DEVELOPMENT OF AIR FORCE FOUNDATIONAL COMPETENCY ASSESSMENTS

Technical Report No. 2

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SUMMARY

This report describes development and validation of two types of assessments for evaluating Air Force members (enlisted, officer, or civilian) on the 22 Air Force Foundational Competencies. These include: (1) a "kneeboard" rubric identifying behaviors corresponding to increasing levels of proficiency (Basic, Intermediate, Advanced, and Expert) on each competency, and (2) a brief Likert-type assessment to efficiently provide feedback on one's strengths and weaknesses among the 22 competencies (designed for use as a developmental 360 assessment on myVector). Assessments were developed by AETC/A3J staff based on review of competency measures from the research literature with adaptation to the Air Force context, and recommendations from retired Air Force General Officers on observable behaviors distinguishing Air Force members who excel on each competency. The report describes initial content validation, followed by a criterion-related validation survey in which Air Force supervisors rated the extent to which high potential and lower-potential members they had worked with demonstrated effectiveness on a total of 584 competency behaviors. We report scale reliability and evaluate convergent and divergent validity of the Foundational Competency assessments, demonstrating stronger relationships between scores on the two assessments of each individual competency ("kneeboard" and myVector assessment) than between scales designed to assess distinct, though theoretically closely related competencies. Finally, we compare criterion-related validity of the Foundational Competency scales to that of other measures used within the Air Force (AF 724 and AF 931), finding strong validity of the newly developed Foundational Competency assessments overall.

Background

In 2018, AETC/A3J was tasked to develop an updated Air Force Foundational Competency model defining core competencies expected of all Airmen, from E1-O10 and WG-01 to SES. As described in an earlier report (Barelka, Barron, Coggins, Hernandez, and Kulpa, 2019), AETC/A3J executed a multi-phase study-- incorporating an expert panel, behavioral event interviews, surveys of elite communities, and a large-scale survey based on representative samples of Air Force enlisted members, officers, and civilians-- resulting in a list of 22 Foundational Competencies of validated importance for success in an Air Force career. These 22 Foundational Competencies were approved in 2019 by the Air Force Force Development Commander (Lt Gen Kwast) and Force Development Council to replace the Air Force Institutional Competency List that had previously been codified in Attachment 2 of Air Force Manual 36-2647 (*Institutional Competency Development and Management*, 25 March 2014).

As now codified in AFI 36-2670, *Total Force Development*, Airmen are expected to develop proficiency on Foundational Competencies across the continuum of education, training, and experiences throughout their career, including deliberate development on the Foundational Competencies during Basic Military Training, Professional Military Education, and civilian developmental education programs. Because PME and other developmental education programs aim to develop individual Airmen on the Foundational Competencies, AETC/A3J saw a need to develop a Foundational Competency rubric, specifying increasing levels of proficiency (Basic, Intermediate, Advanced, Expert) that could be adopted for classroom use. Recognizing that such a rubric could also be used to assess Airmen on-the-job, AETC/A3J termed this form of rubric a "kneeboard" rubric to reflect the intended ability for a trainer to quickly grade a student's proficiency on paper (on one's lap if needed, without access to a desk; a pilot's kneeboard is familiar to most Airmen, thus the use of this term).

Separately, in coordination with AF/A1D and AF/A1X, AETC/A3J plans to introduce a voluntary self-assessment and 360 assessment on myVector in November 2020 to provide a mechanism for Airmen to receive candid, confidential developmental feedback from supervisors, peers, and subordinates. The assessment results will identify a member's personal strengths and weaknesses among the Foundational Competencies, and provide personalized recommendations for online resources (courses, articles, videos, etc.) for self-development based on identified competency areas for improvement.

The sections of the report that follow describe the development of potential item content for the Foundational Competency "kneeboard" rubrics and myVector assessments (Phases 1a and 1b), initial refinement through content validation (Phase 2), and a large-scale survey of Air Force supervisors (Phase 3) to select assessment items from a large pool of potential items and calibrate the competency behaviors associated with increasing levels of competency proficiency (Basic, Intermediate, Advanced, Expert).

Phase 1a: Development of Initial Draft "Kneeboard" Competency Rubrics and Likert-Type Assessment Content

In 2019, two types of draft competency assessments were initially developed that underwent subsequent refinement through content validation (Phase 2) and construct and criterion-related validation (Phase 3). AETC/A3J developed (1) a draft "kneeboard" rubric for each competency that specified behaviors associated with increasing levels of competency proficiency (Basic, Intermediate, Advanced, and Expert-level behaviors), and (2) a shorter Likert-type competency measure intended for efficient self-assessment on multiple competencies.

Draft "Kneeboard" Competency Rubrics. Working as a team, AETC/A3J adapted scale content included in the Barelka et al. (2019) study and content from Spencer & Spencer (1993) to create a 9-10 item assessment of each competency that distinguished behaviors of increasing levels of competency proficiency (Basic, Intermediate, Expert, and Advanced). Assessment items were simplified and modified to apply to a military context (e.g., referencing "mission goals" rather than "business goals") and revised in an iterative fashion until staff reached consensus on perceived correspondence of the behavioral items listed on the draft assessments to the intended competency definitions and level of proficiency.

AFGSC Sq/CC (Likert-Type) Competency Assessment. In April 2019, AFGSC/A9 requested AETC/A3J provide a brief competency assessment to provide developmental feedback on competency strengths and weaknesses to participants in the AFGSC course for newly assigned Sq/CCs. From the 200+ items included in the Barelka et al. survey, AETC/A3J developed a short 45-item Likert-type measure that would capture 9 of the 22 Foundational Competencies. Items with complex or double-barreled wording were simplified and shortened, items that previously referred to "subordinates" or "supervisors" were made more broadly applicable (e.g., to reference "team members," for example), and items with relatively lower item-total correlations based on the Barelka et al. study were removed to shorten scales where needed.

Phase 1b: Development of Additional Item Content Based on General Officer Input

As part of scale development, we additionally sought to ensure input from Air Force subject matter experts: senior leaders likely to possess a high level of the target competencies and likely to have had the opportunity to observe how Foundational Competencies manifest over a full Air Force career, to include the most senior ranks. Towards this goal, we contacted a convenience sample of retired Air Force General Officers in August 2019. Maj Gen James J. ("Rev") Jones (retired) contacted 58 retired Air Force General Officers employed as Adjunct Contract Professors for Flatter Inc., with a request to participate in a voluntary online survey on Air Force Foundational Competency development; 7 of 58 retired General Officers completed the survey, including General Stephen R. Lorenz, who had previously served as the Air Education and Training Command (AETC) Commander.

The online survey asked participants to identify in open-ended responses behaviors demonstrating a high level of each of the 22 Foundational Competencies that they had observed

during their Air Force career. For each competency, the retired General Officers were instructed: "Think of the Airman (enlisted, officer, or civilian) you worked with during your career who most excelled at [the competency]" and provided with the corresponding competency definition. For each competency they were asked: "What did that Airman do that demonstrated a level of [the competency] that few (if any) could match? List the specific, observable behaviors that this individual engaged in that few others could if/when faced with the same types of situations."

From the retired General Officer input, AETC/A3J developed a total of 97 items that appeared conceptually distinct from those previously identified by AETC/A3J staff on draft "kneeboard" rubrics. An example of General Officer input for Strategic Thinking, and resulting edited items selected for further evaluation in Phase 2 appears below:

Think of the Airman (enlisted, officer, or civilian) you worked with during your career who most excelled at **Strategic Thinking (Planning)** (considering and organizing activities to achieve desired goals; thinking small- and large-scale, short- and long-term). What did that Airman do that demonstrated a level of Strategic Thinking (Planning) that few (if any) could match? List the specific, observable behaviors that this individual engaged in that few others could if/when faced with the same types of situations.	
General Officer survey response	Items based on edited GO inputs (selected for Phase 2 evaluation)
"Looked in to the future at the best and worst possible cases for how a situation could be resolved and then tried to set strategies that capitalized on the positive while limiting the possibility for bad outcomes."	Identifies best and worst-case scenarios when making decisions.
"Reviewed courses of action in light of how other parts of the AF and DoD/Congress might react and set strategic guidance so that people could execute and keep the strategy on track."	Considers how multiple entities or stakeholders would be affected by proposed courses of action.
"There are three levels of thinking: tactical, operational and strategic. **Work your Boss's, Boss's problems** and you do not have any problems."	Considers issues from the perspective of more senior leadership.
"Continually asked the question: And then what? **Picked an achievable horizon.** Thought BIG. **Started small. Scaled fast."**	Builds on small successes to achieve larger goals. Identifies a realistic time horizon for achieving goals.

Phase 2: Content Validation

Content validity of an assessment (degree to which a scale adequately samples the universe of content associated with a construct) is typically identified in terms of 3 components: content representativeness, definitional correspondence, and definitional distinctiveness (Colquitt et al., 2019). In Phase 1b, by seeking out retired general officer input as a supplement to inputs from AETC/A3J staff, we sought to increase content representativeness (i.e., soliciting input from more senior leaders to help capture the full construct domain). In Phase 2, we next sought to evaluate potential items in terms of the other two components of content validity: (1) definitional correspondence (extent to which scale items correspond to the construct definition) and (2) definitional distinctiveness (extent to which scale items correspond more to the focal construct's definition than to that of other orbiting constructs). Given the relatively large number of Foundational Competencies, evaluating definitional distinctiveness was a primary concern.

Adapting the Anderson & Gerbing (1991) content validation methodology, 15 raters from AETC/A3J and AETC/A3K completed a formal competency re-translation task in September 2019 to assess the correspondence of 204 scale items from the initial draft "kneeboard" rubrics to the intended competencies, and evaluate items from the AFGSC Sq/CC self-assessment (45 items) and retired General Officer survey (97 items) as potential alternatives. Research by Colquitt et al. (2019) has found this strategy of retaining items with greater ratings of definitional correspondence and distinctiveness in a general population to result in stronger psychometric properties overall (i.e., higher internal consistency). Raters were presented with a total of 346 items and asked to identify (denote with an "X" in the applicable column) which of the 22 Foundational Competencies most closely corresponded to each item ("Match each item to the foundational competency that it most closely seems to represent"). Raters were provided with competency definitions (see Table 1) and directed to select one and only one competency per item, even if the item appeared to correspond well to multiple competencies.

Table 1. Foundational Competency Definitions

Competency	Definition
Accountability	Accepts full responsibility for self and team; displays honesty and truthfulness.
Communication	Clearly and effectively articulates, presents, and promotes ideas and issues before a wide range of audiences, in both speaking and writing.
Initiative	Prefers taking action; does more than is required or expected; does things that no one has requested that will improve or enhance job results and avoid problems; or finds and creates new opportunities.
Decision Making	Makes well-informed, effective and timely decisions. Uses sound judgment to integrate and weigh situational constraints, risks, and rewards.
Self-Control	Keeps emotions under control and restrains negative actions when under stress.
Resilience	Negotiates, manages, and adapts to significant sources of stress or trauma.
Results Focused	Demonstrates concern for working well or for competing against a standard of excellence.
Information Seeking	Demonstrates an underlying curiosity; desires to know more about things, people, oneself, the mission or issues; an eager, aggressive learner.
Leadership*	Intentionally takes a role as a leader of others.

Teamwork	Builds cohesive teams within and across units. Ensures team members feel valued and approved.
Precision	A concern for order, quality, and accuracy with an underlying drive to reduce uncertainty in the environment.
Perseverance	Displays grit in accomplishment of difficult long-term goals. Works strenuously toward challenges; maintains effort and interest over years despite failure, adversity, and plateaus in progress.
Flexibility	Adapts to and works with a variety of situations, individuals, or groups effectively.
Develops People	Invests in others to maximize their contributions to the mission by inspiring and providing an environment of continual feedback and learning opportunities.
Service Mindset	Desires to help or serve others to meet their needs; makes and focuses efforts to discover and meet others' needs.
Analytical Thinking	Identifies problems; evaluates alternative perspectives / solutions; makes timely / effective recommendations; and identifies courses of action.
Creative Thinking	Develops new insights into new situations; questions conventional approaches; encourages new ideas and innovations.
Fostering Innovation	Builds a culture of behaviors and business practices that encourages, champions, and rewards creativity and informed risk taking; is open to change; and rapidly adapts to new conditions and technologies.
Influence	Intends to persuade, convince, or impress others to elicit their support to make specific impacts or achieve particular effects on others.
Strategic Thinking	Considers and organizes activities and resources to achieve a desired goal; thinks on a large and small scale, long- and short-term.
Change Management	Adapts, helps others adapt, or implements change with the goal of ensuring unit goals are properly aligned to the desired end state.
Resource Management	Carefully and responsibly administrates resources placed under an Airman's control with the intent to maximize readiness and lethality and improve organizational performance.

Note. The "Leadership" definition was subsequently changed to "Inspires, builds, and sustains others' motivation and morale to accomplish the mission; organizes people and actions." The myVector and "kneeboard" Leadership assessments were revised to correspond accordingly.

In total, of the 204 items from the draft "kneeboard" rubrics, 65 items were removed based on poor definitional correspondence and/or poor definitional distinctiveness. To maintain a minimum of 9 items per competency (198 items total), alternatives from the AFGSC self-assessment and general officer input were selected as replacements. Items with negative substantive validity coefficients (i.e., more participants categorized the item as an alternate competency than categorized it as the competency originally intended on the draft kneeboard rubric) were targeted for replacement with items categorized as the target competency by a greater proportion of participants. The extent of definitional correspondence and definitional distinctiveness of study items varied substantially by competency. For example, of the 9 Teamwork items from the initial draft "kneeboard" rubrics, none had negative substantive validity; as a result, all of these items were retained in the large-scale supervisor survey (Phase 3). In contrast, of the 9 items from the draft Strategic Thinking kneeboard rubric, 7 had negative substantive validity (e.g., "Anticipates challenges and develops contingencies" was categorized by 6 of 14 participants as Analytical Thinking, but only 1 of 14 as Strategic Thinking). As a

result, 7 Strategic Thinking replacement items that had stronger definitional correspondence and definitional distinctiveness were identified (e.g., "Considers how to address mission problems outside of one's immediate job," categorized as Strategic Thinking by 10 of 15 participants) and included on the large-scale supervisor survey (Phase 3). See Tables with Teamwork and Strategic Thinking examples.

Table 2. Evaluation of Teamwork Items from Initial Draft "Kneeboard" Rubric

Item	% of Participants Matched to Intended Competency	Maximum % of Participants Matched to Any Single Competency (of 22)	Most Matched Competency	Disposition
1. Participates during team activities while working toward a goal.	73.3% (11 of 15 raters)	73.3% (11 of 15 raters)	Teamwork	Retained on Supervisor Survey
2. Helps other team members work toward team goals.	66.7% (10 of 15 raters)	66.7% (10 of 15 raters)	Teamwork	Retained on Supervisor Survey
3. Acknowledges contributions made by others on the team.	66.7%	66.7%	Teamwork	Retained on Supervisor Survey
4. Anticipates conflict and works to resolve situations that could affect team goals.	46.7%	46.7%	Teamwork	Retained on Supervisor Survey
5. Models collaborative excellence and guides others to improve collaboration.	46.7%	46.7%	Teamwork	Retained on Supervisor Survey
6. Ensures teams work together toward a common goal.	46.7%	46.7%	Teamwork	Retained on Supervisor Survey
7. Freely shares information with others on the team.	40%	40%	Teamwork	Retained on Supervisor Survey
8. Acknowledges conflict and works to resolve issues.	26.7%	26.7%	Teamwork	Retained on Supervisor Survey
9. Develops strategies to ensure team members remain focused on goals despite major obstacles.	20%	20%	Teamwork, Results Focus, Perseverance (tie)	Retained on Supervisor Survey

Table 3. Evaluation of Strategic Thinking Items from Initial Draft "Kneeboard" Rubric

Item	% of Participants Matched to Intended Competency	Maximum % of Participants Matched to Any Single Competency	Most Matched Competency	Disposition
1. Recognizes long-term trends to anticipate future challenges not readily apparent to others.	71.4%	71.4%	Strategic Thinking	Retained as Strategic Thinking
2. Develops plans that support long-term goals and objectives.	64.3%	64.3%	Strategic Thinking	Retained as Strategic Thinking
3. Anticipates challenges and develops contingency plans.	7.1%	42.9%	Analytical Thinking	Excluded from survey
4. Follows logical order for completing tasks to meet short-term goals.	6.7%	60%	Precision	Retained as Precision
5. Asks "why questions" to help others develop an understanding of complex problems and prioritize long-term goals.	6.7%	53.3%	Develops People	Excluded from survey
6. Thoughtfully uses resources to meet existing tasks with time and material left over to apply to anticipated future tasks.	0%	78.6%	Resource Management	Excluded from survey
7. Plans activities to get maximum value from people, equipment, and facilities.	0%	53.3%	Resource Management	Excluded from survey
8. Considers why past actions worked or did not work and creates plans that incorporate lessons learned.	0%	46.7%	Analytical Thinking	Excluded from survey
9. Teaches others to reframe problems and actively seek out discussions with critics when making key decisions.	0%	25%	Decision Making, Develops People (tie)	Excluded from survey

Table 4. Identification of Alternate Strategic Thinking items for Survey Inclusion

Item	% of Participants Matched to Strategic Thinking	Maximum % of Participants Matched to Any Single Competency (of 22)	Initially Targeted Competency for Assessment
1. Considers how to address mission problems outside of one's immediate job.	66.7%	66.7%	Creative Thinking (ACP)
2. Continually reviews and adopts new strategies to meet long-term goals.	60%	60%	Perseverance
3. Anticipates and creatively solves strategic problems.	53.3%	53.3%	Decision making
4. Plans for the future rather than leave things to chance.	53.3%	53.3%	Strategic Thinking (AFGSC)
5. Considers issues from the perspective of more senior leadership.	57.1%	57.1%	Strategic Thinking (ACP)
6. Considers how multiple entities stakeholders would be affected by proposed courses of action.	53.3%	53.3%	Strategic Thinking (ACP)
7. Anticipates and manages secondary effects of proposed policies, actions, or adjustments to strategy.	46.7%	46.7%	Decision making

Phase 3: Large-Scale Survey of Air Force Supervisors (Evaluation of Construct and Criterion-Related Validity)

Identification of Additional Item Content for Validation

Recognizing that many proposed scale items may need to be eliminated from the draft assessments, we sought to include a minimum of 18 items per competency for evaluation on the supervisor survey. Items that demonstrated adequate definitional correspondence and definitional distinctiveness in Phase 2 vetting were supplemented by item content from Spencer & Spencer (1993) and from existing Air Force assessments (AF 931, AF 724, and a new measure recently proposed for use by SNCO promotion boards). As a supplement to items from these sources, 71 scale items were written based on adaption of other scales from the research literature as needed. This resulted in inclusion of a total of 584 behavioral items, split across 5 survey versions. A summary of item content by source appears in Table 5.

Table 5. Item Content for Evaluation on Supervisor Survey by Survey Version

Source	Items	Competencies/Qualities by Version
Revised Draft Kneeboard Rubric	198 items	V1: Analytical Thinking, Creative Thinking, Strategic Thinking, Decision Making, Information Seeking V2: Fosters Innovation, Change Management, Flexibility, Self-Control, Resilience V3: Initiative, Perseverance, Precision, Results Focus, Resource Management V4: Teamwork, Develops People, Leadership, Service Mindset V5: Accountability, Influence, Communication
Spencer & Spencer scales	170 unique items*	V1: Analytical Thinking, Conceptual and Creative Thinking, Information Seeking V2: Flexibility (Breadth of Change), Self-Control V3: Initiative (Self-Motivation), Concern for Order, Quality, and Accuracy, Achievement Orientation V4: Teamwork (Intensity), Develops People (Intensity and Completeness), Leadership (Complexity) V5: Impact and Influence, Interpersonal Understanding (Listening and Responding)
AF 931/932/724 Self-Assessment	18 items	V5: Accountability, Air Force Culture, Responsibility, Self
AF 931 (supervisor-rated)	52 items	V1: Personal and Professional Development V3: Task Knowledge/Proficiency, Initiative/Motivation, Resource Utilization, Comply With/ Enforce Standards V4: Teamwork (Caring, Respectful, and Dignified Environment) V5: Air Force Core Values, Esprit de Corps and Community Relations, Communication
AF 724 (supervisor-rated)	27 items	V1: Job Knowledge, Judgment and Decisions V3: Organizational Skills V4: Leadership Skills V5: Professional Qualities, Communication
Draft SNCO promotion board rubric	42 items	V1: Breadth and Depth of Experience V2: Improving the Unit V3: Executing the Mission, Influences Unit Readiness, Managing Resources V4: Leadership, Team Building, Force Development V5: Culture Development, Communication
Other sources	71 unique items total (see Reference list in Appendix)	

Note. *8 Spencer & Spencer items appeared on the draft kneeboard rubrics

Phase 3 Study Design

Based on a survey of Air Force supervisors, a modified criterion-sampling methodology was used to evaluate the behavioral criteria for each "kneeboard" competency proficiency level and to select items for inclusion on the myVector assessments. In the survey, current Air Force supervisors were asked to think of two individuals they have worked with directly during their career:

- one Airman (enlisted/officer/civilian) who they view/viewed as having a **high potential for future success in an Air Force career**
- one Airman, **in the same rank/grade and career field**, who they view/viewed as having **lower potential for future success in an Air Force career**

Survey participants then indicated their level of agreement/disagreement that the member engaged in each behavior on a Likert-type scale:

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

For each behavior, the survey participant was alternately able to indicate if:

- The Airman was not in a situation or position where this behavior was possible or applicable **(No opportunity to perform)**
- I had no opportunity to observe whether the Airman demonstrated the behavior **(Don't Know)**

To minimize the amount of time required to complete the survey, each survey participant rated behaviors corresponding to no more than five foundational competencies; participants were randomly assigned to receive one of five versions of the survey (to collect data on all 22 foundational competencies overall) as shown in Table 5.

Phase 3 Survey Participants.

In February of 2020, Air Force Survey Office (AFPC/DSYS) contacted the full population of Air Force supervisors (10,601 officers; 12,907 enlisted; 9,060 civilians) via email to request participation in the online CAC-enabled survey. Respondents included Guard, Reserve, and Active Duty.

A total of 5,938 supervisors completed the survey. By gender, 75.8% of respondents were male and 24.2% female. Of the 3,244 enlisted respondents, most were in the ranks of E-4 (26%), E-5 (27.9%), E-6 (18.2%), or E-7 (11.6%). Of the 1442 officer respondents, most were in the ranks of O-2 (13.8%), O-3 (48.4%), O-4 (17.7%), or O-5 (11.7%). Of the 1,236 civilian respondents, most were in the grades of GS/GG-11 (13.4%), GS/GG-12 (18.8%), GS/GG-13 (12.5%), or NH/NJ/NK-03 (12.3%). The most common career fields among enlisted respondents were 4M0X1-Aerospace and Operational Physiology ($N = 136$), 3P0X1-Security Forces ($N = 130$), and 3F0X1-Personnel ($N = 101$). The most common career fields among officer respondents were 21A-Aircraft Maintenance ($N = 79$), 21R-Logistics Readiness ($N = 72$), and 11M-Mobility Pilot ($N = 60$). The most common occupational series of civilian respondents were 1700-1799

Education Occupations ($N = 42$), 0301 Miscellaneous Administration and Program ($N = 36$), and 0343 Management and Program Analysis ($N = 26$).

Most (61.7%) survey participants rated both high and low potential members who they had supervised; 4.5% rated high and low potential co-workers who had been a higher rank as them at the time they worked together most directly; 18.8% rated high and low potential co-workers who had been a lower rank as them at the time they worked together most directly. 12.7% rated high and low potential co-workers who had been the same rank as them at the time they worked together most directly. In a smaller number of cases, participants rated members who had supervised them, or members who had served in other roles (e.g., their commander or senior rater). See Appendix for additional information on survey respondent demographics and ratees.

Scale Internal Consistency and Identification of Proficiency Levels for "Kneeboard" Rubrics

Both quantitative and qualitative reviews were used to identify behavioral items for retention on each competency proficiency scale. First, to ensure high internal reliability of the scale (i.e., 9 items across the four proficiency levels) item(s) were removed from consideration if scale reliability (α) would be higher with the item removed. Where applicable, one item was removed at a time until removal of any further items would have resulted in lower scale reliability. Second, items that had relatively lower inter-correlations with other scale items were reviewed on a qualitative basis to evaluate their correspondence to the intended competency definition. This step was desired because of the addition of new items beyond those vetted in the initial content validation study. A small number of items were removed based on apparent non-correspondence to the intended competency definition.

Next, to determine which proficiency level each item corresponded to, we ordered the items based on the percentage of high and lower potential members who engaged in the behavior ("Agree" or "Strongly Agree"). We designated behaviors as Basic, Intermediate, Advanced, or Expert based on consideration of two factors. First, we reasoned that a greater proportion of lower potential members should engage in each Basic behavior than they do Intermediate/Advanced/Expert behaviors; a greater proportion of lower potential members should engage in each Intermediate behavior than Advanced/Expert behaviors; and a greater proportion of lower potential members should engage in each Advanced behavior than Expert behaviors. Second, we reasoned that Expert behaviors should distinguish high vs. lower potential members to a greater extent than Advanced/Intermediate/Basic behaviors; Advanced behaviors should distinguish high vs. lower potential members to a greater extent than Intermediate/Basic behaviors; Intermediate behaviors should distinguish high vs. lower potential members to a greater extent than Basic behaviors. For all but two of the competencies (Precision and Teamwork), at least one of the 9 items from the draft kneeboard rubric was removed/replaced on this basis, with the most substantive changes for the competency of Accountability.

We next evaluated scale reliability. Split-half reliability exceeded .70 for all competency scales, even when scores on Basic/Intermediate items were correlated with scores on Advanced/Expert items rather than using a conventional odd/even split (see Table 6).

When scored based on the overall mean across items, internal reliability is consistently high. As shown in the Appendices, when used to assess high potential members, internal consistency for the 9-item scales ranged from .813 for Initiative to .941 for Service Mindset. When used to assess lower potential members, internal consistency for the 9-item scales ranged from .906 for Influence to .960 for Change Management.

Table 6. Split-Half Reliability Estimates: "Kneeboard" (9-Item) Scales

	Odd/Even Split	Basic/ Intermediate vs. Advanced/ Expert Split
Analytical Thinking	**.833**	**.782**
Creative Thinking	**.872**	**.803**
Strategic Thinking	**.835**	**.861**
Decision Making	**.886**	**.862**
Information Seeking	**.864**	**.790**
Fostering Innovation	**.841**	**.824**
Change Management	**.906**	**.868**
Flexibility	**.889**	**.864**
Self-Control	**.834**	**.838**
Resilience	**.889**	**.874**
Initiative	**.847**	**.783**
Perseverance	**.892**	**.871**
Precision	**.858**	**.731**
Results Focus	**.897**	**.830**
Resource Management	**.872**	**.796**
Teamwork	**.890**	**.786**
Develops People	**.855**	**.854**
Leadership	**.845**	**.755**
Service Mindset	**.908**	**.823**
Accountability	**.857**	**.847**
Influence	**.789**	**.720**
Communication	**.851**	**.825**

Ns = 1157-1273 (lower potential members).

Development of myVector Assessments

The shorter myVector scales were also developed based on a combination of quantitative and qualitative review. First, we identified the 10 items with the highest factor loadings for each competency as potential scale items. From the 10 items for each competency, we then selected 3 for each scale on a rational basis. In this qualitative review we aimed to select items that are short and easy to understand and that, in combination with the 2 other selected items, could

capture all facets of the competency definition (e.g., accountability defined as "reliability" and "honesty" and "taking responsibility for team"). We aimed to avoid items that were double-barreled, redundant with other selected items (e.g., "Inspires others" and "Inspires people"), or tautological (e.g., Analytical Thinking items like "Thinks analytically" or "Demonstrates analytic thought").

As shown in the Appendices, when used to assess lower potential members, internal consistency for the 3-item myVector scales ranged from α = .815 for Initiative to .902 for Change Management. When used to assess high potential members, internal consistency for the 3-item scales ranged from .660 for Results Focus to .836 for Resource Management. Scale reliability based on assessment of high potential members exceeded .70 for all competencies except Results Focus and Initiative.

Evaluation of Construct Validity

Next, we evaluated convergent and divergent validity of the Foundational Competency assessments, seeking to demonstrate stronger relationships between scores on the two assessments of each individual competency ("kneeboard" and myVector assessment) than between scales designed to assess distinct, though theoretically closely related competencies. For the purpose of these analyses, the kneeboard scales were scored based on the mean across items, rather than by proficiency level. Although some of the "kneeboard" scales included one or more of the 3 items that appeared on the myVector scales, overlapping items were removed for the purpose of this analysis, such that myVector scale scores were correlated with the mean score across 6 to 9 non-overlapping items from the "kneeboard" scale. Analyses were based on assessment of lower potential members to limit potential range restriction.

As shown in Tables 7-11, correlations between the "kneeboard" scale and the 3-item myVector scale for the same competency were consistently high, ranging from .719 for Creative Thinking to .915 for Resilience. These results demonstrate a high level of convergent validity of the myVector and "kneeboard" scales, for all competencies.

Both the myVector and "kneeboard" scales generally demonstrated appropriate divergent validity. With only three exceptions, the relationship between the myVector and "kneeboard" scales designed to assess the same competency (3-item myVector scale and "kneeboard" scale with overlapping items removed) exceeded the relationship between any scales designed to assess different competencies (e.g., relationships between Analytical Thinking and Creative Thinking scales). For example, as shown in Table 7, scores on the myVector Analytical Thinking scale correlated $r = .850$ with scores on the "kneeboard" Analytical Thinking scale (overlapping items removed). The myVector Analytical Thinking scale correlated .573 to .700 with myVector scales designed to assess Creative Thinking, Strategic Thinking, Decision Making, and Information Seeking, substantially below the .850 relationship with the "kneeboard" Analytical Thinking scale.

Overall, the results demonstrated appropriate construct validity (based on both convergent and divergent validity evidence), with the limited exceptions of the Leadership "kneeboard" scale,

the Resource Management "kneeboard scale," and the myVector Influence scale. The Leadership "kneeboard" scale was correlated .823 with the "Develops People" scale, but (with overlapping items removed) only .814 with the myVector Leadership scale. Similarly, the Resource Management "kneeboard" scale was equally correlated (.835) with the myVector Resource Management scale (with overlapping items removed) and the Results Focus "kneeboard" scale. Most notably, the myVector Influence scale was correlated .773 with the Communication scale, but (with overlapping items removed) only .719 with the "kneeboard" Influence scale.

Table 7. Convergent and Divergent Validity: Decision Making and Related Constructs

	Analytical Thinking	**Creative Thinking**	**Strategic Thinking**	**Decision Making**	**Information Seeking**
Analytical Thinking	*(.850)*	.700	.605	.621	.573
Creative Thinking	.770	*(.839)*	.723	.685	.688
Strategic Thinking	.674	.773	*(.867)*	.690	.695
Decision Making	.701	.761	.778	*(.879)*	.702
Information Seeking	.659	.749	.762	.805	*(.856)*

Notes. Intercorrelations among 9-item scales are displayed below the diagonal. Intercorrelations among 3-item scales are displayed above the diagonal. The diagonal displays relationships between the 3-item competency scale and the "kneeboard" competency scale with duplicative items (i.e., that appeared on both the 3-item and 9-item scale) removed from "kneeboard" scale calculation. Ns = 764-942.

Table 8. Convergent and Divergent Validity: Resilience and Related Constructs

	Fostering Innovation	**Change Management**	**Flexibility**	**Self-Control**	**Resilience**
Fostering Innovation	*(.852)*	.646	.600	.396	.456
Change Management	.728	*(.876)*	.725	.422	.545
Flexibility	.663	.808	*(.900)*	.478	.574
Self-Control	.478	.549	.582	*(.847)*	.632
Resilience	.509	.591	.616	.715	*(.915)*

Notes. Intercorrelations among 9-item scales are displayed below the diagonal. Intercorrelations among 3-item scales are displayed above the diagonal. The diagonal displays relationships between the 3-item competency scale and the "kneeboard" competency scale with duplicative items (i.e., that appeared on both the 3-item and 9-item scale) removed from "kneeboard" scale calculation. Ns = 774-1124.

Table 9. Convergent and Divergent Validity: Perseverance and Related Constructs

	Initiative	Perseverance	Precision	Results Focus	Resource Management
Initiative	*(.855)*	.684	.605	.675	.541
Perseverance	.772	*(.899)*	.665	.702	.589
Precision	.717	.754	*(.885)*	.754	.708
Results Focus	.772	.783	.821	*(.900)*	.731
Resource Management	.680	.693	.788	.835	*(.835)*

Notes. Intercorrelations among 9-item scales are displayed below the diagonal. Intercorrelations among 3-item scales are displayed above the diagonal. The diagonal displays relationships between the 3-item competency scale and the "kneeboard" competency scale with duplicative items (i.e., that appeared on both the 3-item and 9-item scale) removed from "kneeboard" scale calculation. *N*s = 770-1267.

Table 10. Convergent and Divergent Validity: Develops People and Related Constructs

	Teamwork	Develops People	Leadership	Service Mindset
Teamwork	*(.856)*	.680	.728	.715
Develops People	.737	*(.895)*	.773	.730
Leadership	.775	.823	*(.814)*	.760
Service Mindset	.791	.764	.700	(.894)

Notes. Intercorrelations among 9-item scales are displayed below the diagonal. Intercorrelations among 3-item scales are displayed above the diagonal. The diagonal displays relationships between the 3-item competency scale and the "kneeboard" competency scale with duplicative items removed from "kneeboard" scale calculation. Ns = 716-1157.

Table 11. Convergent and Divergent Validity: Develops People and Related Constructs

	Accountability	Influence	Communication
Accountability	*(.896)*	.419	.570
Influence	.542	*(.719)*	.773
Communication	.698	.628	*(.889)*

Notes. Intercorrelations among 9-item scales are displayed below the diagonal. Intercorrelations among 3-item scales are displayed above the diagonal. The diagonal displays relationships between the 3-item competency scale and the "kneeboard" competency scale with duplicative items removed from "kneeboard" scale calculation. Ns = 625-1084.

Evaluation of Criterion-Related Validity

As noted previously, an earlier large-scale survey (Barelka, et al., 2019) demonstrated that Air Force members view each of the 22 Foundational Competencies as important for success in an Air Force career. Unknown was:

(a) The extent to which different Foundational Competencies effectively distinguish highly successful Air Force members from less successful members, and
(b) The extent to which the Foundational Competencies may contribute to career success to a greater or lesser extent than other competencies on which Air Force members (enlisted and officer) are currently formally evaluated.

To address these questions, we compared supervisor ratings of members identified on the supervisor survey as having a "high potential for Air Force career success" to those of members identified as having a "lower potential for Air Force career success." The standardized difference (Cohen's *d*) between "high potential" and "lower potential" members' ratings on each competency was calculated based on the myVector and "kneeboard" competency assessments. "Kneeboard" assessment scores were based on the mean rating across the 9 behavioral items for each competency, rather than proficiency level categorization.

As shown in Table 12, differences between "high potential" and "lower potential" members on the myVector assessment were large, ranging from $d = 1.97$ (Self-Control) to $d = 4.32$ (Initiative) in the overall sample. As shown in Table 13, differences between "high potential" and "lower potential" members on the "kneeboard" assessment items were similarly large, ranging from $d = 2.25$ (Self-Control and Influence) to $d = 4.38$ (Initiative) in the overall sample. Across both the myVector and "kneeboard" assessments, the competencies of Initiative, Results Focus, and Perseverance most effectively distinguished members identified by supervisors as having a "high potential" for Air Force career success.

Table 12. Criterion-Related Validity of myVector Competency Scales (3-Item Measures)

Competency	Lower Potential		High Potential		
	Mean	*SD*	Mean	*SD*	Cohen's *d*
Accountability	2.03	0.81	3.86	0.30	3.01
Analytical Thinking	1.73	0.69	3.54	0.48	3.04
Change Management	1.69	0.70	3.58	0.47	3.20
Communication	2.09	0.74	3.74	0.39	2.79
Creative Thinking	1.70	0.68	3.49	0.50	2.99
Decision Making	1.86	0.70	3.67	0.41	3.16
Develops People	1.89	0.75	3.63	0.49	2.76
Flexibility	1.86	0.72	3.65	0.41	3.08
Fostering Innovation	1.89	0.80	3.59	0.46	2.61
Influence	2.13	0.75	3.43	0.57	1.99
Information Seeking	1.74	0.67	3.57	0.44	3.26
Initiative	1.65	0.64	3.83	0.31	4.32
Leadership	1.87	0.75	3.77	0.41	3.14
Perseverance	1.66	0.69	3.68	0.44	3.48
Precision	1.89	0.73	3.67	0.43	2.96
Resilience	1.96	0.72	3.47	0.52	2.40
Resource Management	1.99	0.75	3.76	0.41	2.94
Results Focused	1.81	0.69	3.76	0.35	3.57
Self-Control	2.15	0.79	3.50	0.56	1.97
Service Mindset	2.17	0.82	3.82	0.37	2.62
Strategic Thinking	1.61	0.67	3.47	0.58	2.98
Teamwork	2.13	0.76	3.74	0.42	2.63

Note. Ns = 360-637. Only cases in which the rater supervised both the High and Low Potential member were included.

Table 13. Criterion-Related Validity of "Kneeboard" Competency Scales (9-Item Measures)

Competency	Low Performer		High Performers		
	Mean	*SD*	Mean	*SD*	Cohen's *d*
Accountability	2.03	0.71	3.84	0.27	3.36
Analytical Thinking	1.79	0.61	3.60	0.38	3.56
Change Management	1.73	0.66	3.58	0.41	3.39
Communication	1.99	0.66	3.63	0.40	3.01
Creative Thinking	1.82	0.64	3.56	0.41	3.24
Decision Making	1.86	0.65	3.62	0.40	3.27
Develops People	1.88	0.70	3.59	0.45	2.90
Flexibility	1.81	0.68	3.58	0.38	3.23
Fostering Innovation	1.91	0.73	3.61	0.42	2.84
Influence	2.01	0.68	3.35	0.51	2.25
Information Seeking	1.84	0.66	3.62	0.37	3.35
Initiative	1.68	0.57	3.71	0.33	4.38
Leadership	1.93	0.69	3.70	0.38	3.19
Perseverance	1.71	0.66	3.67	0.36	3.70
Precision	1.86	0.64	3.60	0.39	3.28
Resilience	2.01	0.71	3.50	0.48	2.48
Resource Management	1.92	0.68	3.64	0.41	3.08
Results Focused	1.79	0.65	3.75	0.31	3.83
Self-Control	2.10	0.71	3.47	0.50	2.25
Service Mindset	2.07	0.77	3.78	0.37	2.85
Strategic Thinking	1.65	0.61	3.49	0.50	3.30
Teamwork	2.11	0.70	3.76	0.35	2.99

Note. Ns = 359-568. Only cases in which the rater supervised both the High and Lower Potential member were included.

For a direct comparison of the newly developed Foundational Competency assessments to existing competency assessments used within the Air Force, we also calculated scores based on the competencies (or "performance factors") that are rated on the officer and junior enlisted versions of the Airman Comprehensive Assessment (AF 724 and AF 931, respectively)—existing measures that Air Force supervisors are required to use when providing mid-term performance feedback (conducting a progress review with their subordinates). Analyses comparing the myVector Foundational Competency assessments to the AF 724 competency ("performance factor") rating areas were based on "high potential" and "lower potential members" at the ranks of O1-O6. Analyses comparing the myVector Foundational Competency assessments to the AF 931 competency ("performance factor") rating areas were based on "high potential" and "lower potential members" at the ranks of E2-E6.

As shown in Table 14, officers at the ranks of O1-O6 are evaluated on six competencies ("performance factors") on the AF 724: Job Knowledge, Communication Skills, Judgment and Decisions, Leadership Skills, Organizational Skills, and Professional Qualities. Each of these AF

724 competencies ("performance factors") is defined by 2-9 behavioral statements that were rated separately for the purpose of the criterion-related validation study, and averaged to calculate a mean score for each competency ("performance factor").

Table 14. AF 724 Competencies ("Performance Factors") and Behavioral Items

AF 724 Competency/ "Performance Factor"	Behavioral Items (Rated on for High Potential and Lower Potential Meber in Criterion-Related Validation Study)
Job Knowledge	Applies knowledge to handle non-routine situations. Has knowledge required to perform duties effectively. Strives to improve knowledge.
Leadership Skills	Sets and enforces standards. Promotes a healthy organizational climate. Works well with others. Fosters teamwork. Displays initiative. Displays self-confidence. Motivates subordinates. Maintains respect and confidence of subordinates. Evaluates subordinates fairly and consistently.
Professional Qualities	Accepts personal responsibility. Adheres to Air Force standards. Exhibits loyalty, discipline, dedication, integrity, and officership.
Organizational Skills	Anticipates and solves problems. Develops innovative solutions. Meets suspenses. Plans, coordinates, schedules, and uses resources effectively. Schedules work for self and others equitably and effectively.
Judgment and Decisions	Adheres to safety and occupational health requirements. Emphasizes logic and decision-making. Makes timely and accurate decisions. Recognizes and acts to take advantage of opportunities. Retains composure in stressful situations.
Communication Skills	Clearly and succinctly conveys ideas. Listens, speaks, and writes effectively.

As shown in Table 15, differences between "high potential" and "lower potential" officers (O1-O6) on the AF 724 competencies ("Performance Factors") were large, ranging from $d = 2.52$ (Job Knowledge) to $d = 3.33$ (Organizational Skills). The myVector competency assessments also demonstrated high levels of criterion-related validity, ranging from $d = 2.13$ (Influence and Fostering Innovation) to $d = 3.70$ (Initiative). Notably, 16 of the 22 myVector Foundational Competency assessments better differentiated Air Force officer career success (ds > 2.52) than one or more existing "Performance Factors" mandated for evaluation in annual progress reviews. Initiative better differentiated Air Force officer career success than all existing "Performance Factors" mandated for evaluation in annual progress reviews. As in the overall

sample, the competencies of Initiative, Perseverance, and Results Focus most effectively distinguished officers (O1-O6) identified by supervisors as having a "high potential" for Air Force career success from "lower potential" officers.

Table 15. O1-O6 Ratees: Criterion-Related Validity of myVector Foundational Competency Assessments and AF 724 "Performance Factor" Measures

Competency	Low Performer		High Performers		
	Mean	*SD*	Mean	*SD*	Cohen's *d*
AF 724 Communication	2.29	0.75	3.89	0.23	2.88
AF 724 Job Knowledge	2.36	0.74	3.80	0.32	2.52
AF 724 Judgment	2.23	0.69	3.80	0.29	2.96
AF 724 Leadership	2.18	0.69	3.86	0.44	2.90
AF 724 Organizational	2.03	0.68	3.79	0.31	3.33
AF 724 Professional	2.43	0.76	3.95	0.17	2.78
Accountability	2.46	0.75	3.89	0.28	2.53
Analytical Thinking	1.85	0.70	3.59	0.51	2.82
Change Management	1.79	0.69	3.57	0.51	2.95
Communication	2.32	0.69	3.84	0.29	2.88
Creative Thinking	1.81	0.73	3.54	0.53	2.73
Decision Making	2.03	0.70	3.73	0.38	2.99
Develops People	2.06	0.74	3.67	0.42	2.68
Flexibility	1.94	0.69	3.72	0.38	3.18
Fostering Innovation	2.05	0.84	3.55	0.54	2.13
Influence	2.25	0.76	3.55	0.42	2.13
Information Seeking	1.88	0.66	3.58	0.49	2.93
Initiative	1.79	0.72	3.84	0.30	3.70
Leadership	2.13	0.73	3.86	0.36	2.98
Perseverance	1.82	0.70	3.71	0.41	3.28
Precision	2.05	0.72	3.70	0.37	2.87
Resilience	1.97	0.74	3.43	0.58	2.18
Resource Management	2.18	0.79	3.81	0.34	2.68
Results Focused	1.98	0.72	3.79	0.31	3.26
Self-Control	2.07	0.68	3.58	0.54	2.44
Service Mindset	2.41	0.79	3.86	0.26	2.44
Strategic Thinking	1.78	0.63	3.52	0.64	2.73
Teamwork	2.38	0.72	3.79	0.38	2.44

Note. *N*s = 78-136.

As shown in Table 16, enlisted members at the ranks of E1-E6 are evaluated on nine common competencies on the AF 931: Task Knowledge/Proficiency, Initiative/Motivation, Resource Utilization, Comply with/Enforce Standards, Communication Skills, Teamwork, Air Force Core Values, Personal and Professional Development, and Esprit de corps. Each of these AF 931 competencies are defined by behaviors intended to signify increasing levels of competency proficiency (e.g., Basic, Intermediate, Advanced, Expert); the individual behavioral

statements that comprise the AF 931 competency rating scales were rated separately for the purpose of the criterion-related validation study, and averaged to calculate a mean score for each competency. Behavioral items associated with the lowest level of proficiency (i.e., negatively worded items, denoted with parentheses in Table 16) were excluded from these calculations.

Table 16. AF 932 Competencies and Behavioral Items

AF 932 Competency	Behavioral Items (Rated on for High Potential and Lower Potential Member in Criterion-Related Validation Study)
Task Knowledge/ Proficiency – quality, quantity, results and impact of the Airman's knowledge and ability to accomplish tasks	*(Demonstrates insufficient ability; requires reaccomplishment of tasks and more guidance or experience.)* **Demonstrates acceptable ability and consistently produces good quality, quantity, results, and impact.** **Exceeds performance expectations associated with current grade.** **Meets established suspenses.** **Routinely delivers high-quality work.** **Knowledge and skills impact far beyond those of peers; efforts directly elevate unit's impact on mission success.**
Initiative/ Motivation – degree of willingness to execute duties, motivate team members, and develop innovative new processes	*(Displays little or no effort in accomplishing duties, lacks motivation, and does not display initiative.)* **Mindful of others' needs; develops new processes.** **Displays good effort in performance of assigned tasks.** **Self-starter on task completion.** **Proactively assists team members.** **Routinely seeks out new ways to execute mission.** **Demonstrates an inspired work ethic.** **Aggressively seeks to improve others' motivation.** **Drives innovative environments.**
Resource Utilization – how effectively the Airman utilizes resources to accomplish the mission (e.g., time management, manpower, and budget)	*(Improperly or inconsistently manages time and other resources.)* **Makes good use of available time and other resources within Airman's control.** **Seeks better ways to more effectively utilize time and other resources.** **Sought after as an utilization expert in saving time, equipment, manpower, and budget with impact outside of work center or unit.**
Comply with/Enforce Standards – personal adherence and enforcement of fitness standards, dress and personal appearance, customs and courtesies, and professional conduct	*(Fails to meet some or all standards.)* **Consistently meets all standards.** **Meets all/surpassed some standards of fitness, conduct, appearance, and behavior; influences others by example.** **As the model Airman, raises the standard in all areas for others to emulate; coaches others.**
Communication Skills – how well the Airman	*(Inarticulate; does not assimilate or convey information in a clear and concise manner.)*

receives and relays information, thoughts, and ideas up and down the chain of command (includes listening, reading, speaking, and writing skills); fosters an environment for open dialogue	**Conveys most information in an understandable manner.** **Makes some effort to improve communication skills.** **Clearly conveys complex information in a concise manner.** **Encourages and considers others' input.** **Improves communication skills in themselves and others.** **Has presence and confidence in all settings.** **Remarkable communicator, mentor, and teacher.** **Sought out by leaders for various communication forums.**
Teamwork/ Caring, Respectful, and Dignified Environment – how well the Airman selflessly considers others, values diversity, and sets the stage for an environment of dignity and respect; to include promoting a healthy organizational climate	(Displays little to no respect for others and/or themselves.) **Fosters a dignified environment by consistently treating Airmen and themselves with respect.** **Displays strong interpersonal skills by proactively meeting others' needs.** **Holds others accountable for professional conduct to enhance a dignified environment.** **Demonstrates unmatched interpersonal skills.** **Always displays exemplary conduct and behavior with actions that are tone-setting, resulting in measurable increases in teamwork and unit effectiveness.**
Air Force Core Values – how well the Airman adopts, internalizes, and demonstrates Air Force Core Values of Integrity First, Service Before Self, and Excellence in All We Do	*(Fails to adhere to the Air Force Core Values.)* **Consistently demonstrates the Air Force Core Values, both on and off duty.** **Embodies the Air Force Core Values of Integrity, Service Before Self, and Excellence.** **Encourages others to uphold Air Force Core Values.** **Demonstrates personal conduct that exudes Air Force Core Values for others to emulate.** **As an influential leader, inspires others to embody the Air Force Core Values.**
Personal and Professional Development – amount of effort the Airman devoted to improve themselves and their work center/ unit through education and involvement	*(Makes little or no effort to pursue personal or professional development.)* **Establishes goals and progresses to meet those goals for personal and/or professional development.** **As a driven Airman, exceeds both professional and personal development goals with positive impact on individual performance or mission impact.** **Relentlessly pursues personal and professional development of themselves and others; efforts result in significant positive impact to unit and/or Air Force.**
Esprit de Corps and Community Relations – how well the Airman promotes camaraderie, embraces esprit de corps,	*(Makes little or no effort to promote esprit de corps or act as an Air Force ambassador.)* **Fosters esprit de corps through involvement in base and/or community events.** **Actively participates; organizes and occasionally leads team building and/or community events to foster esprit de corps.**

and acts as an Air Force ambassador	**Epitomizes an Air Force ambassador; consistently and selflessly leads efforts that inspire esprit de corps with significant impact to the mission and/or community.**

As shown in Table 17, differences between "high potential" and "lower potential" enlisted members (E2-E6) on the AF 931 competencies were large overall, but varied considerably in magnitude, ranging from $d = 2.57$ (Esprit de Corps) to $d = 4.55$ (Task Knowledge/Proficiency). The myVector competency assessments also demonstrated high levels of criterion-related validity overall, though the magnitude varied substantially by competency, ranging from $d = 1.84$ (Influence) to $d = 4.65$ (Initiative). Of the 22 myVector Foundational Competency assessments, 19 better differentiated Air Force officer career success (ds > 2.57) than the Esprit de Corps (mandated for evaluation in annual progress reviews). As in the overall sample, of the Foundational Competencies, Initiative and Results Focus most effectively distinguished junior enlisted members (E2-E6) identified by supervisors as having a "high potential" for Air Force career success from "lower potential" enlisted members. Notably, the myVector assessment of Initiative (based on 3 items) demonstrated greater criterion-related validity ($d = 4.65$) than the AF 931 assessment of Initiative (based on 8 items; $d = 4.23$), and greater criterion-related validity than any of the other competencies currently mandated for evaluation on the AF 931.

Table 17.
E2-E6 Ratees: Criterion-Related Validity of myVector Foundational Competency Scales (3-Item) and Airman Comprehensive Assessment (AF 931) Competency Measures

Competency	Low Performer		High Performers		
	Mean	*SD*	Mean	*SD*	Cohen's *d*
AF 931 Communication	1.93	0.63	3.68	0.35	3.43
AF 931 Core Values	1.85	0.68	3.77	0.36	3.53
AF 931 Esprit de Corps	1.93	0.79	3.65	0.52	2.57
AF 931 Teamwork	1.88	0.58	3.65	0.44	3.47
AF 931 Resource Utilization	1.66	0.68	3.62	0.47	3.37
AF 931 Task Knowledge	1.62	0.60	3.80	0.32	4.55
AF931 Compliance	1.59	0.62	3.72	0.41	4.01
AF 931 Personal Develop.	1.49	0.59	3.59	0.52	3.77
AF 931 Initiative	1.66	0.58	3.66	0.33	4.23
Accountability	1.84	0.74	3.86	0.30	3.58
Analytical Thinking	1.62	0.64	3.46	0.48	3.24
Change Management	1.65	0.66	3.56	0.46	3.37
Communication	2.05	0.76	3.73	0.38	2.82
Creative Thinking	1.62	0.68	3.39	0.49	2.99
Decision Making	1.76	0.69	3.62	0.42	3.26
Develops People	1.83	0.72	3.60	0.53	2.83
Flexibility	1.81	0.72	3.59	0.42	3.03
Fostering Innovation	1.82	0.77	3.59	0.43	2.86
Influence	2.12	0.74	3.34	0.59	1.84
Information Seeking	1.64	0.64	3.51	0.44	3.39
Initiative	1.58	0.59	3.81	0.34	4.65
Leadership	1.73	0.69	3.74	0.45	3.44
Perseverance	1.62	0.69	3.60	0.48	3.32
Precision	1.76	0.70	3.60	0.47	3.10
Resilience	1.90	0.74	3.49	0.50	2.52
Resource Management	1.86	0.75	3.69	0.47	2.93
Results Focused	1.68	0.67	3.70	0.39	3.67
Self-Control	2.16	0.83	3.50	0.54	1.90
Service Mindset	2.03	0.79	3.79	0.45	2.73
Strategic Thinking	1.54	0.65	3.42	0.56	3.08
Teamwork	2.01	0.73	3.68	0.47	2.72

Note. Ns = 136-281.

Appendix A.
Ranks/Grades of High and Low Potential Members Rated, By Relationship to the Survey Respondent

	Rater (Survey participant) supervised both the high and low potential member rated	**Rater (Survey participant) did NOT supervise both the high and low potential member rated**	**TOTAL**
Enlisted Ratees			
- E2	11	1	12
- E3	192	105	105
- E4	400	209	609
- E5	427	271	698
- E6	277	158	435
- E7	205	99	304
- E8	52	19	71
- E9	3	4	7
Officer Ratees			
- O1	39	33	72
- O2	100	61	161
- O3	310	252	562
- O4	97	106	203
- O5	69	74	143
- O6	6	22	28
- O7	0	4	4
Civilian			
- GS/GG 1 to 8 or Equivalent (Category 1)	64	18	82
- GS/GG 9 to 12 or Equivalent (Category 2)	311	102	413

- GS/GG 13 to 15 or Equivalent (Category 3)	95	57	152
- NH/NJ/NK -01	0	1	1
- NH/NJ/NK -02	9	1	10
- NH/NJ/NK -03	102	31	133
- NH/NJ/NK -04	18	20	38
- WS-01	0	1	1
- WS-05	1	1	2
- WS-06	2	0	2
- WS-08	3	0	3
- WS-09	2	2	4
- WS-10	14	16	30
- WS-11	2	2	4
- WS-12	2	0	2
- WS-13	2	1	3
- WS-15	1	0	1
- WS-17	0	1	1
- NF-01	5	0	6
- NF-02	16	2	18
- NF-03	17	6	23
- NF-04	8	8	16
- DF-02	11	7	18
- DF-03	11	2	13
- DF-04	2	4	6

Appendix. "Kneeboard" Competency Scale Items (Ns = 988 - 527), By Proficiency Level

Competency	Proficiency Level	Item	% High Potential Members Engage in Behavior (If Known/ Observable)	% Low Potential Members Engage in Behavior (If Known/ Observable)	Item-Total Correlation (Low Potential Member Sample)	Item-Total Correlation (High Potential Member Sample)
Accountability (α = .935 in Lower Potential Sample; α = .884 in High Potential Sample)	Expert	Leads by example.	98.70%	16%	0.805	0.716
	Expert	Models professionalism and excellence in every endeavor.	98.80%	19.60%	0.800	0.689
	Expert	Takes personal responsibility for unit performance.	96.70%	19.70%	0.743	0.601
	Advanced	Does the right thing even when it is unpopular or difficult.	97.50%	28.70%	0.794	0.668
	Advanced	Admits shortcomings and mistakes.	97.70%	29.50%	0.711	0.569
	Intermediate	Follows through on promises and commitments.	99.30%	33.70%	0.746	0.659
	Intermediate	Embodies the Air Force Core Values of Integrity, Service Before Self, and Excellence.	98.40%	30.60%	0.79	0.634
	Basic	Adheres to Air Force standards.	99.10%	43.60%	0.745	0.596
	Basic	Looks after fellow Airmen and their families.	98.30%	50%	0.702	0.611
Analytical Thinking (α = .917 in Lower Potential Sample; α = .865 in High Potential Sample)	Expert	Teaches techniques and tools to help others analyze complex problems.	93%	13.60%	0.66	0.576

	Expert	Develops new analytical techniques and tools to analyze complex problems.	92.30%	11.30%	0.701	0.616
	Expert	Uses several analytical techniques to identify several solutions and weighs the value of each.	93.10%	12.80%	0.759	0.666
	Advanced	Identifies interrelated issues and trends to address multiple facets of a problem.	96.40%	16.80%	0.735	0.664
	Advanced	Anticipates risks and thinks ahead to next steps.	98.20%	20.50%	0.708	0.578
	Intermediate	Breaks down a complex task into manageable parts in a systematic way.	98.30%	22.10%	0.758	0.615
	Intermediate	Recognizes several likely causes of events or several consequences of actions.	97.40%	22.20%	0.743	0.629
	Basic	Breaks problems into simple lists of tasks or activities.	97.90%	35.50%	0.707	0.572
	Basic	Sets priorities for tasks in order of importance.	98.80%	37.30%	0.628	0.456
Creative Thinking (α = .941 in Lower Potential Sample; α = .898 in High Potential Sample)	Expert	Teaches others how to question assumptions and conceptualize problems in new ways.	93.80%	14.40%	0.731	0.625
	Expert	Reconciles conflicting data to gain new insight into a complex problem.	95.40%	15.10%	0.826	0.738
	Expert	Identifies connections between concepts that are not readily apparent to others.	96%	16.50%	0.791	0.68
	Advanced	Reframes issues to evaluate them from different perspectives.	95.30%	17.70%	0.823	0.719
	Advanced	Identifies useful relationships among complex data from unrelated areas.	96.70%	20.30%	0.795	0.665
	Intermediate	Applies and modifies complex learned concepts or methods appropriately.	98.30%	23.60%	0.795	0.626

	Intermediate	Questions existing methods or processes and identifies novel alternatives.	97%	27.10%	0.781	0.682
	Basic	Applies learned concepts or methods to new situations.	98.50%	34.50%	0.733	0.64
	Basic	Considers previous solutions to generate new ideas.	98.70%	35.60%	0.742	0.61
Strategic Thinking (α = .942 in Lower Potential Sample; α = .921 in High Potential Sample)	Expert	Teaches others to reframe problems and actively seek out discussions with critics when making key decisions.	93.70%	11.50%	0.777	0.739
	Expert	Continually reviews and adopts new strategies to meet long-term goals.	93.30%	11.90%	0.837	0.75
	Expert	Recognizes long-term trends to anticipate future challenges not readily apparent to others.	94.60%	12.70%	0.838	0.751
	Advanced	Anticipates and manages secondary effects of proposed policies, actions, or adjustments to strategy.	95.60%	13.30%	0.762	0.727
	Advanced	Develops plans that support long-term goals and objectives.	95.30%	17.30%	0.799	0.762
	Intermediate	Considers issues from the perspective of more senior leadership.	92.60%	18.30%	0.744	0.677
	Intermediate	Plans for the future rather than leaving things to chance.	96.90%	18.90%	0.771	0.695
	Basic	Considers how hierarchies, roles, and relationships influence specific problems.	95.40%	20.70%	,737	.672.
	Basic	Articulates both short-term and long-term goals.	96.40%	25.60%	0.73	0.68

Decision Making (α = .940 in Lower Potential Sample; α = .905 in High Potential Sample)	Expert	Coaches others as they solve problems.	96.80%	14.50%	0.65	0.61
	Expert	Makes well-thoughtout decisions under time pressure.	98.20%	15%	0.781	0.673
	Expert	Identifies known and unknown variables before making decisions.	96%	20.60%	0.814	0.7
	Advanced	Leverages appropriate decision-making techniques (e.g., identifies root causes, involves others, gathers information).	96.80%	21.60%	0.82	0.696
	Advanced	Rationally weighs all the information when uncertain.	98.30%	22%	0.812	0.718
	Intermediate	Takes time to consider the risks and benefits of a situation before making a decision.	98.20%	25%	0.801	0.739
	Intermediate	Identifies key decisions within area of responsibility.	97.90%	27.70%	0.8	0.713
	Basic	Investigates the facts as part of the decision-making process.	98.40%	30%	0.796	0.715
	Basic	Allows sufficient time to gain others' input before making a decision.	95%	32%	0.671	0.591
Information Seeking (α = .938 in Lower Potential Sample; α = .886 in High Potential Sample)	Expert	Coaches and guides others to appreciate the importance of continuous learning.	95.70%	14.30%	0.714	0.633
	Expert	Personally establishes ongoing systems or habits for various kinds of information gathering.	96%	14%	0.771	0.627

	Expert	Identifies own areas of deficit; plans and sets own goals and strategies for learning.	96.20%	14.60%	0.757	0.626
	Advanced	Pursues opportunities for additional information that may be useful in the future.	98.30%	19.40%	0.764	0.698
	Advanced	Asks important questions that others are reluctant to ask or answer.	97.20%	20.10%	0.815	0.609
	Intermediate	Calls on others, who are not personally involved, to get their perspective, background information, or experience.	95.80%	21.20%	0.725	0.583
	Intermediate	Asks probing questions to get to the root of a situation or problem.	97.70%	23.30%	0.812	0.69
	Basic	Asks direct questions and consults available resources.	99.20%	36.80%	0.774	0.641
	Basic	Asks questions to clarify information, when needed.	99.60%	42.20%	0.755	0.671
Fostering Innovation (α = .945 in Lower Potential Sample; α = .917 in High Potential Sample)	Expert	Mentors others on how to encourage open dialogue, innovation, and informed risk-taking.	91.70%	15%	0.736	0.676
	Expert	Promotes out-of-the-box thinking.	95.40%	21.90%	0.777	0.696
	Expert	Champions new methods, procedures, and approaches.	95.80%	22.50%	0.731	0.637
	Advanced	Encourages others to identify new ways to approach a task or project.	94.10%	24.30%	0.8	0.737
	Advanced	Creates a flexible and forgiving culture that allows sharing of ideas	94.40%	27.60%	0.807	0.713
	Intermediate	Encourages diverse perspectives and differing points of view.	94.90%	29.50%	0.804	0.724
	Intermediate	Welcomes the implementation of new ideas.	97%	29.90%	0.806	0.707

	Basic	Demonstrates openness and support of different and innovative change ideas.	96.40%	30.70%	0.828	0.773
	Basic	Considers innovative ideas generated by others.	96.90%	35.60%	0.766	0.714
Change Management (α = .960 in Lower Potential Sample; α = .911 in High Potential Sample)	Expert	Acts as a valuable change resource / trusted advisor.	97.50%	14.40%	0.805	0.649
	Expert	Identifies deeply cherished motives to unite people in making a desired change.	91.80%	12.20%	0.837	0.692
	Expert	Helps others understand the vision behind proposed changes.	94.70%	15.30%	0.858	0.692
	Advanced	Manages complex transitions to successfully bring about desired change results.	97.10%	16.70%	0.851	0.689
	Advanced	Synthesizes requirements for and implements and assesses change effort.	97.50%	16.70%	0.862	0.721
	Intermediate	Involves others and shares information to build understanding and support for change.	96.10%	18.80%	0.838	0.723
	Intermediate	Demonstrates willingness to make significant contributions to change.	98.20%	19%	0.797	0.667
	Basic	Recognizes the long-term benefits of organizational change.	96.10%	22.40%	0.828	0.723
	Basic	Supports and adapts to changes initiated by others.	97%	25.50%	0.821	0.699
Flexibility (α = .954 in Lower Potential Sample; α = .901 in High Potential Sample)	Expert	Challenges others to treat new situations or risks as opportunities for learning or growth.	96.80%	17%	0.8	0.67

	Expert	Proactively anticipates major changes to the context and environment and effectively adapts in advance of the changes.	96%	14.30%	0.825	0.701
	Expert	Makes large or long-term adaptations in own or partnering organization in response to the needs of the situation.	95.60%	16.10%	0.845	0.664
	Advanced	Responds proactively to unexpected or ambiguous situations, opportunities, or risks.	98.10%	17.60%	0.848	0.709
	Advanced	In static environments, finds and implements constructive methods to exercise flexibility.	96.30%	18.50%	0.831	0.691
	Intermediate	Prioritizes, considers alternatives, and responds quickly and effectively to unexpected and rapidly changing conditions.	98.50%	19.10%	0.848	0.684
	Intermediate	Changes own behavior or approach to suit the situation.	94.90%	22.40%	0.777	0.638
	Basic	Changes approach when current approach is not working.	97.60%	23.70%	0.8	0.654
	Basic	Modifies approach based on feedback from others.	97.50%	27.60%	0.772	0.627
Self-Control (α = .934 in Lower Potential Sample; α = .910 in High Potential Sample)	Expert	Remains visibly calm in very stressful situations, while calming others.	92%	18.80%	0.814	0.786
	Expert	Uses stress management techniques to control responses, prevent burnout, and deal with ongoing stresses effectively.	92.50%	23.40%	0.807	0.718
	Advanced	Remains visibly calm in stressful situations when others are not remaining calm.	93%	27.10%	0.844	0.793

	Advanced	Controls strong emotions or other stress and takes action to respond constructively to the source of the problems.	93.80%	27.80%	0.777	0.761
	Intermediate	Waits until an appropriate time to present ideas.	94.60%	32.30%	0.762	0.708
	Intermediate	Re-engages discussions or other processes calmly after initial conflict.	94.80%	33.80%	0.739	0.639
	Basic	Resists the temptation to engage in inappropriate involvements or impulsive behavior.	94.40%	34.30%	0.738	0.667
	Basic	Communicates concern without raising one's voice.	90.70%	41.90%	0.706	0.628
Resilience (α = .956 in Lower Potential Sample; α = .934 in High Potential Sample)	Expert	Models a positive approach to overcome significant trauma and sustained stressors.	95.20%	26.30%	0.814	0.797
	Expert	Recovers quickly when traumatic or highly stressful events occur in rapid succession.	93.20%	21.10%	0.869	0.825
	Expert	Adapts to address subsequent stressful events increasingly well; experiences with stress have a demonstrable positive effect on self-development.	96.80%	23.10%	0.831	0.728
	Advanced	Uses innovative techniques to overcome complex, traumatic, or stressful events.	93%	21.20%	0.801	0.663
	Advanced	Recovers quickly from ongoing stressful events.	95.40%	23.90%	0.853	0.824
	Intermediate	Comes through difficult times with little trouble.	93.70%	27%	0.845	0.77
	Intermediate	Recovers quickly from a singular stressful event.	96.50%	31.40%	0.831	0.784
	Basic	Deals with stressful situations one step at a time.	97.30%	33.60%	0.813	0.742
	Basic	Maintains an evident work/life balance.	90.50%	37.30%	0.73	0.681

Initiative (α = .910 in Lower Potential Sample; α = .813 in High Potential Sample)	Expert	Inspires others to contribute more than the job requires.	93.60%	8.80%	0.669	0.558
	Expert	Exceeds job description; starts and carries through new projects.	98%	7.70%	0.755	0.595
	Expert	Puts in extraordinary effort by working outside the norm to get the job done.	95.60%	7.80%	0.759	0.632
	Advanced	Puts in extra effort to complete work when not required.	97.10%	12.80%	0.757	0.557
	Advanced	Acts quickly and decisively when the norm is to hope problem will resolve itself.	97%	13.30%	0.669	0.469
	Intermediate	Recognizes and acts on present opportunities or addresses present problems.	98.50%	16.90%	0.764	0.642
	Intermediate	Takes action to create opportunities or avoid problems.	93.20%	18.70%	0.599	0.425
	Basic	Completes assignments without close supervision.	99.20%	24.50%	0.618	0.416
	Basic	Displays good effort in performance of assigned tasks.	99.30%	33.60%	0.674	0.404
Perseverance (α = .946 in Lower Potential Sample; α = .881 in High Potential Sample)	Expert	Helps others regain motivation and commitment to long-term goals after major setbacks.	95.10%	9.10%	0.737	0.555
	Expert	Overcomes initial objections of others; persuades others to provide needed resources or other tangible support for a long-term goal.	96.90%	11.50%	0.81	0.595

	Expert	Sustains passion and commitment over a long period of time.	97.10%	11.70%	0.818	0.659
	Advanced	Models perseverance and effort in pursuit of challenging, long-term goals.	97.90%	11.90%	0.866	0.723
	Advanced	Maintains focus on long-term projects.	98.30%	17%	0.799	0.666
	Intermediate	Displays commitment to achieving difficult work goals in challenging environments.	99%	18.50%	0.812	0.614
	Intermediate	Overcomes setbacks in order to achieve goals.	99%	19.70%	0.822	0.695
	Basic	Persists after criticism.	96.80%	26.10%	0.676	0.549
	Basic	Keeps at it when trying to learn something challenging.	99%	27.60%	0.776	0.655
Precision (α = .929 in Lower Potential Sample; α = .889 in High Potential Sample)	Expert	Teaches others how to develop systems to organize and track data, increase order, and improve quality.	92%	10.70%	0.719	0.636
	Expert	Proactively identifies and acts on opportunities to improve order, quality, and accuracy when others are resistant to proposed changes.	97.50%	12.30%	0.76	0.713
	Expert	Develops new systems to organize and track data, increase order, and improve quality.	94.30%	13.10%	0.731	0.617
	Advanced	Displays broad concern for increasing order and accuracy in existing systems.	95.90%	19.30%	0.769	0.698
	Advanced	Monitors quality of others' work; checks to ensure that procedures are followed.	95.10%	21.80%	0.76	0.645
	Intermediate	Double-checks accuracy of information and own work.	97.10%	23.20%	0.78	0.66
	Intermediate	Carefully follows directions.	96.80%	33.50%	0.7	0.563

	Basic	Follows logical order for completing tasks to meet short-term goals.	98.60%	35.70%	0.762	0.671
	Basic	Maintains organized files or materials.	94%	36.20%	0.7	0.627
Results Focus (α = .947 in Lower Potential Sample; α = .883 in High Potential Sample)	Expert	Sets challenging goals for team to increase organizational excellence.	94.50%	9.70%	0.77	0.618
	Expert	Formulates innovative strategies to achieve self-set goals and improve performance in all facets of work.	96.20%	10.90%	0.743	0.606
	Expert	Sets challenging goals to continually increase personal standards of excellence.	96.80%	11.50%	0.795	0.678
	Advanced	Continually works toward a defined standard of excellence.	99.20%	18.70%	0.806	0.681
	Advanced	Monitors and evaluates plans; focuses on results and measuring attainment of outcomes.	98.30%	18.80%	0.847	0.712
	Intermediate	Accomplishes work projects diligently.	99.10%	25.30%	0.824	0.643
	Intermediate	Actively strives to make a positive contribution through one's efforts.	99.70%	27.30%	0.801	0.636
	Basic	Ensures projects within areas of specific responsibility are completed in a timely manner.	99.30%	28.90%	0.815	0.656
	Basic	Meets established suspenses.	98.80%	32%	0.755	0.577
Resource Management (α = .958 in Lower Potential Sample; α = .930 in High Potential Sample)	Expert	Teaches best-practice techniques for resource management, formally or informally.	95.80%	10.60%	0.794	0.7

	Expert	Develops or improves existing best-practice resource management techniques.	96.10%	10.60%	0.77	0.74
	Expert	Sets and redefines priorities, provides guidance, and reorganizes resources to increase capacity to better support strategy, mission, or goals.	98.10%	17.60%	0.881	0.803
	Advanced	Identifies and implements best-practice resource management techniques.	96.10%	16.60%	0.856	0.755
	Advanced	Integrates, allocates, and controls resources across offices, consistent with goals and priorities.	97.90%	23.10%	0.864	0.744
	Intermediate	Manages the allocation of resources in relation to organizational needs.	98.30%	28.50%	0.875	0.822
	Intermediate	Uses available resources wisely.	98.60%	29.90%	0.819	0.696
	Basic	Organizes resources to execute the mission.	99%	34.80%	0.865	0.766
	Basic	Follows Air Force resourcing processes.	98%	53.70%	0.765	0.68
Teamwork (α = .941 in Lower Potential Sample; α = .915 in High Potential Sample)	Expert	Models collaborative excellence and guides others to improve collaboration.	96.80%	14.30%	0.761	0.72
	Expert	Develops strategies to ensure team members remain focused on goals despite major obstacles.	96%	17%	0.78	0.719
	Expert	Anticipates conflict and works to resolve situations that could affect team goals.	94%	15.70%	0.754	0.685
	Advanced	Acknowledges conflict and works to resolve issues.	95.90%	23.60%	0.807	0.698
	Advanced	Ensures teams work together toward a common goal.	98%	32.80%	0.844	0.787
	Intermediate	Helps other team members work toward team goals.	98.40%	37.70%	0.805	0.735

	Intermediate	Freely shares information with others on the team.	98.40%	39%	0.771	0.678
	Basic	Acknowledges contributions made by others on the team.	98%	43.90%	0.716	0.698
	Basic	Participates during team activities while working toward a goal.	98.70%	47.60%	0.736	0.695
Develops People (α = .957 in Lower Potential Sample; α = .931 in High Potential Sample)	Expert	Mentors others on how to provide developmental feedback and identify opportunities for learning	95.40%	13.50%	0.85	0.801
	Expert	Identifies new methods to structure learning to better meet developmental needs	94.20%	13.50%	0.856	0.779
	Expert	Effectively develops employees who are actively resistant to learning	86.30%	11%	0.773	0.66
	Advanced	Identifies tasks that will give others opportunities to develop and strengthen skills	96.20%	19.40%	0.872	0.824
	Advanced	Arranges appropriate learning opportunities to foster long-term development of others	95.80%	20.20%	0.825	0.755
	Intermediate	Assesses competency of others; provides tools to improve that competency	96.90%	21.80%	0.868	0.79
	Intermediate	Provides helpful advice about improving an individual's performance	97.60%	24%	0.811	0.798
	Basic	Explains how to do a task; makes specific helpful suggestions	97.20%	29.10%	0.82	0.782
	Basic	Gives detailed instructions and/or on-the-job demonstrations.	97.40%	25.60%	0.753	0.605

Leadership (α = .941 in Lower Potential Sample; α = .920 in High Potential Sample)	Expert	Creates opportunities to shepherd others into and through leadership opportunities.	96.10%	15%	0.759	0.773
	Expert	Uses complex strategies to promote team morale and productivity (e.g., team assignments, cross-training).	91.80%	10.40%	0.773	0.667
	Expert	Communicates a compelling vision that generates excitement, enthusiasm, and commitment to the group mission.	95.30%	12%	0.76	0.748
	Advanced	Motivates/inspires the team toward mission success.	98.10%	16.60%	0.804	0.774
	Advanced	Ensures that others buy into leader's mission, goals, agenda, climate, tone, and policies.	95.50%	19.30%	0.843	0.74
	Intermediate	Takes steps to address mediocre work or below average effort from others.	95.40%	22.40%	0.722	0.648
	Intermediate	Protects the organization and its reputation vis-a-vis the larger organization or the community at large.	97.10%	28.80%	0.793	0.711
	Basic	Ensures that organizational tasks are completed.	98%	38.50%	0.76	0.732
	Basic	Makes sure the practical needs of the organization are met.	98.80%	39.70%	0.775	0.735
Service Mindset (α = .957 in Lower Potential Sample; α = .941 in High Potential Sample)	Expert	Acts as a trusted advisor to help others identify new or different approaches to address their needs.	98.30%	20.20%	0.809	0.818
	Expert	Provides advice and counsel to serve and support higher-level	97.80%	22.90%	0.825	0.796

		strategies or goals, even when one disagrees with those strategies or goals.				
	Expert	Acts to support higher-level organizational goals, even when such goals may negatively affect one's own career or personal goals.	96.20%	22.40%	0.781	0.79
	Advanced	Continues to provide a high level of support to others even if they are rude, mean, or fail to appreciate efforts to meet their needs.	94.90%	24.30%	0.798	0.656
	Advanced	Attempts to identify win/win solutions that meet the needs of others.	98.10%	27.70%	0.856	0.819
	Intermediate	Makes self fully available when others are going through a critical period.	97.60%	33.10%	0.842	0.774
	Intermediate	Expresses positive expectations about others.	98%	32.80%	0.839	0.791
	Basic	Expresses genuine concern for the welfare of others.	97.80%	43.30%	0.827	0.793
	Basic	Lends a helping hand to team members when needed.	98.50%	44.30%	0.84	0.796
Influence (α = .906 in Lower Potential Sample; α = .840 in High Potential Sample)	Expert	Teaches influence tactics and strategies to others.	74.80%	15.60%	0.678	0.569
	Expert	Uses complex influence strategies tailored to individual situations (e.g., chains of indirect influence – "get A to show B so that B will tell C such-and-such").	75%	23.70%	0.64	0.555
	Expert	Models behavior desired in others in order to have a specific impact.	87.50%	28.50%	0.714	0.515
	Advanced	Creates a sense of urgency to overcome inaction.	82.50%	29.60%	0.633	0.515

	Advanced	Takes steps to develop trust among the various parties involved.	97.20%	32.10%	0.677	0.566
	Intermediate	Uses experts and other influence tactics to build support for ideas.	94.10%	33.30%	0.728	0.657
	Intermediate	Appeals to ideals or values to overcome resistance and sway opinions of others.	90%	38.10%	0.721	0.549
	Basic	Gains buy-in by seeking input from others.	93.30%	40.50%	0.676	0.559
	Basic	Uses facts to support own point of view when meeting with team members.	96.60%	41.20%	0.673	0.574
Communication (α = .929 in Lower Potential Sample; α = .900 in High Potential Sample)	Expert	Mentors others on strategies for improving communications and messaging.	94.10%	16%	0.68	0.64
	Expert	Presents complex information articulately to persuade others about a contentious issue.	97.50%	22.80%	0.765	0.667
	Expert	Voices differing opinions without triggering a defensive response.	94.40%	23.90%	0.678	0.665
	Advanced	Recognizes non-verbal reactions of audience, anticipates audience concerns, and adjusts presentations accordingly.	95.70%	25.60%	0.797	0.701
	Advanced	Clearly conveys complex information in a concise manner.	97.90%	26.90%	0.763	0.645
	Intermediate	Communicates with sensitivity to others' needs of the moment.	95.30%	27.50%	0.684	0.698
	Intermediate	Tailors messaging and briefings to address identified concerns of the audience.	97.80%	29%	0.827	0.738
	Basic	Conveys information clearly and concisely to team members.	98.50%	30.90%	0.786	0.746

	Basic	Uses pictures to communicate what words can't clearly convey.	94%	40%	0.682	0.568

Appendix. myVector Competency Scale Items (Ns = 1066 - 983)

Competency	Item	% High Potential Members Engage in Behavior (If Known/ Observable)	% Low Potential Members Engage in Behavior (If Known/ Observable)	Item-Total Correlation (Low Potential Member Sample)	Item-Total Correlation (High Potential Member Sample)
Accountability (α = .891 in Lower Potential Sample; α = .782 in High Potential Sample)	Does the right thing even when it is unpopular or difficult.	97.50%	28.70%	0.779	0.646
	Establishes standards consistent with the Air Force Core Values.	98.50%	31.70%	0.786	0.623
	Holds self accountable for rules and responsibilities.	98.60%	25.90%	0.792	0.6
Analytical Thinking (α = .836 in Lower Potential Sample; α = .752 in High Potential Sample)	Identifies interrelated issues and trends to address multiple facets of a problem.	96.40%	16.80%	0.696	0.616
	Recognizes several likely causes of events or several consequences of actions.	97.40%	22.20%	0.704	0.578
	Uses several analytical techniques to break apart complex problems.	92.80%	13.20%	0.693	0.577
Change Management (α = .902 in Lower Potential Sample; α = .802 in High Potential Sample)	Involves others and shares information to build understanding and support for change.	96.10%	18.20%	0.826	0.685

	Leads others in adapting to new conditions and adopting new technologies.	95.90%	15.10%	0.819	0.682
	Manages complex transitions to successfully bring about desired change results.	97.10%	16.70%	0.771	0.58
Communication (α = .834 in Lower Potential Sample; α = .795 in High Potential Sample)	Listens to ensure messages are understood.	97.40%	28.20%	0.686	0.667
	Tailors messaging and briefings to address identified concerns of the audience.	97.80%	29%	0.718	0.661
	Clearly and succinctly conveys ideas.	99.30%	35%	0.681	0.598
Creative Thinking (α = .886 in Lower Potential Sample; α = .807 in High Potential Sample)	Identifies connections between concepts that are not readily apparent to others.	96%	16.50%	0.733	0.594
	Reconciles conflicting data to gain new insight into a complex problem.	95.40%	15.10%	0.81	0.706
	Reframes issues to evaluate them from different perspectives	95.30%	17.70%	0.794	0.666
Decision Making (α = .857 in Lower Potential Sample; α = .789 in High Potential Sample)	Makes well-thoughtout decisions under time pressure.	98.20%	15%	0.747	0.633
	Rationally weighs all the information when uncertain.	98.30%	22%	0.74	0.627
	Distinguishes information that is relevant to the decision at hand.	99%	34.20%	0.714	0.628

Develops People (α = .895 in Lower Potential Sample; α = .826 in High Potential Sample)	Arranges successful experiences for others to build up their skills and confidence.	94.10%	20.70%	0.807	0.647
	Identifies tasks that will give others opportunities to develop and strengthen skills.	96.20%	19.40%	0.801	0.741
	Provides helpful advice about improving an individual's performance.	97.60%	24%	0.769	0.673
Flexibility (α = .855 in Lower Potential Sample; α = .771 in High Potential Sample)	Develops plans to get the job done when initial plans fail.	98.50%	25.60%	0.728	0.604
	Responds proactively to unexpected or ambiguous situations, opportunities, or risks.	98.10%	17.60%	0.736	0.597
	Changes approach when current approach is not working.	97.60%	23.70%	0.72	0.614
Fostering Innovation (α = .843 in Lower Potential Sample; α = .794 in High Potential Sample)	Encourages others to identify new ways to approach a task or project.	94.10%	24.30%	0.702	0.653
	Promotes out-of-the-box thinking.	95.40%	21.90%	0.72	0.635
	Welcomes the implementation of new ideas.	97%	29.90%	0.702	0.625

Influence (α = .857 in Lower Potential Sample; α = .741 in High Potential Sample)	Adapts a presentation or discussion to appeal to the interest and level of others.	94.30%	37.10%	0.725	0.577
	Anticipates and prepares for other's reactions during discussions and presentations.	95.60%	30.60%	0.756	0.609
	Appeals to ideals or values to overcome resistance and sway opinions of others.	90%	38.10%	0.709	0.528
Information Seeking (α = .843 in Lower Potential Sample; α = .711 in High Potential Sample)	Identifies areas for further development in whatever he/she accomplishes.	97.60%	15.20%	0.762	0.594
	Identifies own areas of deficit; plans and sets own goals and strategies for learning.	96.20%	14.60%	0.726	0.523
	Asks probing questions to get to the root of a situation or problem.	97.70%	23.30%	0.648	0.477
Initiative (α = .815 in Lower Potential Sample; α = .671 in High Potential Sample)	Demonstrates an inspired work ethic.	99.20%	19.30%	0.636	0.452
	Exceeds job description (e.g., takes on extra tasks).	97.90%	9.20%	0.681	0.533
	Puts in extra effort to complete work when not required.	97.10%	12.80%	0.688	0.508

Leadership (α = .858 in Lower Potential Sample; α = .832 in High Potential Sample)	Inspires and motivates through interactions.	97.50%	14.70%	0.719	0.69
	Uses formal authority and power in a fair and equitable manner.	98.20%	32.30%	0.697	0.671
	Builds pride, unity, and teamwork in the unit and Air Force.	97.50%	20.20%	0.791	0.713
Perseverance (α = .882 in Lower Potential Sample; α = .759 in High Potential Sample)	Overcomes setbacks in order to achieve goals.	99%	19.70%	0.745	0.573
	Persists on difficult tasks even when others have already given up.	97.50%	12.60%	0.801	0.594
	Sustains passion and commitment over a long period of time.	97.10%	11.70%	0.77	0.608
Precision (α = .831 in Lower Potential Sample; α = .756 in High Potential Sample)	Monitors progress of a project against milestones or deadlines.	96.70%	27.70%	0.697	0.592
	Develops and uses systems to organize and keep track of information.	95.90%	26%	0.708	0.607
	Double-checks accuracy of information and own work.	97.10%	23.20%	0.663	0.557

Resilience (α = .847 in Lower Potential Sample; α = .810 in High Potential Sample)	Recognizes the good in even the worst situations.	94.60%	26.40%	0.691	0.625
	Recovers quickly from ongoing stressful events.	95.40%	23.90%	0.739	0.715
	Comes through difficult times with little trouble.	93.70%	27%	0.716	0.638
Resource Management (α = .897 in Lower Potential Sample; α = .836 in High Potential Sample)	Makes good use of available time and other resources within Airman's control.	98.30%	23.60%	0.769	0.663
	Manages the allocation of resources in relation to organizational needs.	98.30%	28.50%	0.833	0.755
	Organizes resources to execute the mission.	99%	34.80%	0.79	0.682
Results Focused (α = .864 in Lower Potential Sample; α = .660 in High Potential Sample)	Remains focused on mission outcomes.	99.70%	30.30%	0.768	0.492
	Sets and acts to reach challenging goals for self or others (e.g., to improve productivity by 15% in 6 months).	94.40%	10.10%	0.716	0.477
	Continually works toward a defined standard of excellence.	99.20%	18.70%	0.759	0.51

Self-Control (α = .861 in Lower Potential Sample; α = .820 in High Potential Sample)	Remains visibly calm in stressful situations when others are not remaining calm.	93%	27.10%	0.725	0.65
	Communicates concern without raising one's voice.	90.70%	41.90%	0.703	0.643
	Controls strong emotions, such as anger or frustration, in challenging situations	94.10%	31.70%	0.789	0.739
Service Mindset (α = .893 in Lower Potential Sample; α = .828 in High Potential Sample)	Attempts to identify win/win solutions that meet the needs of others.	98.10%	27.70%	0.762	0.673
	Lends a helping hand to team members when needed.	98.50%	44.30%	0.798	0.712
	Makes self fully available when others are going through a critical period.	97.60%	33.10%	0.818	0.693
Strategic Thinking (α = .892 in Lower Potential Sample; α = .830 in High Potential Sample)	Continually reviews and adopts new strategies to meet long-term goals.	93.30%	11.90%	0.822	0.703
	Develops plans that support long-term goals and objectives.	95.30%	17.30%	0.787	0.72
	Recognizes long-term trends to anticipate future challenges not readily apparent to others.	94.60%	12.70%	0.761	0.644
Teamwork (α = .860 in Lower Potential Sample; α = .794 in High Potential Sample)	Invites all members of a group to contribute to a process.	96.40%	36.50%	0.748	0.617

	Encourages and empowers others; makes them feel strong or important.	96.30%	25.20%	0.75	0.651
	Ensures teams work together toward a common goal.	98%	32.80%	0.713	0.654

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