Competencies: Making Them "Work" for the Navy's Total Force

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ABSTRACT

Competencies consist of the knowledge, skills, abilities, and other characteristics that contribute to successful job performance. The competency movement in Industrial/Organizational Psychology started in the 1970s in response to the inability of traditional aptitude, tests, to predict job performance. If traditional aptitude measures did not predict job performance, then what would? Researching characteristics of people who did a job well led to the competency framework as a model to distinguish characteristics that differentiated superior from average performance. In more recent years there has been another explosion of interest in competencies in the Human Resource (HR) environment because of the growing concern that traditional job analysis procedure are not able to effectively adapt to the new emerging HR management environment (e.g., distributed teams, complexity of work, changing work structures). The Navy also believes that a competency based approach has value and has committed to implementing a competency-based strategy for the Navy's Total Force (TF). Navy researchers are currently implementing a phased approach to develop competencies for the work of the Navy. Proficiency levels will be used to measure one's capability to demonstrate a competency (technical and non-technical) and to delineate the required competencies (technical and non-technical) for a billet. Different positions will require different levels of proficiency and competencies for successful performance. The mapping of competencies and proficiencies to the job requirements is concurrent and ongoing. This paper describes the advantages and challenges of implementing competencies and proficiencies for the Navy.

ABOUT THE AUTHORS

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INTRODUCTION

In the past 30 years, competency-based approaches have gained popularity in multiple fields (e.g., medical, legal, education) and workforce areas (e.g., government, industry) with various levels of implementation and success. In the last 15 years there has been an international expansion of competency modeling in workforce planning and human resource (HR) programs (Markus, Cooper-Thomas, & Allpress, 2005). Although the popularity of competency aligned organizations is increasing, there seems to be a gap between the plethora of practitioners and consultants advocating the benefits of implementing competency models and documented, validated benefits for workforce planning (Heinsman, de Hoogh, Koopman, & van Muijen, 2007; Horey, Harvey, Curtin, Keller-Glaze, Morath, & Fallensen, 2006; Rubin, Bebeau, Leigh, Litchenberg, Nelson, Portnoy, Smith, & Kaslow, 2007; Shippmann, Ash, Battista, Carr, Eyde, Hesketh, Kehoe, Pearlman, Prien, & Sanchez, 2000).

The competency movement in Industrial/Organizational (I/O) Psychology is often traced to an influential article published in 1973 by David McClelland. In his research he proposed focusing on competence rather than intelligence to predict successful job performance because of the inability k of traditional intelligence and psychometric tests ability to predict employee success (Heinsman, et al., 2007; Markus et al., 2005; Shippmann et al., 2000).

The claimed benefits of implementing competency models include all aspects of human capital management: recruitment and selection; career development; performance management; workforce planning; retention; succession planning; training and education; and career management. Although there are few research studies on competency models as a scientifically validated approach, the use of competencies seems to be increasing in popularity (Heinsman, et al., 2007; Markus, et al., 2005).

In terms of leadership competencies, Reed, Bullis, Collins, and Paparone (2004) criticized the competency models applied in a military environment. Their critique was primarily based on the development of competencies by individuals "outside the profession" and their view of competency mapping as an overly bureaucratic and complex that are not adaptive or meaningful to the complex military leadership requirements. However, Horey et al. (2006) found evidence validating the use of a leadership competency model for the Army.

No Agreed Upon Models

There is no single, agreed upon model for competencies. The lack of agreement includes an , no consistent operational definition and varying applications and uses for competency models dependent on the organization, causing further confusion among practitioners and scientists. Based on the various origins of competencies, the lack of consistency in defining competencies and the mixed application and intent of usage for competencies, the confusion is not too surprising. The value of competency models are dependent on the intended usage, the level of rigor, and competency evaluation, validation, and assessment strategies (Heinsman, et al., 2007; Horey, et al., 2006; Kaslow, 2004; Rubin et al., 2007; Shippman et al., 2000).

No Single Approach

Markus, et al., (2005) grouped competency models into three approaches: 1) educational approach focused on development of skills and expected work outcomes, 2) psychological approach focused on the behavioral repertoires of superior performance in the job and 3) business approach focused on the organization higher-level future oriented capabilities. There are many different approaches and types of competencies. However, our research has found that most applied competency models have blended approaches. Rubin et al. (2007) found that a lag between initiating a competency-based approach and an organization

adopting a pervasive culture of competency is often due to a lack of appropriate evaluation strategies.

Pearlman (2002) concluded in a Society for Industrial Organization Psychologists (SIOP) task force review of competency models that there were two types of competency models: good and bad. Good competency models were linked to business strategies, often developed by I/O Psychologists and were more meaningful for management. Bad competency models had a lack of methodological rigor, were not being used for their intended purpose, lacked evaluation, and lacked definitional clarity. In reviewing competency models, it is not always easy to distinguish the good from the bad.

The variation in definition and approach to competencies results in differing degrees of organizational usefulness. The requirement for the competency to be measurable and observable is not always apparent and in some cases is nonexistent except for in a very subjective manner. Some competency models have proficiency levels built into the definition; other models have a separate process for assessing proficiency or even no reference to levels of competency proficiency at all. The challenge for all who desire meaningful benefits from their competency effort is not only the identification of critical competencies or identification of proficiency indicators, but a well-defined implementation plan.

ORGANIZATIONAL COMPETENCY REVIEW

Many Efforts – Little Implementation

The development and application of competency models are highly variable within and across organizations (Pearlman, 2002). Many public sector organizations have initiated workforce planning initiatives utilizing competencies with varying levels of competency specificity and workforce planning application. In reviewing various competency models and workforce planning initiatives and applications, it is obvious that benchmarking, cross-pollination, and sharing of approaches has occurred (Anderson, 2004). It is also apparent that although organizations may have established a competency framework for implementing competencies in a number of HR practices, that some have only implemented a fraction of what they intended.

The simplified view of workforce planning across organizations often appears as four key steps 1) supply analysis (current competencies and workload), 2) demand analysis (future competencies and workload), 3) gap analysis (difference between current and future competencies and workload), and 4) solution analysis (how to close the competency gaps and limit the extra competencies) (Anderson, 2004). However, despite all the similarities in workforce planning, there is also a lot of disparity in the competency models, the application, and the predictive power of the workforce planning metrics incorporated. In summary, although there is no agreed upon model for competencies and competency frameworks and multiple competency approaches, most have a shared purpose in design to support workforce planning.

State Government Examples

Several state government competency models and websites have been reviewed to benchmark, educate, and assemble best practices and lessons learned.

For example, the North Carolina (2000) state government dictionary of dimensions identified 41 generic dimensions (i.e., 40 non-technical competencies and 1 generic technical competency of technical/professional knowledge) with key behaviors identified for state government workers. These competencies are used for assessments, determining and managing employee's pay, career development, and recruitment and selection.

The Montana (2004) statewide competency model consists of six non-technical competency areas with 24 competencies that have 34 additional sub-competencies, for a total of 58 non-technical competencies with five proficiency levels for each competency and sub-competency. These competencies are used for recruitment, selection performance management, training and development, compensation and classification.

The state of Georgia (2008) developed technical and non-technical competencies but only implemented in a phased approach the non-technical competencies in an evaluation pilot. The technical competencies were developed separately from the non-technical and there was too much data that lacked commonality and was not considered usable. In the website research of the state of Georgia the competencies seemed completely implemented and integrated in all HR applications, but in conversations with the project coordinator they had only piloted a portion of the non-technical competencies for employee evaluations (J. Hecht, personal communication, November 6, 2008 and April 15, 2009).

The Commonwealth of Virginia (2009) competency model is aligned to the state's mission and business needs. The competency model has seven competency areas with one broad technical and functional competency and six non-technical competencies with team member versus team leader distinctions each with 3-5 indicators for the behavioral examples. Proficiency is defined with four levels: learn, apply, master, lead/strategize. These competencies are used for self-assessment, training and development, performance management, placement of workers, and compensation decisions.

The state government competency examples are heavily focused on non-technical competencies with minimal, if any, incorporation of technical competencies. In other words, the focus of state government competencies is on "how" work is being conducted rather than "what" work is being performed. Are the focus and intended usage of federal government competency initiatives similar?

Federal Government Examples

Several federal government competency models were reviewed for best practices and lessons learned. The Center for Disease Control and Prevention (CDC) (2009) developed technical and non-technical applied epidemiology competencies (AEC) via a panel of experts over a 2-year period utilizing existing work. Their competency model consists of eight domains/competency areas based on tiers of epidemiology practice that represent a broad range of experience, responsibility, and education. An interesting split of tier groups at the highest tier level of the three levels separates: a) supervisors and b) researchers, based on the importance and value of management and hands-on research at the more senior levels.

The National Aeronautics and Space Administration (NASA) (2006) five workforce combination of technical and non-technical competencies are divided into two to twelve competency suites with additional sub-competencies within each competency suite. The drill-down competencies consist of a title and a comprehensive list of ability requirements and knowledge statements. Additionally, NASA's competency management system is split into two groups: (1) position competencies that are tied to NASA's mission without regard to incumbent, and (2) employee 'portfolios' that are tied to an individual's, skills knowledge, and expertise. These competencies are used for human capital management, employee development, as an expertise locator, and knowledge sharing.

The U.S. Geological Survey (USGS) (2009) website links competencies to training and has eight core leadership (non-technical) competencies (e.g., customer service). The U.S. Department of Transportation (DOT) (2009) also has core competencies for career development and different career paths that identify learning and development activities that will help meet future skill needs. For example, the Field Safety Competency Framework consists of core (non-technical) competencies, 50 technical competencies in six knowledge areas (e.g., program administration, safety engineering). The website also describes headquarters competencies with 4-levels (i.e., basic, intermediate, accomplished, and expert) of proficiency.

The National Institute of Health (NIH) (2009) developed competencies in four distinct areas: 1) 14 core (non-technical) competencies, 2) 16 leadership and management (non-technical) competencies, 3) 10 competency models (including sub-competencies) for specific occupations (technical), and 4) 8 executive level leadership (non-technical) proficiencies. Each type of competency has five levels of proficiency identified with corresponding appropriate course/title for proficiency development. The main focal point of NIH competencies is workforce development and career development for NIH employees to manage their careers for the next 5 years.

The NIH competencies are not applied to performance management or measurement and the NIH competency team advocates separating competencies from performance measurement. The uncertainty of NIH employees with how the competencies will be used was one of the barriers that the NIH competency team has had to overcome and they continue to face as additional competencies are developed and implemented. Another lesson learned from the NIH competency initiative was that employees and supervisors preferred 5-levels of proficiency rather than 4-levels proficiency as originally developed (NIH Competency Help Team, personal communication, June, 11, 2009).

Of the competency models reviewed several included non-technical competencies only, technical competencies only, or a hybrid of both. Most of the competency models reviewed do not address technical competencies at all or minimally include a generic catchall technical competency to cover the breadth of all technical competencies. Another issue, is the

complexity and simplicity tradeoff of competencies being written at too low of a level and too detailed to be unusable versus too high/simplified level and not relevant (Markus et al., 2005).

The federal government competency examples include more technical competencies than the state government examples reviewed. The different components and level of granularity of the competencies vary as well as the intended application and implementation. Multiple state and federal competency initiatives and examples exist, what is less clear is how many have been implemented successfully and in which HR and workforce planning areas. Despite the challenges and varying level and diversity of state and federal competency examples, the Navy is on-board and committed to implementing a consolidated TF competencies approach.

So what? What value and lessons learned are there from the state and federal competency examples for OPNAV N112 to be more successful in our competency effort? State and federal governmental agencies and departments have created competencies that vary in granularity, style, type, and level of work described. For a single organization or agency, the consistency in competency format and level of detail is important for a shared lexicon across the workforce population. In an organization as large and diverse as the Navy, it is even more important to have a consistent format and level for describing the work across varying categories of workers (i.e., military and civilian). The take-away is that with approximately 750 jobs and a population of over 575,000 the challenge of capturing the work, identifying technical competencies and competency gaps is daunting. Coupled with soliciting buy-in from those within the Navy that have already pursued competency efforts that may or may not already be implemented, the challenges are multiplied. For competencies to work for the Navy, the technical and non-technical competencies have to be written at the highest common level of work and remain consistent in style, type, and format for all members of the TF workforce.

Making Competencies Work for the Navy's Total Force: Putting Theory, State and Federal Examples to Practice

In structuring an approach for implementing a competency framework for the Navy, we designed an approach to avoid some of the common pitfalls of other competency initiatives. The pitfalls, our strategy for avoiding, and the risk level to success are listed in Table 1 below.

Table 1. Navy Strategy to Avoid Common Pitfalls

Pitfall/Barrier	Strategy	Risk
Level of Detail	* Mix of technical and non-technical competencies * Top-down approach vs. bottom-up * Written at highest "common" level of work for TF shared lexicon	
Implementation Approach	* Commitment from TF manpower, personnel and training organizations * Continuous communication	
Insufficient Resources	* Train the trainers * Supplement analysts with contractors * Explore virtual workshops	
Buy-in (e.g., Sponsorship, End-Users)	* Memorandums and Instructions to communicate ownership and benefits of the competency framework * Top level support of initiative and way ahead is required for success * Early adopters and supporters of competency initiative (e.g., Protective Services community)	
Competing Efforts (e.g., DoD, Contractors)	* Collaborate efforts to fit TF framework * Utilize competency data from all efforts in TF framework	

Navy Total Force Competency Initiative

The Navy OPNAV N112 competency model combines technical and non-technical competencies with five proficiency levels to describe the work of the Total Force. The Navy competency model framework includes both the technical and non-technical competencies required to accomplish the Navy's work and is a hybrid of simplified (i.e., non-technical competencies) with some level of

complexity (i.e., technical competencies). The goal for the Navy's Total Force competency effort is to allow for maximum interoperability and interchangeability of work functions among members of the Total Force, better matching of personnel to positions, a more responsive mechanism to measure current and future workforce gaps, and a mechanism for gap closure through manpower planning and development. The direction and guidance for a Total Force competency-based initiative is from multiple sources of authority. For example, in the DoD (2006) Quadrennial Defense Review (QDR) a key enabler of transforming the Total Force was a "competency-focused" and "performance-based" workforce.

The U.S. Navy (2007) Human Capital Strategy (2007) provided the vision and strategic goal of a competency-based workforce that applies to how Navy work and workforce are defined, described and managed by the competencies required for mission accomplishment. By determining which competencies are found in the Navy today, and determining which will be needed in the future, the Navy can recruit, train, reassign or educate to fill the gaps. Furthermore, one of the guiding principles of the U.S. Navy (2008) Total Force Planning and Management (TFPM) Memorandum of Agreement (MOA) for the Department of Navy Total Force Planning and Management was competencies being used to match people and work. In addition, a recent United States Government Accountability Office (GAO) (2009) report to Congressional requestors highlighted the progress in civilian workforce planning and competency initiatives for enterprise-wide mission-critical areas.

Defining Navy Competencies

The OPNAV N112 Navy definition of a competency is an observable, measurable set of skills, knowledge, abilities, behaviors and other characteristics that are needed to accomplish work or occupational functions. Technical competencies describe the 'what' needs to be performed or accomplished, the major work requirements related to being part of a profession and related to the specialized aspects of work performed. Non-Technical competencies are described in observable and measurable terms that are required for the effective accomplishment of the work, they describe 'how' work needs to be performed or accomplished (i.e., qualities and attributes) to be successful.

The OPNAV competency model defines a technical competency as consisting of a title, description, tasks, knowledge, skills, and abilities (KSAs). All six of these areas comprise a technical competency. The knowledge statements are often unique to the community and are the principles or facts acquired through education or experience. The skills are the learned or developed capabilities that facilitate job performance and are leveraged from the Department of Labor (DOL) (2008) skills library. The abilities are the characteristics, natural talents, or aptitudes an individual possesses and are leveraged from the DOL (2009) ability library.

The technical competency title provides key information about the work and is written to stand alone and still have meaning. The description is three or less sentences and describes the work that needs to be performed without any jargon or reference to a level of proficiency. The tasks describe areas of the competency. The KSAs complete the competency.

This competency model is being applied to the Navy Total Force, all Military Enlisted Rates, Officer Designators, civilian occupational series (i.e., General Schedule; Trades and Labor), specialty communities (e.g. Recruiters and Space Cadre), and contractors.

Pre-Competency Workshop

The draft technical competencies are developed by OPNAV N112 researchers utilizing available existing community data (e.g., legacy task statements, requirements document, position classification standards) and publications (e.g., training manuals, personnel qualification standards) and any additional resources available online or from the community point of contact (POC) and Subject Matter Expert (SME). The data is 'chunked' into initial work areas via spreadsheet for refinement into a preliminary set of technical competencies.

Working with the POC for the community of interest, the draft technical competencies are revised and improved in preparation for the competency workshop. A list of knowledges for the draft competencies and community are also developed. The OPNAV N112 researcher works with the community POC to organize the logistics of the workshop and to identify 10-15 SMEs for participation in the workshop. The SMEs identified as workshop participants should be top performers in the targeted field, have many recent years performing the technical work, represent multiple geographical locations, and be representative of all work areas of the field.

Prior to the workshop the draft technical competencies (i.e., title, description, and tasks) are submitted to an internal panel of OPNAV N112 experts for a quality review to ensure the draft technical competencies meet the standards and structure requirements. Any format improvements required are made prior to the workshop.

Navy Total Force Competency Workshop

The competency workshop is facilitated by members of the OPNAV N112 competency team that guide the SME discussion in revising and/or adding the technical competencies. Participants complete an expertise questionnaire regarding their length, breadth, recency of technical work experience, and geographical location to ensure that a representative sample of the community participates in the workshop. A "My Specialty Is" handout is also completed by participants listing three of their key responsibilities. The handout has two purposes, it is a reminder to the facilitators of participants' names (e.g., taped to front of table) and it is a cue for all key work areas that need to be captured by the technical competencies.

Before the draft technical competencies are reviewed, participants complete an allocation of time handout. Utilizing a pie chart format, participants identify how their day is divided between technical work (i.e., basis for technical competencies), general administrative duties, collateral duties, attending training, and other miscellaneous duties. Participants are then asked to divide the portion of technical work into large chunks of technical work responsibilities (e.g. analysis, budget, research). This exercise is used as a means for the workshop attendees to begin to 'chunk' and think in terms of their technical work. The allocation of time handout is also reviewed at the end of the technical competencies portion of the workshop to confirm that all the technical competencies have been captured for the community.

Participants are asked to develop job-related, non-sensitive (i.e., can be shared) 'sea story' (critical incident) using three main elements: 1) situation: a description of the situation that leads to the incident, 2) action: the behaviors of the focal person during the incident, and 3) result: the outcome of the focal person's actions; was if effective or ineffective; and what was the skill level of the focal person. Participants are then asked to place these worksheets in their folders for use later in the workshop.

The draft technical competency titles and descriptions are reviewed by participants either by using a card sort methodology that allows participants to sort or an Excel handout to mark the draft competencies by accept, reject, or modify. The makeup of the attendees and preference of the facilitator determines the method used. Dependent on the number or extent of modifications required or if there is a large group of workshop participants, the group can be divided into teams according to their key duties (e.g., duties listed on the "My Specialty Is" handout) to work on the technical competencies that need modification.

Once modifications have been made, all of the participants are brought back together to review the entire list of technical competencies to determine:

- Has all technical work been represented?
- Are the technical competencies separate and not overlapping?
- Is there a majority of consensus regarding a technical competency? If disagreement, can the dissenters live with it?
- Do the technical competencies follow the correct format and structure?

After the technical competencies titles and descriptions are determined, the draft tasks and knowledges are reviewed and updated and revised by the workshop participants. A handout is provided to the participants to map the knowledge elements, skill statements, and ability statements to each identified technical competency. Optimally, participants select the five most relevant of each KSA (minimum of three and a maximum of ten) per technical competency.

During the workshop, SMEs review the non-technical competencies. Participants perform a card sort exercise to identify which non-technical competencies apply to their population. Working individually, participants review the competencies against three filter questions and then place each card into either an 'accept' or 'reject' pile. After each filter question, only the 'accepts' are used for the next filter question. The filter questions are:

- Is this competency critical to successful performance in your career field?
- Does this competency differentiate top performers from all the rest?
- Would a higher level of proficiency at this competency result in better performance?

After the SMEs have completed the exercise, the facilitators tally the number of 'accepts' and then

divide that number by the total number of SME participants. In order to keep the number of non-technical competencies manageable, the results are recorded, sorted by percent agreement, and presented to the SMEs as a list of the non-technical competencies that had 60% (i.e., Lawshe's coefficient) or more agreement.

After the technical and non-technical competencies have been determined, the SMEs are asked look at the sea stories they wrote the first day of the workshop. They are provided a copy of the competencies and are asked to review their sea stories and identify the non-technical and technical competencies present in their critical incident.

The critical incident technique is used to systematically identify which technical and non-technical competencies contribute to success or failure of individuals in specific situations. The presence or lack of competencies in a particular incident determines the outcome of a critical incident. Collecting a sufficient number of critical incidents helps validate the collection effort and build a profile of the competencies that are required for satisfactory performance in the professional group.

During the workshop, participants are also facilitated in a discussion of future trends and challenges of what technical competencies and skill sets might be needed in the future. Participants have an opportunity to discuss areas of future concern (e.g., emerging trends, changing geopolitical climate, technology, new laws or regulations) that may affect their community.

Post-Competency Workshop

After workshop completion, the primary responsibilities for the analysts are data analysis and preparation for the online validation of the technical competencies. Both the data input and analyses are checked for quality control purposes.

Spreadsheets are used to complete the analysis of the essential demographic data including the experience and geographical locations of participants from the workshop. This ensures that participants have not been selected from a single concentrated location, which would lessen the validity of the results.

Results of the critical incidents are analyzed to determine which technical and non-technical competencies are reflected in the participant write-ups. This analysis is not just what technical and non-technical competencies the SMEs stated were reflected, but what the analyst has confirmed was reflected in the critical incident.

Similar to determining the top non-technical competencies, the KSAs need at least 60% (i.e., Lawshe's coefficient) of the workshop participants to assign it to a competency in order for it to be considered a valid selection. However, given the size of the sample of the population and the number of KSAs from which to select, this may not always be possible. In these instances, the five KSAs that were most commonly selected for each competency are assigned to the competency.

The complete technical competencies, titles, description and KSAs are delivered in a spreadsheet to the OPNAV N112 Technical Competencies Quality Review Board for review of the technical competencies data for adherence to prescribed format and to ensure titles, descriptions, and tasks are within guidelines. Any panel questions or changes are coordinated with workshop SMEs for approval or rework and final acceptance of the content before the survey competency assessment.

A data collection report is a summary of all the data collected and key findings. The critical incidents are only used to demonstrate which competencies occurred and how often and the future focus information is provided to either community managers and/or the POC.

Competency Content Validation

Competency content validity involves ensures a closer match between job-relatedness and that portion of the work covered by the competency. The qualifying of SMEs for the workshop ensures validity by choosing appropriate SME participants for the workshop. To increase content validity and better represent the population, the technical competencies are reviewed by the community at large for refinement and validation. By using this two-stage cluster sampling approach, a savings of time and expense in both gathering and periodically refreshing the data is achieved.

The first stage of the two stage cluster analysis was to identify SMEs who represent the identified clusters of our analyses (e.g., clusters defined by geographic location, occupation, skill and knowledge levels). The second stage is to use the input from the initial SME sample group to conduct a survey utilizing a representative sample of the population.

The community POC is provided a web link to a survey that is in turn sent to additional qualified SMEs. To qualify and solicit feedback from the additional SMEs they are electronically provided a copy of the privacy act statement, expertise questionnaire, competency assessment guide, and a competency data assessment link and are asked to rank each competency on a scale from 1 to 4 (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree) on the following "Overall, I feel that the wording of the competency title and description is an accurate representation of the work that either I or other people within my profession perform." For the competencies the SMEs felt were not representative of work performed (rated as a 1 or 2), they are asked to explain why.

The competency assessment is where the participants rate each competency on frequency performed, importance, how a competency is best developed, whether it is required by all individuals (core) or only for certain jobs (specialty), and the stage of a career it is initially required. The mode (most commonly selected response) is the best method to determine how to report the results for each factor mentioned with the exception of importance, where the mean is the appropriate metric.

The results of this analysis provide insight into how competencies are developed throughout a career by giving decision makers the power to see which competencies are required first and which ones are required by all individuals (core) or only for certain jobs (specialty). The SME survey input when combined with workshop input, increases competency validity.

Navy Competency Success Stories

Success stories are not about the collection of competencies, but the implementation of them. The Protective Services category was the OPNAV's first competency collection effort. This included the civilian series' of Security and Law Enforcement. The community POC was very active in the process and dedicated to the success of the effort and acted with full support from the Community Leader. The collection effort was routine, however the real story began post validation. Within three months the technical competencies were being used for hiring. Currently technical and non-technical competencies are being utilized for all basic HR processes for Security and Law Enforcement employees including career roadmaps for supervisory and non-supervisory personnel, succession planning, position descriptions, performance parameters and assessments. Collaboration, valid competencies and implementation are the recipe for success.

Navy Competency Pitfalls

Any organization that has multiple competency models renders all models within that organization less useful. In the past, individual organizational elements of the Navy recognizing the value of competencies began their own competency efforts. As a result within the Navy, competencies have been defined and applied differently. At the present time, there are multiple competency efforts ongoing in the Navy.

The Department of Defense (DoD) developed acquisition competencies based on a legislative requirement to assess skill gaps across certain DoD communities (e.g., contracting). The units of competence, training required, technical elements (i.e., N112 technical competencies) and professional leadership proficiencies (i.e., N112 non-technical competencies) developed by DPAP have been utilized by Navy entities independently and in different ways. For example, one entity has implemented competencies for workforce development, career planning, and to justify training budgets. Where others have more indirectly and to varying degrees implemented the competencies across HR and workforce planning based on work domains.

The challenge for OPNAV N112 analysts is to work with Navy organizations that have moved forward with their own competency efforts to format the competency data to fit the framework of the Navy Total Force competency model and validate the resulting TF competency end product.

Proficiency – Billet and Individual

Competencies are developmental, in that what is expected varies depending on the individual's level of professional functioning or the requirements of the position (Kaslow, 2004). Proficiency levels describe the levels of a competency required to perform a specific job successfully. OPNAV N112 recommends 5-levels of proficiency (None/Not Applicable, Basic/Introductory, Functional, Intermediate, Advanced, and Expert) for technical competencies with global descriptions for each level. For the non-technical competencies N112 recommends 3-levels of proficiency (None/Not

applicable, Basic/Introductory, Intermediate, Expert) utilizing behavioral indicators of performance to help raters focus on more objective examples of behavior rather than on more subjective indicators or value judgments. The behavioral indicators are examples of what behavior could look like and are not inclusive of all behaviors that demonstrate each level of performance in the competency. Rather, it is a tool to help guide evaluations of employee non-technical competency behaviors and performance. The level of proficiency assigned should be based on the consistency during the performance cycle demonstrating the majority of behavior indicators for that level.

The billet or position competencies (technical and non-technical) and proficiency levels required for each position will need to be determined for each Navy billet.

Individual proficiency levels for the technical and non-technical competencies are the result of education, training, and/or experience that underlie an individual's capacity to successfully perform a work activity or set of work activities. The proficiency levels possessed by or available to an individual will be self-assessed by the individual and verified by his/her supervisor. In addition, a supplemental worksheet documenting competency proficiency levels will be required.

CONCLUSION

Utilizing technical and non-technical competencies in HR practices has the potential to benefit both individual Navy employees and departments. In the interviews and discussions we had with state and federal representatives of competency-based initiatives, we learned of barriers to success and lessons learned including: resource issues, project delays, and end-user pushback based on their fears and concerns. More collaboration is needed to share these lessons learned and best practices. A future area of research needed is the further assessment of successful competency-based workforce planning implementations and metrics versus the marketing and stated benefits of an integrated HR competency model on public websites and PowerPoint presentations without metrics of success.

For competencies to truly "work" for the Navy's Total Force the guidelines and processes for how competencies will be applied and used for the entire Navy need to be clearly communicated to the workforce. Splinter competency initiatives need to be stopped and a common and consistent framework for competencies adopted. The work for developing and validating competencies has begun but the concern is that without clear guidance and focus on how the competencies will be implemented and used, that all the competency work will be validated but not used or useful for workforce planning and other HR initiatives. This would lead to a common outcome with competency initiatives—the investment in the analysis and doing all the work and failing to follow-through on the implementation.

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REFERENCES

Anderson, M.W. (2004). The metrics of workforce planning. *Public Personnel Management, 33(4),* 363-378.

Center for Disease Control and Prevention (2009). *CDC/CSTE Development of Applied Epidemiology Competencies:* Retrieved May 21, 2009, from http://www.cste.org/dnn/Home/CSTEFeatures/Competencies/tabid/174/Default.aspx

Commonwealth of Virginia. (2009). *Guidelines for Developing Competency-Based Systems:* Retrieved June 8, 2009, from, http://jobs.virginia.gov/cd_competencies.html

Department of Defense (2006). *Quadrennial Defense Review Report:* Retrieved June 18, 2009, from http://www.globalsecurity.org/military/library/policy/dod/qdr-2006-report.pdf

Department of Labor. (2008). *O*NET Skills Search*: Retrieved September 05, 2008 from, http://online.onetcenter.org/skills/

Department of Labor. (2009). *Instructions for Making Abilities Ratings:* Retrieved June 26, 2009 from http://www.onetcenter.org/dl_files/MS_Word/Abilities.doc

Heinsman, H., de Hoogh, A.H.B., Koopman, P.L., & van Muijen, J.J. (2007). Competencies through the eyes of psychologists: A closer look at assessing competencies. *International Journal of Selection and Assessment, 15*, 412-427.

Horey, J., Harvey, J., Curtin, P., Keller-Glaze, H., Morath, R., & Fallesen, J. (2006). A criterion-related

validation study of the Army core leader competency model (Army Project Number DASW01-03D-0016, Mod 9).

Kaslow, N.J. (2004). Competencies in professional psychology. *American Psychologist*, 774-781.

Markus, L.H., Cooper-Thomas, H.D., & Allpress, K.N. (2005). Confounded by competencies? An evaluation of the evolution and use of competency models. *New Zealand Journal of Psychology, 34(2),* 117-126.

McClelland, D.C. (1973). Testing for competence rather than for "intelligence." *American Psychologist*, 28, 1-14.

Montana. (2004). *A Guide to Integrating Competencies into Montana's Human Resource Programs*: Retrieved April 18, 2009, from http://www.hr-guide.com/data/G481.html

National Aeronautics and Space Administration. (2006). *NASA Workforce Competencies Facet:* Retrieved May 18, 2009 from http://nasataxonomy.jpl.nasa.gov/2.0/competencies/urn-comp-1438.php

National Institute of Health. (2009). *Competencies for NIH Employees:* Retrieved June 11, 2009, from http://hr.od.nih.gov/competencies/default.htm

North Carolina (2000). *North Carolina State Government Dictionary of Dimensions:* Retrieved April 17, 2009, from http://www.nccrimecontrol.org/div/admin/dimensions.pdf

Pearlman, K. Competency Modeling: Mirror into the 21st century workplace - or just smoke? (2002). *Presented at the 26th Annual IPMAAC Conference on Personnel Assessment*.

Reed, G., Bullis, C., Collins, R., & Paraprone, C. (2004). Mapping the route of leadership education: Caution ahead. *Parameters*, 46-60.

Rubin, N.J., Bebeau, M., Leigh, I.W., Litchenberg, J.W., Nelson, P.D., Portnoy, S., Smith, I.L., & Kaslow, N.J. (2007). The competency movement within psychology: An historical perspective. *Professional Psychology: Research and Practice, 38(5),* 452-462.

Shippman, J.S., Ash, R.A., Battista, M., Carr, L., Eyde, L.D., Hesketh, B., Kehoe, J., Pearlman, K., Prien, E.P., & Sanchez, J.I. (2000). The practice of competency modeling. *Personnel Psychology, 53*, 703-740.

State of Georgia. (2008). *Georgia's Behavioral Competency Dictionary:* Retrieved November 6, 2008, from http://www.spa.ga.gov/competencyManage/GeorgiaBehavioralCompetencyDictionary.pdf

United States Department of Transportation. (2009). *Field Safety Competency Framework:* Retrieved June 18, 2009, from http://safety.fhwa.dot.gov/training/competencies/fsecf.htm

United States Geological Survey (USGS). (2009). *Understanding Competencies in the USGS:* Retrieved June 14, 2009, from http://training.usgs.gov/MngmtComps/MgmtComps.pdf

United States Government Accountability Office (2009). *Human Capital Opportunities Exist to Build on Recent Progress to Strengthen DOD's Civilian Human Capital Strategic Plan* (GAO-09-235): Retrieved June 18, 2009, from http://www.gao.gov/new.items/d09235.pdf

United States Navy. (2007). Human Capital Strategy Building and Managing the Total Navy Force: Retrieved August 18, 2008, from http://www.donhcs.com/hsr/doc/070420%20Navy%20MRA%20HCS%20FINAL%20v2.pdf

United States Navy. (2008*). Memorandum of Agreement for Department of the Navy Total Force Planning and Management*: Retrieved June 18, 2009, from http://www.donhcs.com/LinkClick.aspx?fileticket=%2brt%2f7GC9zNo%3d&tabid=234