byham, William C. *Developing Dimension-/ Competency-Based Human Resource Systems*. Pittsburgh, PA: Development Dimensions Institute, ND. http://u.camdemy.com/sysdata/doc/d/d85676e3485f349c/pdf.pdf.

Campbell, Roy, Karen Moriarty, and Tonia Heffner. "Development of an Army Competency Assessment Test: Experiences and Lessons Learned." In *Proceedings of the International Military Testing Association*, (2004): 1–9. http://www.imta.info/PastConferences/Presentations.aspx.

Campion, Michael A., Alexis A. Fink, Brian J. Ruggeberg, Linda Carr, Geneva M. Phillips, and Ronald B. Odman. "Doing Competencies Well: Best Practices in Competency Modeling." *Personnel Psychology* 64, no 1. (March 22, 2011): 225–262.

Carey, Neil B., Edward J. Schmitz, Zachary T. Miller, and Sara M. Russell. *Assessing the Impact of and Needs for Navy Language, Regional Expertise, and Culture Training*. Alexandria, VA: CNA Analysis and Solutions, 2012. http://www.dtic.mil/docs/citations/ADA570490.

Chairman of the Joint Chiefs of Staff, *CJCS Guide to the Chairman's Readiness System,* 3401D. Washington, DC: Joint Chiefs of Staff, 2010. https://www.jcs.mil/Portals/36/Documents/Library/Handbooks/g3401.pdf?ver=2016-02-05-175742-457.

———. *Language, Regional Expertise, and Culture (LREC) Capability Identification, Planning and Sourcing,* 3126.01A, Washington, DC: Joint Chiefs of Staff, 2013. https://www.jcs.mil/Portals/36/Documents/Library/Handbooks/g3401.pdf?ver=2016-02-05-175742-457.

———. *Language and Regional Expertise and Culture (LREC) Capability Requirements DOTmLPF Change Recommendation, Version 1*. Arlington, VA: Joint Staff, J-1 Manpower and Personnel Directorate Foreign Language Branch, 2009.

Cheetham, Graham, and Geoff Chivers. "The Reflective (and Competent) Practitioner: A Model of Professional Competence Which Seeks to Harmonise the Reflective Practitioner and Competence-Based Approaches." *Journal of European Industrial Training* 22, no. 7 (October 1, 1998): 267–76. https://doi.org/10.1108/03090599810230678.

———. "Towards a Holistic Model of Professional Competence." *Journal of European Industrial Training* 20, no. 5 (July 1, 1996): 20–30. https://doi.org/10.1108/03090599610119692.

Chouhan, Vikram S., and Srivastava, Sandeep. "Understanding Competencies and Competency Modeling: A Literature Survey." *ISOR Journal of Business and Management* 16, no 1. (January 2014): 14–22.

Clifford, Ray, and Donald Fischer. "Foreign Language Needs in the U.S. Government." *The Annals of the American Academy of Political and Social Science* 511, no. Sept (January 1, 1990): 109–21. http://search.proquest.com/docview/58230273/.

Cook, S., S. Sweet, A. Lancaster, N. Pandza, S. Jackson, E. Pelzl, K. Gor, and C. Doughty. "Linguistic Correlates of Proficiency (LCP): at the Intersection of Testing and Teaching." in *Useful Assessments and Evaluation in Language Education*, edited by J. Davis, J. Norrris, M. Malone, T. Mckay, and S. Young-A. Washington, DC: Georgetown University Press, 2018.

Council of Europe. "Common European Framework of Reference for Languages." Accessed April 26, 2020. https://www.coe.int/en/web/common-european-framework-reference-languages/uses-and-objectives

Cox, Troy L., and Ray Clifford. "Empirical Validation of Listening Proficiency Guidelines." *Foreign Language Annals* 47, no. 3 (September 2014): 379–403. https://doi.org/10.1111/flan.12096.

Cuter, Natela A. "DLI Launches New DLPT Generation-DLPT5: Measuring Language Capabilities in the 21st Century." Accessed April 26, 2020. http://internetmor92.blogspot.com/2012/03/dli-launches-new-dlpt-generation-dlpt-5.html.

Davies, A. "Fifty Years of Language Assessment." In *The Companion to Language Assessment,* edited by Antony Kunnan. Hoboken, NJ: John Wiley & Sons, 2013.

Decamp, Jennifer, Sarah O. Meadows, Barry Costa, Kayla M. Williams, John Bornmann, and Mark Overton. *An Assessment of the Ability of the U.S. Department of Defense and the Services to Measure and Track Language and Culture Training and Capabilities Among General Purpose Forces*. Santa Monica, CA: RAND, 2012. http://www.dtic.mil/docs/citations/ADA565668.

Defense Civilian Personnel Advisory Service. *Foreign Affairs Technical Competency Model. November*. Alexandria, VA: Defense Civilian Personnel Advisory Service, 2014.

———. *Security Cooperation Functional Competency Model*. Alexandria, VA: Defense Civilian Personnel Advisory Service, 2018.

Defense Industry Daily. "Lend Me Your Ears: U.S. Military Turns to Contractor Linguists." Last modified August 22, 2013. http://www.defenseindustrydaily.com/lend-me-your-ears-us-military-turns-to-contractor-linguists-05934/.

Defense Language and National Security Education Office. "Readiness." Accessed April 18, 2020. https://dlnseo.org/content/readiness.

Defense Language Institute Foreign Language Center. "Defense Language Proficiency Test 5 System: Familiarization Guide for Constructed Response Format." Accessed April 26, 2020. https://www.dliflc.edu/wp-content/uploads/2014/04/Generic-Fam-Guide-CRT-CBT.pdf

———. "DLPT Guides and Information." Accessed April 26, 2020. https://www.dliflc.edu/resources/dlpt-guides/.

———. "Thai Defense Language Proficiency Test 5 (DLPT5) Multiple Choice Format Familiarization Guide." Accessed April 27, 2020. https://www.dliflc.edu/wp-content/uploads/2014/02/THAI_DLPT5_MC_Fam-Guide_Final_27SEPT2017.pdf.

Department of the Air Force. "517th Training Group, Goodfellow Airforce Base." Accessed April 17, 2020. https://www.goodfellow.af.mil/Units/517th-Training-Group/.

———. *Total Force Language, Regional Expertise and Culture Program.* Air Force Instruction 35–4005. Washington, DC: Department of Air Force, 2019. https://www.airuniversity.af.edu/Portals/10/AFCLC/documents/Key%20LREC%20Guidance%20Documents/afi36-4005.pdf?ver=2019-06-06-160459-923.

Department of the Army. *Army Foreign Language Program*, AR-11-6. Washington, DC: Department of the Army, 2016). https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/r11_6.pdf.

———. *The U.S. Army Human Dimension Concept*, TRADOC Pamphlet 515–3-7. Fort Eustis: VA, Department of Army, 2014. http://adminpubs.tradoc.army.mil/pamphlets/TP525-3-7.pdf.

Department of Defense, *DOD Strategic Plan for Language skills, Regional expertise, and Cultural capabilities,* 2011–2016. Washington, DC: Department of Defense, 2011. http://prhome.defense.gov/RFM/READINESS/DLNSEO/files/STRAT%20PLAN.pdf.

———. *Strategic Workforce Planning Guide.* Washington, DC: Defense Civilian Personnel Advisory Service, 2016. https://www.dcpas.osd.mil/Content/documents/OD/2_A_Strategic_Workforce_Planning_Guide.pdf.

———. "Defense Competency Assessment Tool (DCAT) Frequently Asked Questions (General)." Accessed April 18, 2020. https://www.tecom.marines.mil/Portals/90/EducationCOI/ReferencesEdCOI/Defense%20Competency%20Assessment%20Tool%20(DCAT)%20Frequently%20Asked%20Questions.pdf.

———. "Military Pay Tables & Information." Accessed January 27, 2020. https://www.dfas.mil/militarymembers/payentitlements/Pay-Tables.html

———. "Summary of the 2018 National Defense Strategy of the United States of America." Accessed November 19, 2018. https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf.

———. *Defense Language Transformation Roadmap*. Washington, DC: Defense Language and National Security Education Office, 2005. http://www.dtic.mil/docs/citations/ADB313370.

———. *Defense Language, Regional Expertise and Culture (LREC) Program*. DOD Directive 5160.41E Washington, DC: Department of Defense, 2016. https://dlnseo.org/sites/default/files/DODD%205160.41E_0.pdf.

———. *DOD Civilian Personnel Management System: Administration of Foreign Language Pay for Defense Civilian Intelligence Personnel System (DCIPS) Employees*. DOD Instruction 1400.25. Washington, DC: Department of Defense, 2016. https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/140025/140025_vol2016.pdf.

———. *DOD Civilian Personnel Management System: Volume 250, Civilian Strategic Human Capital Planning (SHCP)*. DOD Instruction 1400.25. Washington, DC: Department of Defense, 2008.

———. *Foreign Language Proficiency Bonus*, FM 7000.14-R, Volume 7A, Chapter 19. Washington, DC: Department of Defense, 2019.

———. *Military Foreign Language Skill Proficiency* Bonus, DOD Instruction 1340.27. Washington, DC: Department of Defense, 2013. https://dlnseo.org/sites/default/files/DODI_7280.03_____1340.27.pdf.

Department of the Navy, Headquarters United States Marine Corps. *Foreign Language Proficiency Pay*, Marine Corps Order 7220.52E. Washington, DC: Department of Navy, 2006. https://www.marines.mil/Portals/1/Publications/MCO%207220.52E.pdf.

———. *Navy Foreign Language Testing Program*, OPNAV 5200.37. Washington, DC: Department of Navy, 2010. http://navybmr.com/study%20material/OPNAVINST%205200.37.pdf

———. *U. S. Navy Language Skills, Regional Expertise and Cultural Awareness Strategy*. Washington, DC: Chief of Naval Operations, 2008. https://apps.dtic.mil/dtic/tr/fulltext/u2/a503388.pdf.

Department of the Air Force. *Student Handbook: For Non-Prior Service Airmen*. San Angelo, TX: Department of the Air Force17[th] Training Wing, 2017. https://www.goodfellow.af.mil/Portals/5/documents/17%20TRW%20NPS%20En listed%20Student%20Handbook%20(FINAL)%20- %20Jun%2017%20(002).pdf?ver=2017-06-14-153614-203.

Ebel, Robert, and Samuel Livingston. "Issues in Testing for Competency." *National Council on Measurement in Education*, 12 no 2 (Summer 1981). https://files.eric.ed.gov/fulltext/ED208001.pdf

Embretson, Susan E. "Construct Validity: A Universal Validity System or Just Another Test Evaluation Procedure?" *Educational Researcher* 36, no. 8 (November 2007): 449–55. https://doi.org/10.3102/0013189X07311600.

Farrell, Brenda S. Human Capital Critical Skills and Competency Assessments Should Help Guide DOD Civilian Workforce Decisions: Report to the Chairman, Committee on Armed Services, U.S. Senate, GAO-13-188. Washington, DC: Government Accountability Office, 2013. https://www.gao.gov/assets/660/651341.pdf.

Fife, Kurt D. "U.S. Military in communication with China: The Role of Chinese Language Training Programs in Shaping Future Capabilities." PhD diss., The Ohio State University, 2017. https://etd.ohiolink.edu/!etd.send_file?accession=osu1499972338160556&disposi tion=inline.

Fleishman, Edwin A., and, Michael S. Pallak. "Systems for Describing Human Tasks." *American Psychologist* 37, no. 7 (July 1982): 821–834.

Gabrenya, William, Rana G. Moukarzel, Marne H. Pomerance, Richard L. Griffith, and John Deaton. A Validation Study of the Defense language Office Framework for Cultural Competence and an Evaluation of Available Assessment Instruments. Report Number 13–12. Patrick Air Force Base: FL, Defense Equal Opportunity Management Institute, Directorate of Research Development and Strategic Initiatives, 2013. https://apps.dtic.mil/dtic/tr/fulltext/u2/1070234.pdf.

Gabrenya, William, Richard L. Griffith, Rana G. Moukarzel, Marne H. Pomerance, and Patrice Reid. *Theoretical and Practical Advances in the Assessment of Cross-Cultural Competence*. Melbourne, FL: Florida Institute of Technology Melbourne School Of Psychology, 2012. http://www.dtic.mil/docs/citations/ADA564931.

Gallus, Jessica A., Melissa C. Gouge, Emily Antolic, Kerry Fosher, Victoria Jasparro, Stephanie Coleman, Brian Selmeski, and Jennifer L. Klafehn. *Cross-Cultural Competence in the Department of Defense: An Annotated Bibliography*. Fort Belvoir VA: Army Research Institute for The Behavioral and Social Sciences, 2013. http://www.dtic.mil/docs/citations/ADA599260.

Grant, Simon, and Rowin Young. "Concepts and Standardization in Areas Relating to Competence." *International Journal of IT Standards and Standardization Research (IJITSR)* 8, no. 2 (2010): 29–44. https://doi.org/10.4018/jitsr.2010070103.

Green, Rita, and Dianne Wall. "Language Testing in the Military: Problems, Politics and Progress." *Language Testing* 22, no. 3 (July 2005): 379–98. https://doi.org/10.1191/0265532205lt314oa.

Hancock, P. A., J. L. Szalma, and M. van Driel. *An Initial Framework for Enhancing Cultural Competency: The Science of Cultural Readiness*. Patrick Air Force Base, FL: Defense Equal Opportunity Management Institute, 2007. http://www.dtic.mil/docs/citations/ADA488614.

Harrison, Adam Jay, Bharat Rao, and Bala Mulloth. *Developing an Innovation-Based Ecosystem at the U.S. Department of Defense: Challenges and Opportunities*. Washington, DC: Institute for National Strategic Studies, National Defense University, 2017.

Hernandez, Prisco. "Developing Cultural Understanding in Stability Operations: A Three-Step Process." *FA Journal* (January 1, 2007): 5–10. http://search.proquest.com/docview/218356011/.

Herzog, Martha. "History of the ILR: An Overview of the History of the ILR Language Proficiency Skill Level Descriptions and Scale: How Did the Language Proficiency Scale Get Started." Accessed November 23, 2018. http://govtilr.org/Skills/IRL%20Scale%20History.htm.

Hoffmann, Terrence. "The Meanings of Competency." *Journal of European Industrial Training* 23, no. 6 (August 1, 1999): 275–86. https://doi.org/10.1108/03090599910284650

Horey, Jeffery. "What's Wrong with Competency Measurement?" In *Proceedings of the International Military Testing Association*, (2011): 1–9. http://www.imta.info/PastConferences/Presentations_v2.aspx?Show=2011.

Hutchinson, Kenneth. "Second Language Capability in the Army Linguistic Community." PhD diss., Walden University, 2019. https://pdfs.semanticscholar.org/36bf/0d18d0915430f8f0a6acea36a72e97882f47.pdf.

Interagency Language Roundtable, "Frequently Asked Questions." Accessed November 28, 2018. http://govtilr.org/FAQ.htm.

———. "ILR revisions and the way forward." Accessed April 26, 2020. https://www.govtilr.org/Calendars/ILR%20Revisions%20Plenary%20October%202019.pdf

———. "Interagency Roundtable Language Skill Level Descriptions—Listening." Accessed April 26, 2020. https://www.govtilr.org/Skills/ILRscale3.htm#2

———. "Proposed ILR Listening SLDs 5 June 2015." Accessed April 26, 2020. https://www.govtilr.org/Publications/ProposedListening.pdf

Ipperciel, Donald, and Samira Elatia. "Assessing Graduate Attributes: Building a Criteria-Based Competency Model." *International Journal of Higher Education* 3, no. 3 (2014): 27–38. https://doi.org/10.5430/ijhe.v3n3p27.

Jewell, David. "Sustaining Foreign Language and Cultural Competence Among U.S. Army Officers." Master's thesis, United States Army War College, 2012. http://www.dtic.mil/docs/citations/ADA560449.

Juan, Li. "Literature Review of the Classifications of 'Needs' in Needs Analysis Theory." *International Journal of Education and Literacy Studies* 2, no. 3 (July 1, 2014): 12–16. https://doi.org/10.7575/aiac.ijels.v.2n.3p.12.

Kane, Michael. "The Argument-Based Approach to Validation." *School Psychology Review* 42, no. 4 (December 1, 2013): 448–57.

———. "Validating Score Interpretations and Uses." *Language Testing* 29, no. 1 (January 2012): 3–17. https://doi.org/10.1177/0265532211417210.

Kane, Michael T. "Validating the Interpretations and Uses of Test Scores." *Journal of Educational Measurement* 50, no. 1 (March 2013): 1–73. https://doi.org/10.1111/jedm.12000.

Kane, Michael T., and Isaac I. Bejar. "Cognitive Frameworks for Assessment, Teaching, and Learning: A Validity Perspective." *Psicología Educativa* 20, no. 2 (December 2014): 117–23. https://doi.org/10.1016/j.pse.2014.11.006.

Kasser, Joseph, Derek Hitchins, Moti Frank, and Yang Zhao. "A Framework for Benchmarking Competency Assessment Models." *Systems Engineering* 16, no. 1 (March 2013): 29–44. https://doi.org/10.1002/sys.21217.

Katz, Daniel, and Robert Louis Kahn. *The Social Psychology of Organizations.* 2nd ed. New York: Wiley, 1978.

Kruse, John E., Suzanne Mckenna, Noah B. Bleicher, Thomas E. Hawley, Andrew Hyde, Sashe Rogers, and Lorry M. Fenner. *Building Language Skills and Cultural Competencies in the Military: DOD's Challenge in Today's Educational Environment.* Washington, DC: Committee on Armed Services, 2008. http://www.dtic.mil/docs/citations/ADA494470.

Le Deist, Françoise Delamare, and Winterton, Jonathan. "What Is Competence?" *Human Resource Development International* 8, no. 1 (March 1, 2005): 27–46. https://doi.org/10.1080/1367886042000338227.

Lett, John. "Foreign Language Needs Assessment in the U.S. Military." In *Second Language Needs Analysis*, edited by Michael H. Long, 105–124. Boston, MA: Cambridge University Press, 2005.

Lichtenberg, James W., Sanford M. Portnoy, Muriel J. Bebeau, Irene W. Leigh, Paul D. Nelson, Nancy J. Rubin, I. Leon Smith, and Nadine J. Kaslow. "Challenges to the Assessment of Competence and Competencies." *Professional Psychology: Research and Practice* 38, no. 5 (October 2007). https://doi.org/10.1037/0735-7028.38.5.474.

Lowe, Pardee. "Keeping the Optic Constant: A Framework of Principles for Writing and Specifying the AEI Definitions of Language Abilities." *Foreign Language Annals* 31, no. 3 (October 1998): 358–80. https://doi.org/10.1111/j.1944-9720.1998.tb00582.x

Lucia, Antoinette D., and Richard Lepsinger. *The Art and Science of Competency Models: Pinpointing Critical Success Factors in Organizations*. San Francisco, CA: Jossey-Bass/Pfeiffer, 1999.

Markel, M. Wade, Jefferson P. Marquis, Peter Schirmer, Sean Robson, Lisa Saum-Manning, Katherine Hastings, Katharina Ley Best, Christina Panis, Alyssa Ramos, and Barbara A. Bicksler. *Career Development for the Department of Defense Security Cooperation Workforce.* Santa Monica, CA: RAND Corporation, 2018.

Mcclelland, David. "Testing for Competence Rather Than for 'Intelligence.'" *American Psychologist* 28 (January 1, 1973): 1–14. http://search.proquest.com/docview/1289775308/.

McDonald, Donald, Gary McGuire, Joan Johnston, Brian Selmeski, and Allison Abbe. *Developing and Managing Cross-Cultural Competence Within the Department of Defense: Recommendations for Learning and Assessment*. Report Number 17–18. Patrick Air Force Base, FL: Defense Equal Opportunity Management Institute, 2008. https://www.deomi.org/DownloadableFiles/research/documents/TECR-Developing_and_Managing_3C-20180619.pdf.

Melancon, Sylvia C., and Martha S. Williams. "Competency-Based Assessment Center Design: A Case Study." *Advances in Developing Human Resources* 8, no. 2 (May 2006): 283–314. https://doi.org/10.1177/1523422305286157

Mills, Craig, Gerald J. Melican, and Nancy Thomas Ahluwalia. "Defining Minimal Competence." *Education Measurement: Issues and Practice* 10, no. 2 (June 1991): 7–10.

Multinational Interoperability Council. *Coalition Building Guide: Cross-cultural awareness and competence, a guide to best practices*, Volume III.2. 2015. https://community.apan.org/wg/msog/m/mic_cbg/144935/download.

Nolan, Annette. "Assessing Professional Military English Language Skills in Sweden and its Neighboring States." *Baltic Security & Defense Review* 16, no. 1 (2014): 234–253.

Office of the Under Secretary for Personnel and Readiness. "Priorities." Accessed April 15, 2020. https://prhome.defense.gov/Readiness/Priorities/.

Office of the Undersecretary of Defense for Intelligence. *Foreign Language Programs Guidebook,* Version 3. Washington, DC: Office of the Undersecretary of Defense for Intelligence, 2016. https://dcips.defense.gov/Portals/50/Documents/FAQ_Docs/OUSDI_Foreign_Language_within_DIE_Reference_2016_Update.pdf.

Olesen, Carrie, David White, and Iris Lemmer. "Career Models and Culture Change at Microsoft." *Organization Development Journal* 25, no. 2 (July 1, 2007): 25, 31–36, http://search.proquest.com/docview/197997509/.

Organisation for Economic Co-operation and Development. *Public Servants as Partners for Growth Toward a Stronger, Leaner and More Equitable Workforce*. Paris: Organisation for Economic Co-operation and Development, 2011.

Outzen, Richard. "Language, Culture, and Army Culture: Failing Transformation." *Small Wars Journal* 20 (2012). https://smallwarsjournal.com/jrnl/art/language-culture-and-army-culture-failing-transformation.

Parry, Thomas S. "OPI Testing at the Defense Language Institute Foreign Language Center." Presentation at Language Education and Resource Network LEARN Workshop Chevy Chase, MD, September 16, 2014, https://www.fbcinc.com/e/learn/e/assessment/presentations/tuesday/OPI_Workshop_(Parry)_-_LEARN_2014.pdf.

Pendleton, John H. National Security Key Challenges and Solutions to Strengthen Interagency Collaboration: Testimony before the Subcommittee on Oversight and Investigations, Committee on Armed Services, House of Representatives, GAO-10-822T. Washington, DC: Government Accountability Office, 2010. https://www.gao.gov/assets/130/124813.pdf.

Rasmussen, Louise J., and Winston R. Sieck. "Ready, Set, Go Anywhere: A Culture-General Competency Model for the DOD." *Military Intelligence Professional Bulletin* 40, no. 3 (July 1, 2014): 47–52.

———. "Strategies for Developing and Practicing Cross-Cultural Expertise in the Military." *Military Review* 92, no. 2 (March 2012).

Ratawani, Krista L., Jeffrey M. Beaubien, Eileen B. Entin, Rachel J. Feyre, and Jessica A. Gallus. *Identifying Dynamic Environments for Cross-Cultural Competencies*. Fort Belvoir VA: Army Research Institute for The Behavioral and Social Sciences, 2014. http://www.dtic.mil/docs/citations/ADA607189.

Reves, Thea, and Adina Levine. "From Needs Analysis to Criterion-Referenced Testing" *System*, 20, no. 2 (May 1992): 201–210. https://www.sciencedirect.com/science/article/abs/pii/0346251X9290025X

Rodriguez, Donna, Rita Patel, Andrea Bright, Donna Gregory, and Marilyn K. Gowing. "Developing Competency Models to Promote Integrated Human Resource Practices." *Human Resource Management* 41, no. 3 (September 2002): 309–24. https://doi.org/10.1002/hrm.10043.

Rogan, Seumas. "Language Proficiency Assessment." Presentation at Berkeley Evaluation and Assessment Research Center, University of California at Berkeley, Berkeley, CA. https://bearcenter.berkeley.edu/sites/default/files/Pt.%202%3ARogan%20presentation.pdf.

Ross, Karol, Christine MacNulty, Nic Bencaz, and Carol Thornson. *Framing Cross-Cultural Competence (3C) Learning Outcomes in a Competency Model,* Report Number 15–10. Patrick Air Force Base, FL: Defense Equal Opportunity Management Institute, 2010. https://www.deomi.org/DownloadableFiles/research/documents/TECR-15-10-Framing_3C_Learning_Outcomes_in_a_Competency_Model-20180730.pdf.

Rothwell, William J., and John E. Lindholm. "Competency Identification, Modelling and Assessment in the USA." *International Journal of Training and Development* 3, no. 2 (June 1999): 90–105. https://doi.org/10.1111/1468-2419.00069.

Rothwell, William, and Rich Wellins. "Mapping Your Future: Putting New Competencies to Work for You." *T + D* 58, no. 5 (May 1, 2004): 94–100.

Rude, David. "Department of Defense: Development Programs & Initiatives for Civilian Leaders." *The Armed Forces Comptroller* 57, no. 1 (January 1, 2012): 11–14. http://search.proquest.com/docview/1151119153/

Sackett, Paul R., and Roxanne M. Laczo. "Job and work analysis." In *Handbook of psychology: Industrial and Organizational Psychology*, edited by W.C. Borman, D.R. Ilgen, and R.J. Klimoski, 21–37. New Jersey: Wiley, 2003.

Sanchez, Juan I., and Edward L. Levine. "The Rise and Fall of Job Analysis and the Future of Work Analysis." *Annual Review of Psychology* 63, no. 1 (January 1, 2012): 397–425. https://doi.org/10.1146/annurev-psych-120710-100401.

Sands, Robert G. and Pieter DeVisser. "Narrowing the LREC Assessment Focus by Opening the Aperture: A Critical Look at the Status of LREC Assessment Design & Development in the Department of Defense," *Journal of Culture, Language and International Security* 2, no. 2 (December 2015). http://www.cultureready.org/sites/default/files/publications/JCLISV2E2Final.pdf

Savignon, Sandra J. "Communicative Competence." In *The TESOL Encyclopedia of English Language Teaching*, New York: John Wiley and Sons, 2018.

Sebrell, Shawn A., "Cross-Cultural Competence: Leader Requirements for Intercultural Effectiveness in the Human Domain." Master's thesis, U.S. Army Command and General Staff College, 2014. http://www.dtic.mil/docs/citations/ADA611659.

Sieck, Winston, Loise Rasmussen, and Jasmine Duran. *Mastery levels to support the education and training of general cultural competence*. Yellow Springs, OH: Global Cognition, 2019. https://www.globalcognition.org/wp-content/uploads/articles/sieck-GCTR19-cultural-competence-mastery-levels.pdf.

Smith, Brent, Mike Hernandez, and Jerry Gordon. *Competency Based Learning in 2018*. Alexandria, VA: Advance Distributed Learning, 2018. https://apps.dtic.mil/dtic/tr/fulltext/u2/1077111.pdf.

Stern, W. "Otto Lipmann: 1880–1933." *American Journal of Psychology* 46 (January 1, 1934). http://search.proquest.com/docview/1289817644/.

Surface, Eric A. *Special Forces Language and Culture Needs Assessment: Defense Language Proficiency Test (DLPT)*. Raleigh, NC: SWA Consulting, 2010. http://www.dtic.mil/docs/citations/ADA618284.

Tannenbaum, Richard, and Patricia Baron. "Mapping TOEIC Test Scores to the STAGNAG 6001 Language Proficiency Levels." In *The Research Foundation for the TOEIC Tests: A Compendium of Studies; Volume II,* edited by Donald Powers. Princeton, NJ: Educational Testing Services, 2010. https://www.ets.org/Media/Research/pdf/TC2-07.pdf

U. S. Congress. House. Intelligence Authorization Act for Fiscal Year 2005, Title VI – Education, 108th Cong., https://congress.gov/bill/108th-congress/house-bill/4548/text?overview=closed.

U. S. Government Accountability Office. *2012 Annual Report: Opportunities to Reduce Duplication, Overlap and Fragmentation, Achieve Savings, and Enhance Revenue*, GAO-12-342SP. Washington, DC: Government Accountability Office, 2012. https://www.gao.gov/assets/590/588818.pdf.

———. *Defense Contracting: Actions needed to explore opportunities to gain efficiencies in acquiring foreign language support*, GAO-13-251R. Washington, DC: Government Accountability Office, 2013. https://www.gao.gov/assets/660/652298.pdf.

———. *Department of State: Foreign Language Proficiency Has Improved, but Efforts to Reduce Gaps Need Evaluation*, GAO-17-318. Washington, DC: Government Accountability Office, 2017. https://www.gao.gov/assets/690/683533.pdf.

———. *Language and Culture Training: Opportunities Exist to Improve Visibility and Sustainment of Knowledge and Skills in the Army and Marine Corps General Purpose Forces*, GAO-12-50. Washington, DC: Government Accountability Office, 2012. https://www.gao.gov/assets/590/585990.pdf.

———. *Military Readiness: DOD's Readiness Rebuilding Efforts May Be at Risk without a Comprehensive Plan*, GAO-16-841. Washington, DC: Government Accountability Office, 2016. https://www.gao.gov/assets/680/679556.pdf.

U. S. Office of Personnel Management. *Assessment Decision Guide*. Washington, DC: Office of Personnel Management, ND. https://www.opm.gov/policy-data-oversight/assessment-and-selection/reference-materials/assessmentdecisionguide.pdf.

———. *Competency Model for Cybersecurity*. Washington, DC: Office of Personnel Management, 2011. https://www.chcoc.gov/content/competency-model-cybersecurity.

———. *Multipurpose Occupational Systems Analysis Inventory—Close-Ended (MOSAIC) Competencies*. Washington, DC: Office of Personnel Management, 2013. https://www.opm.gov/policy-data-oversight/assessment-and-selection/competencies/mosaic-studies-competencies.pdf.

Under Secretary of Defense. *Strategic Management of the Defense Intelligence Enterprise Workforce*. Washington, DC: Undersecretary of Defense, 2011.

Veres, John G, Mary Anne Lahey, and Ricki Buckly. "A Practical Rationale for Using Multi-Method Job Analyses." *Public Personnel Management* 16, no. 2 (June 1987): 153–57. https://doi.org/10.1177/009102608701600206.

Wang, Ning, Deborah Schnipke, and Elizabeth A. Witt. "Use of Knowledge, Skill, and Ability Statements in Developing Licensure and Certification Examinations." *Educational Measurement: Issues and Practice* 24, no. 1 (March 2005): 15–22. https://doi.org/10.1111/j.1745-3992.2005.00003.x.

Ward, William E. (Kip), Thomas P. Galvin, and Laura R. Verhola. "A New Strategic Approach to Managing Our Foreign Area specialists. (Viewpoint Essay)." *Army* 61, no. 5 (May 1, 2011): 61–62, 64.

Werber, Laura, John A. Ausink, Lindsay Daugherty, Brian M. Phillips, Felix. Knutson, and Ryan. Haberman. An Assessment of Gaps in Business Acumen and Knowledge of Industry Within the Defense Acquisition Workforce: A Report Prepared for the U.S. Department of Defense in Compliance with Section 843(c) of the Fiscal Year 2018 National Defense Authorization Act. Santa Monica, CA: RAND, 2019.

Whitcomb, Clifford A., Rabia Khan, and Corina White. *Curriculum Alignment Use Case for Competency Frameworks at the Naval Postgraduate School*. INCOSE, 2016.

Whitcomb, Clifford, White, Corina, and Khan, Rabia. *Development of a System Engineering Competency Career Model: Verification of the Model Using OPM Method.* Monterey, CA: Naval Postgraduate School, 2015.

White House. "Remarks by the President at the Veterans of Foreign Wars Convention,," Washington, DC: Office of the Press Secretary, August 17, 2009, https://obamawhitehouse.archives.gov/video/President-Obama-Speaks-to-the-Veterans-of-Foreign-Wars#transcript

White, Corina, Clifford Whitcomb, and Rabia Khan. *Development of a System Engineering Competency Career Development Model: An Analytical Approach Using Bloom's Taxonomy*. Monterey, CA: Naval Postgraduate School, 2014.

White, Robert W. "Motivation Reconsidered: The Concept of Competence." *Psychological Review* 66, no. 5 (September 1959): 297–333. https://doi.org/10.1037/h0040934.

Wisecarver, Michelle, Gonzalo Ferro, Hannah Foldes, Cory Adis, Tim Hope, and Marc Hill. *Regional Expertise and Culture Proficiency*. Arlington VA: Personnel Decisions Research Institute, 2012. http://www.dtic.mil/docs/citations/ADA565673.

Wolters, Heather M., Trevor Conrad, Christopher Riches, Robert Brusso, Kenny Nicely, Ray Morath, and Heidi Keller-Glaze. *Identification of Knowledge, Skills, and Abilities for Army Design*. Fairfax VA: ICF International Inc, 2014. https://apps.dtic.mil/dtic/tr/fulltext/u2/a601309.pdf.

Zeng, Zhini. "Demonstrating and Evaluating Expertise in Communicating in Chinese as a Foreign Language." PhD diss, The Ohio State University, 2015. https://etd.ohiolink.edu/pg_10?::NO:10:P10_ETD_SUBID:106767.

Zieky, Michael J. "An Introduction to the Use of Evidence-Centered Design in Test Development." *Psicología Educativa* 20, no. 2 (December 2014): 79–87. https://doi.org/10.1016/j.pse.2014.11.003.

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