COMPETENCIES FROM THE AMERICAN SOCIETY FOR TRAINING AND DEVELOPMENT WORKPLACE LEARNING AND PERFORMANCE MODEL: AN EMPIRICAL STUDY

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ABSTRACT

The purpose of this literature review is to empirically examine and identify the importance of competencies needed by workers to improve human resource development and organization performance. This paper examined four studies to determine the competencies required for worker’s abilities and capabilities to do given tasks in the workplaces. All three studies used the American Society of Training and Development (ASTD) competencies as the framework for the studies. However, because the research scope and settings are difference, the researchers had to modify the instruments with location. Most of the findings from the studies show that competencies have great value in producing quality and skillful workers at every job level and work environment. There were also some suggestions on existing competencies for increased job performance and for narrowing the gaps between academic accomplishment and industrial expectations.

KEYWORDS: Competency Model, Human Resource Development, American Society of Training and Development, Workplace Learning and Performance, Organization Performance

INTRODUCTION

In today’s highly competitive workforce environment, competencies of workers are a key element in shaping organization development. Competencies have proven to be a tool to improve Human Resource Development (HRD) and organizational performance that focuses on individual performance or competencies (Peerapornvitoon, 1999; Yoo, 1999; Chen, 2003). According to McLagan (1989) competencies are internal capabilities that people bring to their jobs and capabilities, which may be, expressed in a broad, even infinite, array of on the job behavior (p. 77).

In recent years, competencies have emerged as the primary means of evaluating abilities and job skills. Competencies are a form of progress as a tool, or point of reference, which can be used to assess and evaluate worker’s progress of performance. Moreover, competencies have become one of the review tools to evaluate workers proficiency in hard and soft skills. Several studies have been conducted to identify the impact of competencies in real jobs situations but in different perspectives (Yang, 1994; Yoo, 1999; Chen, 2003; Kuijpers, Schyns, & Scheerens, 2006; Dewey, Montosse, Schrotter, Sullins, & Mattox, 2008; Morningstar, Kim, & Clark, 2008; Lee, 2009). Some of the researchers study the impact of competencies in organization settings such as Yang, 1994, Yoo, 1999, Chen, 2003 and Lee, 2009 while others in different settings. For example, Kuijpers, Schyns, and Scheerens (2006), studies on the relationship between career competencies and career success.

Dewy Montosse, Schrotter, Sullins, and Mattox (2008), explore the overlaps and disconnects between the competencies evaluators acquire during graduate school and those required and desired by employers. In contrast, Morningstar, Kim, and Clark (2008) evaluate transition competencies gained by secondary practitioners involved in a transition teacher education program.
DIFFERENT DEFINITIONS OF COMPETENCY

For many years competency has been defined in numerous ways by researchers. In creating the definition of competency, it is good to see how the researcher’s perspective effects the definition. It will help readers to understand more and see from the same views and perspective of the researcher. Many authors define competency based on their research (McLagan, 1989; Rycus and Hughes, 2000; Boyatzis, 2008; Lee, 2009). According to Rycus and Hughes (2000), competency is defined, as a set of elements of knowledge and skills required for workers to effectively perform their jobs.

Another researcher, Lee (2009) defines competency as a cluster of related knowledge, skills, abilities, and behavior patterns that affect a major part of a worker’s job. Additionally, Boyatzis (2008) defines competency as an individual’s capacity or ability of behavior organized around an underlying construct or intent. The most prominent of competency definitions is from McLagan (1989), who conducted the research and came out with the HRD model for American Society of Training and Development (ASTD), which defines competency as an area of knowledge or skill that is critical for producing key outputs.

In spite of various definitions of competency, the focus refers to an individual or worker’s performance in doing tasks or jobs. Competencies can be seen as sets of behaviors, which characterize better performance in every aspect of an individual. The individual’s competencies are demonstrated in everyday tasks, jobs, roles, functions, and duties in an organization. Thus, competencies are the key elements of professional success needed to support and sustain a strategic plan, vision, mission, and goal of an organization (Hoevermeyer, 2006, p. 19).

PURPOSE OF COMPETENCIES

The main focus of competencies in organizations is to validate the skill levels of workers. As a result, organizations will recognize new set of skills, which need to be transferred to the workers. Competency also enhances the quality of individual and organizational performances. Hence, organizations are more aware of how to align worker’s skills with the tasks given to ensure that they are competent to undertake the job effectively. Organizations require higher competency levels of knowledge and skills that respond to the specific requirements in professional practices (Sauber, McSurely, & Tummala, 2008).

Most research suggests that competencies should be incorporated within the workplace to promote competition among employees and improve productivity within organizations (Yang, 1994; Yoo, 1999; Chen, 2003; Lee, 2009). Even though the researchers use a different competency model but it is shows that workers competency contribute to organization performance.

In viewing the competencies, organizations can be more successful if they know how to integrate competencies throughout all aspects of the workers’ jobs, including career development, professional development, and performance management. An increased need for improved performance requires more efficient ways to identify, recruit, measure, and improve the competencies of the workforce, therefore many organizations are adopting a competency-based model to meet the their goals and needs (Berge, Verneil, Berge, Davis, & Smith, 2003, p. 43).

ASTD COMPETENCIES MODEL

For many years the ASTD competency model has been developed and used in the United States as a guideline in hiring employees and provide better training and development (Pinto and Walker, 1978; McLagan, 1989; Rothwell, 1996; Smith, 2008). The competency model helps guide an organization in the hiring and selection process by selecting
applicants who are already top performers in the profession (Smith, 2008, p. 446). The competency model provides the basic competencies for the employees to enhance their performances as they move into better career positions in the organization. The ASTD Competency Model defines what workers need to know and do to be successful in the organization by doing assessment on their competency. In the context of learning and performance the model tries to balance strategic, financial, and business goals of organizations with the interests of the people who are doing the work (Weinstein, 2005, p. 3).

The ASTD had sponsored several competencies studies related to HRD including Pinto and Walker (1978), McLagan (1983; 1989), Rothwell (1996), and Rothwell, Sanders, and Soper (1999). Pinto and Walker (1978) conducted a study to define the basic skill, knowledge, understanding, and other attribute required for professionals for effective performance of training and development activities (p. 2). McLagan (1983) conducted a study to identify a boundary of training and development and explore the training and development field in term of competencies, roles, and output.

While in 1989, McLagan develop a model of HRD consisting of five major components: a) HRD definitions, b) future force for HRD work, c) outputs of HRD work, d) quality requirements for outputs, and e) ethical issues facing HRD professionals. In contrast, Rothwell (1996) performed a study to lay the definition of Human Performance Improvement (HPI). There were five major outputs from the study: a) definition of HPI, b) key area trends, terminal outputs of HPI work, and enabling output, c) core competencies of HPI and roles of HPI professionals, and d) ethical issues affecting HPI work (Rothwell, 1996). The most recent study in HRD competencies is conducted by Rothwell, et al. in 1999. The output from the study included: a) definition of WLP, b) 52 competencies, six groups of competency, and seven roles of WLP. Table 1 below summarizes the studies done in the United States.

Table 1: Summary of Representative HRD/WLP Competencies Studies (Chen, 2003, p. 32)

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<tbody>
<tr>
<td>Researcher</td>
<td>Pinto &amp; Walker</td>
<td>McLagan</td>
<td>McLagan</td>
<td>Rothwell</td>
<td>Rothwell, Sanders, &amp; Soper</td>
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<tr>
<td>Focus Area</td>
<td>Training &amp; Development</td>
<td>Training &amp; Development</td>
<td>Human Resource Development</td>
<td>Human Performance Improvement</td>
<td>Workplace Learning &amp; Performance</td>
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<tr>
<td>Results</td>
<td>91 activities in 14 categories</td>
<td>31 Competencies, 102 Outputs, 15 Roles, 9 Human Resource specialty area</td>
<td>35 Competencies, 74 Outputs, 11 Roles, 13 Ethical issues, Quality requirements for each outputs</td>
<td>38 Competencies, 4 Roles, 15 ethical issues, 27 Future force</td>
<td>52 Competencies, 6 Group, 7 Roles</td>
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This paper will highlight the studies done by past researchers that cover different angles of competencies in diverse settings. Below are summaries of several studies which empirically examine and critically discuss the importance and relevance of competencies to individuals, organizations, and countries. For this paper, four studies that study competencies will be discussed and analyzed. These studies are selected because all the study using the instruments developed by the ASTD. Furthermore, all the studies are conducted outside of United States and the findings can be compared to findings in United States.

Study 1: Perceptions of Taiwan Practitioners on Expertise Level and Importance of Workplace Learning and Performance (WLP) Competencies

In this study, the researcher discusses Taiwan WLP competencies in regards to practitioners’ perceptions. The purpose of this study included analyzing the perception of current expertise, current importance, and future importance of
competencies, the different disciplines in competencies, and most needed competencies at present and in the future in Taiwan. The conceptual framework used for this study is taken from the ASTD Models for WLP by Rothwell, et al. (1999). Based on this model, there are 52 competencies identified by an expert of the ASTD which are needed by practitioners in the WLP field. The researcher used fully quantitative as a research design in this study. The target populations for this study are the Taiwan WLP practitioners.

The study covers about 870 respondents estimated using a sample size calculation. The survey instruments used are a combination from Rothwell et al. (1999) and Yoo (1999). The researcher modified the questionnaire to adapt it into Taiwan’s setting. The researcher set three main dependent variables including current expertise, present importance competencies, and future importance competencies. However, the independent variables are varied from the work discipline with three levels.

E-mail is used as a medium to send the questionnaires. A total 266 questionnaires were returned which is about a 24.2% response rate. The findings show that the reliability coefficient (Cronbach’s Alpha) for the 52 competencies is .99. The result of ANOVA F-test of three dependent variables show a statistically significant difference in perceived current expertise (F= 8.62, p<.001) and in current importance (F= 5.27, p<.01) across the different disciplines. Therefore, the post hoc Scheffe was employed and conversely the F values were not significant when the researcher further examined the two dependent variables. The paired t-test results between current expertise and future importance show a significance at the p<.001 level. The Pearson’s correlation shows a high correlation between current importance and future importance of competencies (Pearson’s r= .72, p<.001). Lastly, the regression analysis was used to investigate the relationship between perceived current importance and perceived future importance of competencies. The result was significant (p<.001) and therefore the null hypothesis was rejected.

**Study 2: Korean Human Resource Development (HRD) Practitioners’ Perceptions of Expertise Level and Importance of Workplace Learning and Performance (WLP) Competencies**

This study discusses Korean HRD practitioner’s perceptions of WLP competencies. It also seeks to identify the most needed competencies for the workers. The researcher outlines the three purposes of the study, which is to analyze the perceptions of expertise in current and future competencies, differences in perception across HRD fields, and identify the most needed competencies of Korean practitioners. The main question is on the perspective of current Korean HRD practitioners’ on perceived expertise levels of competencies. This study is fully quantitative. The instrument used in this study is based on the WLP competency list from ASTD Models for WLP developed by Rothwell et al. (1999). In addition, the instrument was translated and revised for use in a Korean setting. A total of 400 questionnaires had been sent to the respondents and only 218 (54.5%) respondents replied back to the questionnaires.

In the findings, the researcher segregates the results based on the research questions. In demographic information, the research reports that the overall reliability of coefficients using Cronbach’s Alpha for 52 competencies tested was .94. The reliability result indicates satisfactory as reflected by the survey instruments. The results of MANOVA show no significant difference in current importance and future importance across years of professional experience in HRD fields.

Results from Pillai’s test and the MANOVA univariate F-test also revealed no significant difference in perceptions for six competency groups (p>.05) and the seven roles (p>.05). However, there was a significance difference in current expertise and current importance for six competency groups at level of p<.001 for paired t-test results. The paired t-test result on mean between the current expertise and current importance for all seven roles shows a significant difference at the p<.001.
Study 3: A Survey of Workplace Learning and Performance: Competencies and Roles for Practitioners in Thailand

In this study, Peeprapornvitoon discusses Thailand WLP competencies in regards to practitioners’ perceptions on HRD competencies. The purpose of this study includes identify and rank order the perception of Thai HRD, identify and rank order the perceived present and future importance of competencies, and the examine correlation between practitioners with different disciplines in Thailand.

Peeprapornvitoon developed seven research questions based ASTD Models for WLP developed by Rothwell et al. (1999). The target populations for this study are Thailand WLP practitioners. The study covers about 586 respondents, which was estimated using the computer program (REXX) at Pennsylvania State University. The researcher modified the questionnaire to adapt it to Thailand’s setting. A total 255 questionnaires were returned which is about a 43.52% response rate.

The findings show high agreement on the present and future important of competencies, competency group and roles of WLP. Paired t-test results revealed significantly higher for future for competencies, competency groups, and roles. Results of ANOVA revealed a few competencies with a significant difference in present and future levels within organizations. While, the Spearman Rank-Order is indicate significant correlation between Thai practitioners and competency groups.

Study 4: Perceived Competencies Needed by HRD Managers in Korean

This study focuses on investigating existing human resource development competencies for Korean HRD managers. It also examines the required expertise levels perceived by Korean HRD managers. The author developed six research questionnaires based on ASTD competency questionnaires by McLagan and Suhadolnik (1989). The central question focuses on competencies that are perceived important by the HRD manager in Korea. The purpose of this study is to analyze the gap between current and required expertise levels of HRD managers in HRD competencies.

The researcher used a fully quantitative study in this research. The original instruments used are from the ASTD competency study (McLagan & Suhadolnik, 1989). The researcher claimed that the instrument was selected because the reliability from a previous study with Korean trainers show that the reliability obtained was quite high, .90 and .94 respectively. A total 350 questionnaires were sent out and only 248 (81.3%) respondents replied back.

The researcher segregates the findings into several sections such as demographic, importance, gap analysis between required and current competencies level, difference across demographic information, and comparison of HRD between Korean and the United States HRD managers. Factor analysis is used to categorize the 42 competency items into 8 categories. The results show no significant correlation with one another. However, there was a significant difference in required and current expertise level at p<.001. The results of the comparison between Korean HRD and the United States HRD in competencies show only two competencies perceived important by both groups. The competencies are Training and Development theories and techniques, and information searching skills.

DISCUSSIONS

Based on the studies discussed above it is found that most of the researchers had a similar perspective on competencies even though the research had different scopes and questions on in each of the studies. Even though the study was replicated over time, there were lessons that can be learned for use in future studies. All studies reviews stress how important it is that the research instruments are validated again even though they are replication studies. Generally, the
studies show patterns in conducting a replication research and the methods help other interested researchers to study the steps.

Table 2 below shows a compilation of the studies used in this paper to compare and contrast between several categories that were used by the researcher. The review of these four studies suggests that the findings of one support each of the others. It is agreed that competencies are the main variable by which to evaluate job performance across fields of employment. Stakeholders such as workers, graduates, higher learning institutions, and organizations which significantly support the job skills in HRD have been tested and verified in all of the studies selected for this paper.

<table>
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<tr>
<th>Source / Year</th>
<th>Research Topic / Area</th>
<th>Research Problems</th>
<th>Research Questions</th>
<th>Method / Procedures</th>
<th>Analysis</th>
<th>Outcome</th>
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<tr>
<td>Study 1 Chen (2003)</td>
<td>Topic: Perceptions of Taiwan Practitioners on Expertise Level and Important Workplace Learning and Performance Competencies</td>
<td>To identify how the Workplace Learning and Performance (WLP) practitioners in Taiwan perceive the important WLP competencies needed at the present time, as well as its importance over the next five years.</td>
<td>1. What are the current levels of expertise of WLP practitioners in Taiwan, as measured across the six competency groups, the seven roles, and for each of the 52 competencies?</td>
<td>Samples were 1100 Taiwanese WLP professionals. Random sampling was used. Survey instrument using 5-point Likert Scale</td>
<td>Based on the research questions, analyze were done using these methods:</td>
<td>The study shows that Taiwanese WLP practitioners perceived communication competencies, interpersonal related competencies, and the role of intervention implementer of being the most important competencies not only for the present but for the future as well.</td>
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<td>2. What competencies are perceived to be currently important by Taiwan WLP practitioners, as measured across the six competency groups, the seven roles, and for each of the 52 competencies?</td>
<td>The instrument used is the ASTD Models for Workplace Learning and performance (Rothwell, Sanders, &amp; Soper, 1999)</td>
<td>1. Descriptive statistics to find Means and Standard Deviations. Presented in rank order.</td>
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<td>3. What competencies are perceived to be currently important by Taiwan WLP practitioners, as measured across the six competency groups, the seven roles, and for each of the 52 competencies?</td>
<td>The instrument was validated by Chinese-American bilingual WLP professionals since it was translated to Mandarin (Taiwan) language. In total, 266 usable questionnaires are returned, which is about 24%.</td>
<td>2. Descriptive statistics to find Means and Standard Deviations. Presented in rank order.</td>
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<td>5. Which competencies are most needed at the present time and in the near future?</td>
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<td>4. One-way ANOVA, and Post Hoc tests.</td>
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<td>6. Is there any relationship among current importance, and future importance of the WLP competencies, and if yes, what effect does one variable have on the other?</td>
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<td>5. Paired t-test</td>
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<td>6. Pearson correlation and linear regression analysis.</td>
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| Study 2 Yoo (1999) | Topic: Korean Human Resource Development (HRD) Practitioners’ Perceptions of Necessary Expertise Level and Importance of Workplace Learning and Performance (WLP) Competencies | To identify Korean HRD practitioners’ currently perceived expertise level, as measured across the six competency groups, seven roles, and for each of the 52 competencies? | 1. What was Korean HRD practitioners’ currently perceived expertise level, as measured across the six competency groups, seven roles, and for each of the 52 competencies? | Samples were 400 Korean HRD practitioners Stratified random sampling was used. Survey instrument using 5-point Likert Scale | Based on the research questions were analyzed using these methods: | The study found that Korean HRD practitioners’ perceptions about current and future importance showed a high level of agreement regardless of years of professional development in the HRD field. Technology related competencies and the role of the evaluator were perceived as the most needed now as well as in the next five years. |
| | | | 2. Which competencies were perceived to be currently important by Korean HRD practitioners across the six competency groups, seven roles, and for each of the 52 competencies? | The instrument used is the ASTD Models for Workplace Learning and performance (Rothwell, Sanders, & Soper, 1999) | 1. Means and Standard Deviations |
| | | | 3. Which competencies were perceived to be important in the next five years by Korean HRD practitioners across the six competency groups, seven roles, and for each of the 52 competencies? | The instrument was validated by Korean-American bilingual HRD professionals since it was translated to the Korean language. In total, 229 usable questionnaires are returned. This is about 57.25%. | 2. Means and Standard Deviations |
| | | | 4. Are there any differences among current expertise, current importance, and future importance in terms of years of professional experience in the HRD field? | | 3. Means and Standard Deviations |
| | | | 5. Which competencies are most needed at the present and in the near future? | | 4. Multivariate one-way ANOVA (MANOVA), and Paired t-test. |
| | | | | | 5. Paired t-test |
If researcher can establish a link between competency development and organization performance, then it follows that certain types of competencies will be simultaneously adding to worker skills and behaviors while others will be defining the organization’s capabilities (Murray, 2003, p. 306). The pattern shown from the four studies indicated that over the time period the response rate from the respondents decreased even though the researchers followed up through telephone and e-mail.

From 81.3% in 1994 for the first study to the second study in 1999 which only managed to receive about 57.25% (Korea) and 43.52% (Thailand), and then the last study in 2003 which only received 24% of a response rate. According to
Gunter, Nicholas, Huntington, and Peter (2002), response rates in e-mail survey are often lower than for the standard mail survey.

The most significant difference among the four articles is the scope of the studies and specific findings, which the researchers found in different samples and settings. In Study 1, the scope of the study conducted by the researcher only covers WLP practitioners, academia, and business in the area of WLP, Human Resource Development, and Human Resource Management in Taiwan using quantitative research. Thus, the findings of this study cannot be generalized to other settings. In Study 2, the study focuses on Korean HRD practitioners including the Korean Society for Industrial Education members. The results of the study have a great impact on cultural context in competencies implementation in Korea because the ASTD competencies model used in the study was adapted and modified based on studies in the United States. The authors also employ a quantitative research approach. In Study 3, the scope of the study is to identify competencies and roles of WLP that are necessary to present and future job success for practitioners in Thailand. The results revealed a high level of agreement between Thai practitioners as to future importance of competencies, competency group, and roles of WLP. While in Study 4, the scope of study focuses on Korean HRD managers. The findings of this study also cannot be generalized because of culture and workforce climate differences between the United States and Korea. Although globalization has opened worldwide trade markets, it also allow to numerous competitors in various industries. Therefore, competent workers are critical component of organizations success, and effective strategies for continuously enhancing workers’ competency are in urgent need (Ho, 2008, p. 1235).

Overall, the central focus of the studies relates to the integration and articulation of competencies from theory into practice. Each study looks in some way at the translation between how the HRD practitioners perceive the role of competencies workforce settings. The gaps between academia and practitioner occur when learning institutions and workplaces have different meanings and interpretations of job competencies. Furthermore, a competency is an ability to do certain things as well as a statement of learning outcomes based on awareness, a body of knowledge, or a skill (Sauber et al., 2008, p. 375). The studies show that it is important to hire competent workers to meet the workplace demands and the challenge of globalization.

CONCLUSIONS

The studies prove that competencies are important in a variety of ways to workers and organizations. Competencies are one of the most effective tools and approaches for the organizations to position the workers in the right position within the organization. The competencies focus more on workers and organization performances. Once the organization has the workers in the right position, the organization has opportunities to set future career development. Having clearly defined competencies also makes the workers more effective and reduces job timeliness. To conclude, it is confirmed by the studies that in the future, competencies will expand and benefit the workers skill sets and organization performance.

REFERENCES


