Competency Models:

A Review of the Literature and

The Role of the Employment and Training Administration (ETA)

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For over 30 years, business and industry has utilized competency models to select

employees. The trend to use competency-based approaches in education and training,

assessment, and development of workers has experienced a more recent emergence. With the

mobility of the workforce and retirement of the baby boomers, competency models are being

used for succession planning as well. It is within the last few years that the Employment and

Training Administration (ETA) has turned its focus on skills acquisition and assessment to the

competency model process for determining the needs of business and employers and the

requirements of skilled workers. Recently, ETA has been engaged with business, industry, and

education/training leaders to develop competency models for targeted industries and broker

information on resources that are used based on or used in conjunction with competency models

to efficiently prepare the workforce. This paper examines the role of competency models in

human resources practices and discusses where the ETA Competency Model Clearinghouse has

assisted in sharing competency related information and resources to the publicly funded

workforce investment system and private industry. Concluding remarks suggest future directions

for ETA.

Defining a Competency

First discussed and assessed by McClelland in the early 1970s, competencies, or

individual characteristics, were recognized as significant predictors of employee performance

and success, equally as important as an individual's academic aptitude and knowledge content as

indicated by tests scores or results (Lucia & Lepsinger, 1999; McClelland, 1973). A competency

is the capability of applying or using knowledge, skills, abilities, behaviors, and personal

characteristics to successfully perform critical work tasks, specific functions, or operate in a given role or position. Personal characteristics may be mental/intellectual/cognitive, social/emotional/attitudinal, and physical/psychomotor attributes necessary to perform the job (Dubois, 1993; and Lucia & Lepsinger, 1999). Boyatzis (1982) and Fogg (1999) extend this definition to include both internal and external constraints, environments, and relationships related to the job or occupation. Motivations and perceptions of the work and ones self or talent also are viewed as influential in competently and successfully performing in a position (Boyatzis, 1982; Fulmer & Conger, 2004; Gangani, McLean, & Braden, 2006; and Sandberg, 2000). In summary, competencies are specific personal qualities that are "causally related to effective and/or superior performance" (Boyatzis, 1982, p. 23), are common across many settings and situations, and endure for some time (Delamare Le Deist & Winterton, 2005).

Competency Models

A competency model is a descriptive tool that identifies the competencies needed to operate in a specific role within a(n) job, occupation, organization, or industry. Simply stated, a competency model is a behavioral job description that must be defined by each occupational function and each job (Fogg, 1999). Depending on the work and organizational environment, a group of 7 to 9 total competencies are usually required of a particular job and depicted in a competency model (Shippman, et. al., 2000).

To understand competency requirements of a job role, they are often represented pictorially and competencies are mapped, with competencies existing on a hierarchy (Sandwith, 1993). This also is true of the competency models that the ETA has recently developed with industry representatives for 3 of the 14 targeted industry sectors identified as part of the President's High Growth Job Training Initiative and can be found in the ETA Competency

Model Clearinghouse.[1] Each of the three industry models are based on the general competency model framework (see Figure 1) described on the ETA Competency Model Clearinghouse. The generic framework depicts the competencies existing on nine tiers, with lower tiers serving as building blocks for the higher tiers (PDRI, & Aguirre International, 2005). The lower tiers describe foundational competencies with a broad application to many industries or occupations. Specifically, the foundational competencies group includes tiers one through three, which represent personal effectiveness, academic competencies, and workplace competencies. As one moves up the tiers, the competencies become more specific to an industry and an occupation. The second grouping is industry-related competencies and includes industry-wide technical competencies and industry-specific technical competencies (i.e., tiers four and five). The third and final grouping on the ETA model is occupation-related competencies that subsumes tiers six through nine (i.e., these tiers include the occupation-specific knowledge competencies, occupation-specific technical competencies, occupation-specific requirements competencies, and management competencies).

The elements of the competency models developed by ETA and industries are consistent with the literature that describes competency models. Rothwell (2002) explains that there are core competencies that are required of all workers. This would include knowledge, skills and abilities (commonly referred to as KSAs), as well as soft skills or behaviors (Lucia & Lepsinger, 1999; and Rodriguez, Patel, Bright, Gregory, & Gowing, 2002). The core competencies or skills are similar across occupations and are required of many occupations, as

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[1] The ETA Competency Model Clearinghouse is located at: http://www.careeronestop.org/CompetencyModel/ (01/09/2008).

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9 Management Competencies

Staffing
Informing
Delegating
Networking
Monitoring Work
Entrepreneurship
Supporting Others
Motivating & Inspiring
Developing & Mentoring
Strategic Planning/Action
Preparing & Evaluating Budgets
Clarifying Roles & Objectives
Managing Conflict & Team Building
Developing an Organizational Vision
Monitoring & Controlling Resources

8 Occupation-Specific Requirements

Requirements TBD

7 Occupation-Specific Technical Competencies

Competencies TBD

6 Occupation-Specific Knowledge Areas

Knowledge areas from O*NET and OPM Mosaic taxonomies

5 Industry-Sector Technical Competencies

Competencies to be specified by industry representative

4 Industry-Wide Technical Competencies

Competencies to be specified by industry sector representative

3 Workplace Competencies

| Teamwork | Adaptability/ Flexibility | Customer Focus | Planning & Organizing | Creative Thinking | Problem Solving & Decision Making | Working with Tools & Techology | Workplace Computer Applications | Scheduling & Coordinating | Checking, Examining & Recording | Business Funda- mentals |

2 Academic Competencies

| Reading | Writing | Mathematics | Science & Technology | Communication- Listening & Speaking | Critical & Analytic Thinking | Active Learning | Basic Computer Skills |

1 Personal Effectiveness Competencies

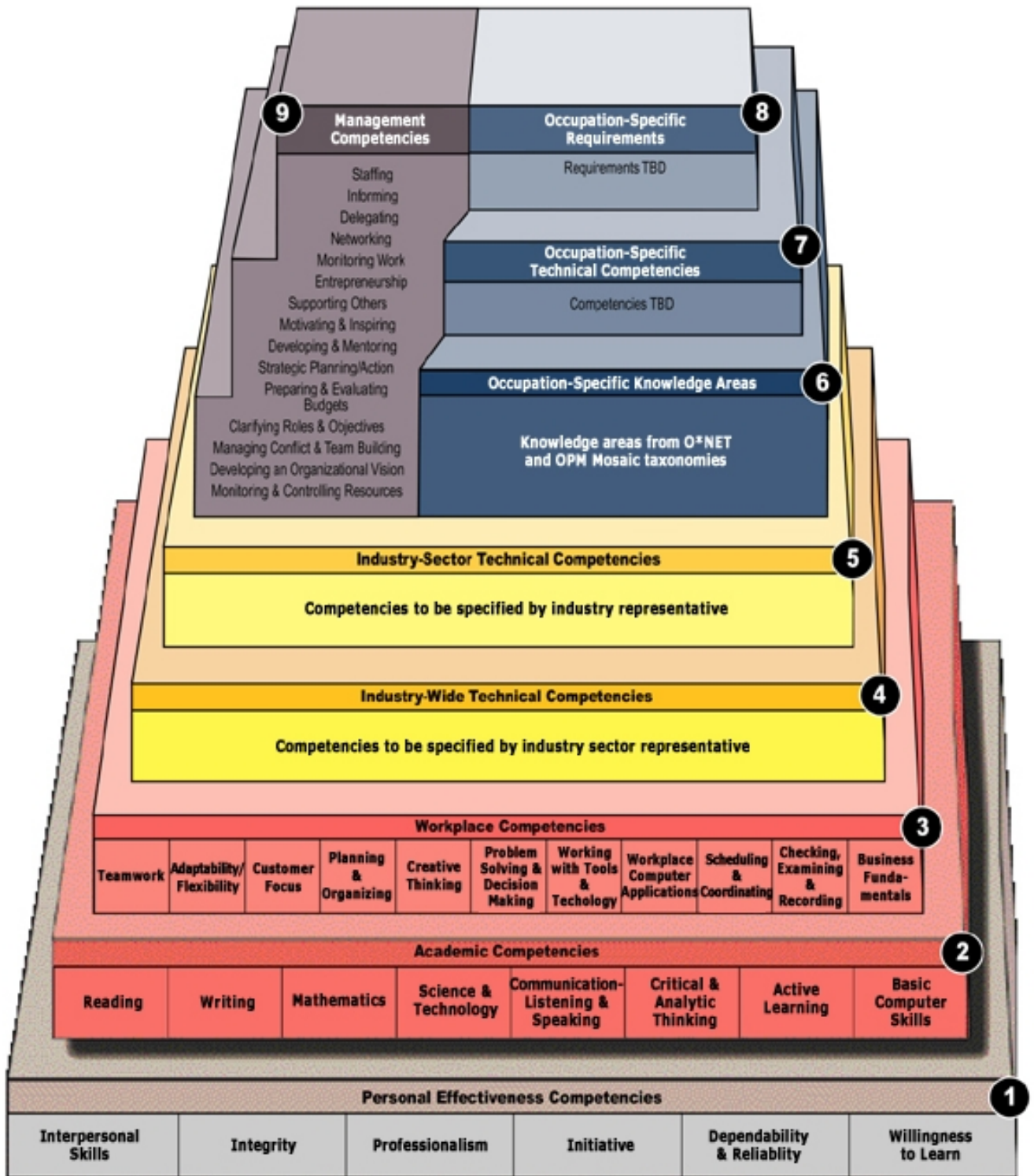| Interpersonal Skills | Integrity | Professionalism | Initiative | Dependability & Reliablity | Willingness to Learn |

Figure 1. ETA Competency Model Clearinghouse's General Competency Model Framework

mentioned above. Roth (2002) categorizes the core skills further describing foundational and intermediate competencies. Demonstration of the core competencies illustrates an individual's occupational or professional competence (Spencer & Spencer, 1993). The foundational competencies might include reading, writing, computation, listening, questioning, speaking, cognitive, individual responsibility and self-esteem, resources (time, money, people, and information), interpersonal, and information and technological. The higher level competencies (McClelland, 1973; and Rothwell, 2002) might include systems thinking, personal mastery or willingness to learn, mental modeling, shared visioning, team learning, self-knowledge, short- and long-term memory, subject matter knowledge, enjoyment of learning and work, flexibility, persistence and confidence, sense of urgency, honesty, giving respect to other, and initiative. In much of the recent literature on competency models, there are job-related or functional competencies with underpinning behavioral competencies (Delamare Le Deist & Winterton, 2005). These models have *competency domains* broken down into *competency groups* and further sub-categorized into *sub-competencies*. As one continues to the next levels in the hierarchy, the competencies become further focused and specific to the industry, job or occupation, and position. Technical competencies can be found in the level(s) above the intermediate level of the competency model. The ETA Competency Model Framework depicted in Figure 1 is one example of how to graphically represent competencies.

Competencies are also context-specific (Boyatzis, 1982; Delamare Le Deist & Winterton, 2005; and Youn, Stepich, & Cox, 2006). Some competencies are more important or essential than others for a position. The degree or level to which they are needed or demonstrated may vary depending on the job or task required of the position. For instance, a sales person and a

cashier both work with customers but likely require a different capacity or facility for interpersonal skills, computation, speaking, etc.

Thus, there are different levels of proficiency for the various behavioral descriptors included in a competency model. Dreyfus and Dreyfus (1980) describe levels of competence that include novice, experienced beginner, practitioner, knowledgeable practitioner, expert, virtuoso, and maestro. From the novice that is focused on rules and limited or inflexible in their behavior to the individual who is willing to break rules to provide creative and innovative solutions to business problems. An adaptation of this model, by Benner (1984), describes levels of performance as follows: 1) unskilled or not relevant; 2) novice; 3) learner; 4) competent; 5) proficient; and 6) expert. The U.S. Office of Personnel Management (OPM), using the Multipurpose Occupational Systems Analysis Inventory—Closed-ended (MOSAIC) approach, has developed benchmarks or levels of mastery that define five levels of competency and provide behavioral examples for each level (Rodriguez, Patel, Bright, Gregory, & Gowing, 2002). Individuals will range in their levels of competence, which may be related to their experience, but also their willingness to be a lifelong learner.

The value of competency models is that a whole-person assessment or holistic approach (Mansfield, 1989; and Rodriguez, Patel, Bright, Gregory, & Gowing, 2002) can be developed to examine the competencies that an individual possesses and may still need to acquire as required by a given industry or occupation. The information can then be used successfully by human resources development (HRD) or workforce development professionals in various applications with the workforce. For example, a competency model can be appropriate for "integrating education and training, aligning both with the needs of the labor market and promoting mobility [and transparency] for individuals (e.g., vertical as in career progression, lateral as in movement

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between sectors, or spatial as in geographically), especially for workers faced with job insecurity" (Delamare Le Deist & Winterton, 2005; van der Klink & Boon, 2002). Therefore, competency-based hiring, assessment, and training and development practices have emerged.

Industry Applications of Competency Models

Since the 1990s, competencies have become the code words for the human resources and strategic management practices of recruiting, selecting, placing, leading, and training employees and evaluating employee performance. Competency models also have been used to classify jobs in both the private and public sectors. When engaging in succession planning, competency models are used by business to prepare and advance competent incumbent workers to vacant positions of leadership. When a competency model has been developed for each position within an organization, the human resources, training, management and employee are working in unison to meet the goals of the organization. In the public workforce investment system, competency models have been used in specific ways with One-Stop Career Centers, Workforce Investment Boards, and education and training providers.[2] Competency behaviors can bring a common vocabulary and perspective to those operating within an organization or system. A consistency of expectations is understood by each player on an organizational team or within a professional network. This systematic framework is used to convey the desirable behaviors and thinking as one develops individually and professionally, within an organization or across industries. While a competency model may benefit various phases of the human resources experience or practice, in isolation, the value of a competency model is not fully realized. To be used successfully in an organization or other professional network, competencies must be inclusive or integrated throughout all of the human resources practices (Fulmer & Conger, 2004; Lucia & Lepsinger,

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[2] Examples of how competency models are being used can be found on the ETA Competency Model Clearinghouse at: http://www.careeronestop.org/CompetencyModel/competencymodel_users.aspx?wi=Y (01/09/2008).

1999; Montier, Alai, & Kramer, 2006; Rodriguez, Patel, Bright, Gregory, & Gowing, 2002; and Rothwell & Wellins, 2004). The following discussion examines the usefulness of a competency model from both the demand and supply side of employment practices.

Using a competency model to develop behaviorally-based interview protocols and assessment tools can ensure the right fit of an individual when selecting and hiring for a position (McClelland, 1998), as well as prepare incumbent staff for succession into specific positions through development plans and training, and guidance received through a performance review system also based on this same competency model (Gangani, McLean, Braden, 2006; Grigoryev, 2006; Lucia & Lepsinger, 1999; and Rodriguez et. al., 2002). For example, the competency-based structured interview and other assessment tools, such as simulation exercises, group exercises, written exercises, and a technical interview, are being used in combination to select health care professionals because multiple behaviors and attitudes can be assessed with the use of one or more measures (Patterson, Lane, Ferguson, & Norfolk, 2001). OPM also has defined competencies for jobs so that there is uniformity across federal agencies (Rodriguez, Patel, Bright, Gregory, & Gowing, 2002).

Competencies not only exist for individual efforts but also for work functions that require team collaboration. With global competition and technological advances, organizational success is depending more on team efforts. A team competency model is proposed by Margerison (2001), with performance being assessed on nine competencies. Finally, a competency framework must be robust, dynamic, fluid, and flexible to change with technological, economic, and other changes (Dubois, 1993; and Lucia, & Lepsinger, 1999) and should be re-evaluated and refined, along with the selection and other human resources tools developed and used with the

competency model (Egodigwe, 2006; Lucia, & Lepsinger, 1999; and Patterson, Lane, Ferguson, & Norfolk, 2001).

Competency models are being used in other areas of human resources management to align the goals of an organization and talents of its workers. It is important to note that a *competency* model describes the qualities required of a worker to be successful in a position, on a team, and within an organization, but a *competence* model describes what an individual worker must perform consistently to achieve or exceed the strategic goals of the organization (Delamare Le Deist & Winterton, 2005; and Teodorescu, 2006). In other words, there are competencies required in a job and these can be held by both average and exemplary employees, but there are also competencies held by only the exemplary worker (Dubois, 1993). This latter definition is related to aligning people and their performance to corporate goals, organizational strategy and success, business competitiveness, and profit. Competencies are identified and given importance when they achieve the organization's goals. Delamare Le Deist and Winterton (2005) explain that the difference between each concept has become fuzzy in both literature and practice. Competency models also are being used to organize the business needs and directional strategy, convey the values and mission of a company, and reward those workers who learn and demonstrate the identified organizational competencies (Fogg, 1999; Lucia & Lepsinger, 1999; and Zingheim, Ledford, & Schuster, 1996).

Developing and utilizing competency models has been equated with running a profitable and successful organization through strategic management of the professional talent within the organization. Thus, several private industry organizations have evolved to assist companies and businesses with developing organizational competency models. For example, ITG[3] designs the Right Competency Model that will align jobs, competencies, and learning resources.

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[3] For more information on ITG's model, visit: http://competencymodels.net/products/ (12/04/2007).

Batrushollweg International's[4] competency model aligns talent with business goals or the strategic focus of an organization. In a sense, an individual's technical, as well as their personal characteristics and attributes must be a fit with the corporate culture in order to be hired by a particular organization and be successful on the job. Without these attributes or competencies, the individual is not considered qualified (King, King, & Rothwell, 2002). In other words, possession of these traits is assumed to lead to expected or desired performance.

Assessing and evaluating performance of an individual through a competency-based appraisal system and providing guided training and professional development opportunities based on the competency model must also be included in an agency's practices. A successful organization will consider the competency model when selecting and hiring new employees but also will be using the competency model to develop and advance incumbent employees. In some companies, successful succession planning requires updating competency models or job descriptions, recognizing internal talent through assessment, and developing such talent through training (Egodigwe, 2006). From a human resources perspective and strategic business model, the competency model can be used to assist people in moving up or over in an organization or industry to benefit an organization. The ETA Competency Model Clearinghouse features a tool that allows the electronic creation and customization of competency models for the occupations available within an organization, with the future possibility of a feature that will connect competency models in order to build career pathways and lattices within an organization.[5] When designing this tool, ETA considered the value of its utility for the small business owner or human

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[4] For more information on Batrushollweg International's model, visit: http://www.batrushollweg.com/ (12/04/2007).
[5] To build a competency model, please visit the ETA Competency Model Clearinghouse Web site at: http://www.careeronestop.org/CompetencyModel/tool_step1.aspx (01/09/2008) or http://www.careeronestop.org/CompetencyModel/careerpathway/cpwoverview.aspx (11/20/2008). Editor's note: Since the writing of this literature review, the clearinghouse has been updated and enhanced. Both a Competency Model Tool and a Career Ladder/Lattice Tool now exist.

resources staff person with few resources for procuring vendors to develop competency model frameworks.

Preparing the Workforce Using Competency Models

Until now, competencies have been discussed from the demand side of employment with consideration primarily given to the needs of employers. Competency models can be used by the supply side of the labor market as well, such as a learner or student, incumbent worker, or hopeful and expectant new employees applying for a position, to achieve job stability. While competency models are useful for business planning purposes, individuals seeking employment, advancing in their jobs, or transitioning careers can benefit from career exploration, planning and development with the use of a competency model framework.

Potential job candidates and employees must consider competencies required of a position of interest and develop and convey the desired knowledge, skills, abilities, and other characteristics to successfully interview for, perform at, and advance in a job within an organization. According to Raven & Stephenson (2001), individuals must demonstrate general competence in the following four areas:

1) *Meaning* competence – understanding the culture of the organization and acting in accordance;
2) *Relation* competence – creating and maintaining connections with stakeholders of the tasks or organization;
3) *Learning* competence – identifying solutions to tasks and reflecting on experiences so that what is learned improves the next task completed; and
4) *Change* competence – acting in new ways when the task or situation calls for it.

These competencies would be required and practiced by both the average and exemplary employee. By understanding the competency model for a position or organization, the individual gains an awareness of the outputs or products or services delivered through the position and has a "destination for a learning process" (Rothwell, 2002; p. 133). Where there are gaps in

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acquisition of these competencies, an employee may experience difficulty in an interview or on the job. If training or development opportunities are not taken advantage of through their own initiative while preparing for employment or as prescribed by an employer once employed, and mastery is not accomplished, ineffective behavior or inaction usually results. However, through training resources, and other developmental opportunities such as mentoring and modeling behaviors through management leadership, many competencies can be learned.

Competency models can be used to guide individual professional development, as well as assist educators and trainers in developing curricula that meets the needs of employers (Rothwell, & Wellins, 2004). The ETA Competency Model Clearinghouse's Resources Web page provides various competency-based materials that can be used by stakeholders in the public workforce investment system to ensure the workforce possesses the competencies necessary to be successful on the job and help employers meet their organizational goals. Materials include models for curriculum and instruction, training and development, assessment instruments, skill standards, apprenticeship work process schedules, and information on certification and credentialing requirements, among others.[6]

Paulson (2001) contends that competencies can be used to prepare graduates of post-secondary institutions for entry into the performance-driven labor market. By U.S. educational standards, a competency provides a "means" (knowledge, skills, abilities) and an "end" (to be an effective employee functioning and performing at expected standards) (Youn, Stepich, & Cox, 2006). Competency models are guides or maps for guiding education and training and

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[6] The ETA Competency Model Clearinghouse's Resources Web page is located at: http://www.careeronestop.org/CompetencyModel/search.aspx. The Career Resource Library available on America's Career InfoNet also provides information on competency-based resources, work readiness, and curriculum development at: http://www.careerinfonet.org/crl/library.aspx?LVL2=14&CATID=594&LVL3=y&PostVal=1. Other information on competency models is also available at: http://www.careerinfonet.org/crl/library_search.aspx?Keyword=competency+models&image1.x=8&image1.y=10 (12/07/2007).

professional development. In the Federal public sector, OPM has instituted career banding to

demonstrate jobs based on shared or like competencies and assist employees with understanding

the competencies required for progression in the same or alternative job families (Rodriguez,

Patel, Bright, Gregory, & Gowing, 2002). Dubois (1993) explains that in the private sector,

employers, with the assistance of human resource development systems based on competency

modeling such as the five-step Strategic Systems Model (SSM), can train individuals in their

present job, educate workers for future jobs, and develop workers by assisting in learning and

acquisition of knowledge not specific to any particular job.

Within the context of the organizational and external environments, and strategic

business directives, the SSM operates as follows:

1) Analyzes and assesses needs and plans for competency-based education;
2) Develops competency models based on needed activities;
3) Creates a competency-based curriculum plan where learning takes place in logical, meaningful segments;
4) Designs and develops competency-based learning interventions with a focus on what is to be mastered and what level of mastery is required of the critical job competencies; and
5) Evaluates activities based upon one of two models:
    a. Context, Input, Process, and Product Model – In this model, evaluation is focused on decision-making and accountability common to management training.
    b. Kirkpatrick Model – In this model, evaluation concerns the learner's reactions, competencies acquired, changes in job behavior, and strategic organization impacts. This model is most appropriate with manual and technical skills training.

The instructional design sequence is consistent with the International Board of Standards for

Training, Performance, and Instruction's ADDIE (analysis, design, development,

implementation and evaluation) model (King, King, & Rothwell, 2001).

Analysis of the individual's competencies, work or organizational setting, and tasks or

job demands are all considered in developing competency-based training. The dynamic

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interaction of these components produces a specific outcome, result, or output in terms of performance, products, procedures or processes (Boyatzis, 1982). Dubois (1993) describes several learner-centered strategies for providing competency-based learning experiences that include simulations, business games, the case method process, computer-based learning, tutorials, videotapes, CD-ROMs, books, coaching, apprenticeship, and job rotation. For most of these strategies, the learner is active in the learning process and the competency or competencies are applied in real world, work experiences or scenarios. For example, one national retail chain uses simulation training to orient new employees, instruct employees on core or foundational skills, and then train employees for advanced competencies (Anonymous, 2006).

Maynard and Furlong (1995) describe another competency-based method of training that uses mentoring to instruct teaching students. In this instructional situation, competency models are used as a guide for systematic training or practical teaching. Agreed upon behaviors are modeled and coached, mentors provide feedback throughout the training process, and behavioral assessments occur through observation. A current ETA grant project with Western Governors University (WGU) is testing how a competency-based teacher education curriculum can train 200 quality rural teachers in the hard to fill disciplines of mathematics and science.[7] Knowledge and skills required of teachers is prescribed by national and regional accreditation bodies such as Distance Education and Training Council, Council for Higher Education Accreditation, Inter-Regional Accrediting Committee, Northwest Commission on Colleges and Universities, and National Council for Accreditation of Teacher Education. WGU describes the competency-based approach utilized for their degree programs as follows (WGU, 12/18/2007):

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[7] To learn about the online, competency-based teacher education program offered at WGU and the scholarship opportunity made possible through an ETA grant, please visit: http://wgu.edu/tuition_financial_aid/rural_overview.asp (12/18/2007).

"The competency-based education model requires [a student] to demonstrate [their] knowledge through carefully designed assessments, which measure progress in [their] degree program. The assessments (tests, assignments, etc.) are not easy, but [students] can progress toward [their] degree as rapidly as [they] can demonstrate [their] knowledge… WGU is the leading regionally-accredited university that grants degrees based completely on competencies—[or students'] ability to demonstrate skills and knowledge through a series of assessments carefully designed to measure [their] knowledge of a field of study. The programs are not based upon required courses."

With competing demands of work, family, and/or other responsibilities, adult students can set their own pace for earning their degree. Advantageous to the adult learner is that through initial assessments given upon or prior to enrolling at WGU, the competencies an individual currently possesses are determined. Based on this assessment, a mentor works with the individual to develop an Academic Action Plan that outlines the remaining competencies a student must achieve for their chosen degree of study. Using the competency model developed for that subject area of teaching, the path toward attainment of a teacher licensure or credential is mapped out. Hyland (1993) and Youn, Stepich, and Cox (2006) caution that competency-based education trains one to be competent not expert, but expertise can be acquired through additional professional development opportunities and experiences.

Important to the notion of competency-based education is that what is learned in the vocational or other skills training is based on industry standards of competence (Mansfield, 1989). More specifically, the education is geared to the work role not the training role. An individual will be able to perform in this role according to industry standards, not just know about the tasks and skills required to perform in the work setting. Upon conclusion of the training, the assessment will indicate an individual's acquired competencies on several dimensions. Furthermore, these competencies can be transferred to other organizations supporting labor mobility in a competitive economy. Finally, from a multi-dimensional holistic model of competence, where cognitive competencies, functional or work roles competencies, and

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social competencies are considered in unison, opportunities exist to prepare a worker for the needs of the workplace in a global economy (Delamare Le Deist & Winterton, 2005).

Challenges with Using Competency Models

Competency models have their place in human resources practices and their use can be a method of speaking a similar language among various audiences when discussing work requirements. However, competency models are not the sole solution for every hiring and selection decision or other managerial functions (Cockerill, Hunt, & Schroder, 1995), nor should they be the only tool utilized in meeting education and training needs (Dalton, 1997). Ashworth and Saxton (1990) explain that framing competencies as an outcome can ignore the mental and personal processes that are utilized in developing and exhibiting skills and utilizing knowledge. Some idiosyncratic competencies that can assist a person in being successful in their job or contributing to the competitiveness of an organization may be overlooked if the competency model solely is used to strategically select only staff that fit this model and do not rely on developmental resources to facilitate acquisition of competencies where a gap exists (Lado & Wilson, 1994; Lado, Boyd, & Wright, 1992).

Several authors also caution against using competency models for measuring or appraising certain areas of performance and providing developmental feedback based on these assessments (Boyatzis, 1982; Jackson, 2007; Delamare Le Deist & Winterton, 2005; and Lucia & Lepsinger, 1999). Despite the efforts to assess the competencies associated with personal characteristics, traits and motivation, such competencies are difficult to define and therefore difficult to assess. Such competencies cannot be directly measured in behavioral terms, but more accurately there are behaviors associated with these competencies. Thus, assessments of such competencies are not objective, rather they are based on faulty or interpretable assumptions

about behaviors that constitute maturity, flexibility, cooperation, autonomy, and independence, among others. For these competencies, measurements that meet professional standards are needed.

If an organization chooses to integrate competency models throughout their human resources practices (i.e., training and development, selection, and performance and assessment activities), the competency model frameworks developed to describe jobs or occupations and promotional opportunities should be shared with all managers and staff; employee participation in development of a competency model can assist with providing awareness of the model as well as create acceptance (Lucia & Lepsinger, 1999; and Montier, Alai, & Kramer, 2006). Resistance to change may be lessened with buy-in from staff and managers. By having the entire organization involved in the development of competency models and defining what certain competencies mean for that particular organization, there will be an organizational expectation of what makes the company succeed. For the gaps in competency acquisition, further training and development can be offered and provided to aid in acquisition of the desired skill, knowledge, behavior, trait, etc. Allowance for some less needed or desired competencies should be considered as well to perhaps enrich the talent pool. For occasions when these competencies are not developed, it is likely that inaction or an ineffective behavior may prevent the worker from accomplishing job tasks and organizational goals. While not usually the most cost-effective option for businesses after investing in an employee, it may be most appropriate for the company to re-evaluate the current competencies of an individual and his or her acquisition for learning new and desired competencies based on those competencies required of the organization. With the results of this analysis, the organization and individual can determine the individual's future

within that organization. The employee might benefit far greater in the long run knowing that

other organizations within that industry or across industries would be a better career fit.

<u>Conclusion</u>

As noted above, with certain exceptions considered, competency models are a viable tool

that can be utilized to prepare the current and future workforce and retain skilled incumbent

workers to meet the job requirements and other needs of employers. Furthermore, for career

exploration and development purposes and during times of job change, whether by choice or due

to market changes, competency models are an assistive device for individuals to focus on their

current competencies and refocus or enhance their competencies as necessary. With the

knowledge and use of the information contained within a competency model and awareness of

their individual competency strengths and weaknesses, individuals may manage their future job

or career success, navigate their current chosen career pathway, or apply the information to

examine new career opportunities, considering the utilization of transferable competencies.

In considering the review of the literature available on competency models, ETA is

clearly consistent with the literature in terms of assisting high growth industries with developing

competency model frameworks and making investments in projects that use them. The

workforce investment system and their partners are already using competency models in a

variety of ways. As mentioned previously, specific descriptions of their use of competency

models for various needs, such as curriculum development, assessment and certification,

communicating industry demands and career guidance, developing career lattices, and training

and apprenticeship, can be found on the ETA Competency Model Clearinghouse. Future

research, pilot and demonstration efforts might expand upon these current investments, where

appropriate. to test their model with additional regions and practitioners. For example, the

Northwest Pennsylvania Workforce Investment Board has used competency models to conduct a needs assessment of the key employers that provide job opportunities in seven industry sectors, followed by a gap analysis of the skills of the workforce. This model might be replicated with additional workforce areas experiencing shortages of workers in targeted industries or occupations, such as healthcare.

Additionally, using competency models to develop training and provide career preparation for targeted populations also might be explored. Future research, pilot and demonstration projects might examine the use of competency models with specific targeted populations. As competency models are efficient for developing training that is focused on industry needs and can specifically prepare an individual for the work role, the use of a competency model for developing training with youth, older workers, individuals with disabilities, immigrants, individuals with limited English proficiency, and ex-offenders might be areas of consideration. For instance, curriculum developed by the American Chemical Society, Manufacturing Skill Standards Council, National Institute for Metalworking Skills, or Computing Technology Industry Association, that includes partnerships with the apprenticeship system, might be utilized and adapted as necessary to prepare previously untapped labor pools.

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