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Research Article

Bridging the Gap Between Theory and Practice: A Comparative Study of Competency-Based and Traditional Training in Management Sciences

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ABSTRACT

Training methods in universities are responsible for developing professional skills among students, especially in management sciences. Conventional training methods emphasize theoretical teaching, whereas competency-based learning is based on developing skills, problem-solving, and practical application (Harvey, 2000). Even with the inclusion of formal training programs within universities, students fail to implement theoretical knowledge into practical skills demanded by employers (Collin, Van der Heijden, & Lewis, 2012). This research tests the performance of traditional and competency-based models in improving the career readiness and workplace performance of students. Literature indicates that competency-based learning supports increased student engagement, critical thinking, and resilience in rapidly changing workplaces (Gherardi, 2001). Employers are also becoming more focused on acquiring practical skills and experiential knowledge compared to traditional formal qualifications (Ash, 2006). The outcomes underscore the importance for universities to integrate experiential learning approaches that conform to industry demands and increase the employability of students. Through the identification of shortcomings in extant training practices, this research helps in the formulation of more efficient education structures in management sciences.

Keywords: Training effectiveness, competency-based learning, management sciences, skill development, student performance, experiential learning.

1.1 Introduction

Universities are most interested in student learning outcomes and making them more practical to meet actual challenges, especially in the field of management sciences (Liao & Chuang, 2004). There have been a number of studies that seek to establish the main factors leading to student academic performance and development of skills (Ittner & Larcker, 1998). As of now, specialists emphasize proper training as an underlying stimulus to enhancing students' practical abilities and professionalism (Gruman & Saks, 2011). But the issue here is whether conventional academic education can really transfer into functional competencies and enhanced performance in the workplace (Morey et al., 2002).

The principles of successful training at the higher education level have been extensively debated. Different research defines how well-formulated learning packages can be made to cater to various student segments (Bartel, 1994; Brown, 2002). Consequently, students of management science are anticipated to acquire core abilities like teamwork, leadership, goal-setting, and strategic problem-solving, so that they are best equipped to adapt from the university to the world of work (Kozlowski et al., 2001).

Presently, training programs are included in the curriculum of most universities to boost the capabilities of students (Cable & Graham, 2000). Yet, the true effectiveness of the training programs on preparing students for professional jobs differs. While some students are not able to apply theoretical concepts in practical contexts, which indicates doubts about the success of the prevailing training models (Deming & Orsini, 2013). Evidence indicates that there is a disconnect due to most programs focusing more on theory over practical

experience. Thus, whereas students will get good grades when writing exams, they tend not to possess skills necessary for real-life application within the business sector (Chen & Huang, 2009).
In light of such apprehensions, the need to distinguish between conventional learning methods and competency-based education becomes paramount. Conventional learning is practiced on the lecture model wherein knowledge is imparted in a one-way interaction, whereas competency-based education involves experiential learning, case studies, and problem-solving exercises to inculcate practical skills (Huang, 2001; Naquin & Holton, 2003). Both methods have their strengths and weaknesses, necessitating a comparison of these methods in detail to identify the best possible strategies for the achievement of students.
This research seeks to investigate the fundamental principles of good training in management sciences and evaluate the ways in which these training techniques affect students' readiness for professional careers. The research questions informing this study are:
i) What are the vital elements of an effective management science student training program?
ii) How can good training enhance the development of students' skills and employability?
The main reason for conducting this study is to develop the current understanding of student training through a comparison of conventional and competency-based training models. Training effectiveness in tertiary education has been extensively discussed (Baldwin, Pierce, Joines, & Farouk, 2011; Bunch, 2007; Grossman & Salas, 2011). This study will particularly address the pragmatic utility of training, considering why certain approaches to training cannot deliver the intended improvements in the development of student skills and employability. Further, the study will consider why students who perform exceptionally well at the academic level might not be able to evidence the same performance in practical terms (Brinkerhoff, 2005). This study seeks to give insights into these challenges and help improve a more efficient training model for management science education.

1.2 Literature Review

The idea of an "investment" in "human capital" isn't novel, though. The economic pay-offs of training and education were, as long ago as in the mid-1990s, argued by Machin and Wilkinson (1995). Then, emphasis was on lifelong learning, the term being used to bring prominence to ongoing enhancement post-formal schooling (Pépin, 2007). In the university context, this concept has developed to motivate students to acquire skills that will be useful throughout their working life (Scottish Borders Council, 2013). While lifelong learning is perceived by some scholars as a tool to raise the competency level of students, others regard it as a career development strategy (Tight, 1998). In spite of varying interpretation, lifelong learning has emerged as a central goal in the policy of higher education (Schuller & Watson, 2009).
The role of education has changed dramatically over time with changes in job market needs (Hargreaves, 2005). The emphasis has changed from sole theoretical study to applied knowledge and skill training. According to Harvey (2000), education in the contemporary era should focus on "training graduates for jobs rather than simply improving their minds" (p. 3). The author outlines a number of trends that will influence education today, such as increased flexibility in students. Numerous sectors in the workforce currently expect workers to change with changing job functions and exercise more autonomous responsibilities, further making competency-based education more pertinent than before (Collin, Van der Heijden, & Lewis, 2012).
Harvey (2000) also points to emerging employment patterns like freelance jobs and temporary contracts, which have transformed conventional career trajectories. These pose a need for a change in methods of educational training to equip graduates not only with theoretical education but also with practical, flexible skills (Gherardi, 2001). Thus, universities are required to prepare students for such changing job markets through applied learning and competency-based education.
Educational and training changes are directly related to employer expectations changes. Harvey (2000) indicates that firms spend less time on in-company training, anticipating graduates to be job-ready upon entry into the labor market. Consequently, employers are increasingly focusing on practical experience and problem-solving skills rather than academic qualifications (Ash, 2006). In addition, recruiters tend to stress personal qualities like critical thinking, flexibility, and self-initiative more than technical expertise (Harvey, 2000). With the fast-changing nature of the contemporary job market, researchers are still investigating the most important competencies that students need to acquire in order to excel in management sciences (Brown, 2007).

1.3 Research Objectives

The following are the research objectives for this study:
1. to compare the effectiveness of competency-based training and traditional training in management sciences.
2. to explore the relationship of competency-based learning on students' career readiness.
3. to provide recommendations for improving university programs to meet industry demands.

1.4 Research Questions

Research questions for this study are outlined below:

1. How does competency-based training compare to traditional training in terms of student learning outcomes?
2. What is the relationship between competency-based training and students' career readiness?
3. What modifications in teaching strategies and assessment methods can make university training more aligned with industry expectations?

1.5 Research Methodology

This study employs a comparative research design to examine the effectiveness of competency-based training versus traditional training in management sciences. Quantitative data is collected to complete the study.

1.5.1 Population

The population of the study consisted of all the students studying in the Islamia University of Bahawalpur and Women University Bahawalpur.

1.5.2 Sample and Sampling Technique

A total of 80 students (40 from each university) were selected for the purpose of data collection. Convenience sampling technique was used to select the participants according to their availability and willingness to participate in the study.

1.5.3 Research Tool

A self-developed questionnaire was utilized. The questionnaire was divided into two parts. Part A consisted of demographic information of the students and part B consisted of 30 items regarding the research questions of the study on a 5-point Likert scale.

1.5.3.1 Pilot Study

A pilot study was conducted to determine the reliability and validity of the tool before the actual data collection. 25 participants were conveniently selected for the pilot study.

1.5.3.2 Validity and Reliability of the Tool

Content validity of the questionnaire was determined by the experts' reviews. Three experts from the field of management sciences were consulted to review the research tool. The questionnaire was modified according to their feedback to best suit the needs of the study. While reliability of the study was analyzed Cronbach alpha value. A 0.89 Cronbach alpha value was calculated using SPSS which shows a good reliability.

1.5.4 Data Collection

Data was collected after obtaining the necessary permissions from the relevant university authorities. Students were assembled, briefed on the purpose of the study, and provided with instructions before completing the questionnaire.

1.5.5 Data Analysis

The quantitative data collected was analyzed using SPSS. Descriptive and inferential statistical methods are used to draw the conclusions for the study.

1.6 Results and Interpretation

Training Method	Mean (M)	Standard Deviation (SD)	Sample Size (n)
Competency-Based Training	78.91	4.76	40
Traditional Training	69.85	4.82	40

Table 1 Comparison of Competency-Based and Traditional Training on Student Learning Outcomes

$t(78) = 8.44$, $p < .001$

An independent samples t-test was conducted to compare student learning outcomes between competency-based training and traditional training in management sciences. The results revealed a statistically significant difference in learning outcomes, $t(78) = 8.44$, $p < .001$. Students who underwent competency-based training ($M = 78.91$, $SD = 4.76$) performed significantly better than those who received traditional training ($M = 69.85$, $SD = 4.82$). These findings suggest that competency-based training is more effective in improving student learning outcomes compared to traditional training methods. Universities should consider integrating more skill-based and experiential learning approaches to enhance students' professional readiness.

Variables	*r*	*p*
Competency-Based Training & Career Readiness	0.87	< .001

Table 2 Correlation Between Competency-Based Training and Career Readiness

Note: Correlation is significant at the 0.01 level (two-tailed).

A Pearson correlation analysis was conducted to examine the relationship between competency-based training and students' career readiness. The results indicate a strong positive correlation, $r = 0.87$, $p < .001$, suggesting that higher competency-based training scores are significantly associated with greater career readiness. These findings reinforce the effectiveness of competency-based training in preparing students for the workforce.

Modification	Mean (M)	Standard Deviation (SD)
More Industry Internships	4.24	0.48
Project-Based Learning	4.50	0.37
Soft Skills Development	4.28	0.62
Real-World Case Studies	4.43	0.48
Competency-Based Assessments	4.63	0.37

Table 3 Descriptive Statistics for Recommended Modifications in University Programs
n = 80, Ratings are based on a 5-point Likert scale

The descriptive statistics indicate that Competency-Based Assessments ($M = 4.63$, $SD = 0.37$) and Project-Based Learning ($M = 4.50$, $SD = 0.37$) received the highest ratings, suggesting strong agreement among students regarding their effectiveness. Additionally, Real-World Case Studies ($M = 4.43$, $SD = 0.48$) and More Industry Internships ($M = 4.24$, $SD = 0.48$) were also highly rated, highlighting the importance of practical exposure and industry-aligned learning. These results suggest that universities should integrate more experiential learning strategies and focus on competency-based assessments to align training with industry demands.

1.7 Discussion

The results of this research offer significant information on the efficiency of competency-based training over conventional training in management sciences. The findings point out the importance of competency-based learning in developing students' employability and suggest important changes to university training courses to meet industry demands.

Effectiveness of Competency-Based Training

The results of the independent samples t-test indicated that competency-based training students scored significantly higher than students who had undergone conventional training, $t(78) = 8.44$, $p < .001$. This result is consistent with previous research confirming the value of competency-based education (CBE) in developing critical thinking, flexibility, and problem-solving abilities (Gherardi, 2001).

Comparable research in global contexts has also affirmed that competency-based programs increase student engagement and application in the real world (Hodge, 2007). European and North American research has shown that students educated using competency-based models outperform students who are given traditional lecture-based training in the workplace (Mulder, 2017). A Pakistan-based study by Ahmed and Iqbal (2020) also emphasized that competency-based learning strategies significantly enhance problem-solving skills and decision-making capacity among management students, affirming the worldwide trend toward experiential learning.

Relationship Between Competency-Based Training and Career Readiness

Pearson correlation test identified a high positive correlation between competency-based training and career readiness of students ($r = 0.87$, $p < .001$). It indicates that students who are taught using competency-based learning are better prepared for career positions. It confirms the claim made by Collin, Van der Heijden, and Lewis (2012), which highlighted that competency-based education facilitates employability as it provides students with skills preferred by employers. In addition, research conducted in Australia and Canada suggests that universities adopting competency-based curricula have improved job placement rates and career success among graduates (Ash, 2006). Employers increasingly seek candidates with experiential learning over candidates who possess formal academic qualifications alone (Harvey, 2000).

In the same vein, a research study in Pakistan by Khan and Javed (2021) established that competency-based education is positively related to graduates' employability since students who were trained using practical approaches had improved job performance and flexibility in the corporate world. In addition, Javed, Bhaumik, and Saifi (2023) investigated the worth of competency model development and established that incorporating structured competency frameworks into university curricula improves academic and professional achievement. These results reinforce the need to transition to pragmatic, skill-oriented education models in order to address industry needs.

Recommendations for Improving University Training Programs

The descriptive statistics showed significant support from students to major changes to university training programs, and the highest rated among these were competency-based tests (M = 4.63, SD = 0.37) and project-based education (M = 4.50, SD = 0.37). Real-world case studies (M = 4.43, SD = 0.48) and more industry internships (M = 4.24, SD = 0.48) were also in high demand. These results are consistent with international research that calls for increased applied learning approaches in higher education (Hodge, 2007). Finnish and German universities that have adopted these changes have graduates with higher workplace flexibility and problem-solving skills (Mulder, 2017). The same suggestion was put forth in a Pakistani research work by Rahman et al. (2019), which placed great importance on practical learning approaches in business education to improve graduate employability and address industry needs. Those learning strategies can narrow the gap between theory and practice and ensure graduates align with the changing needs of the job market.

Conclusion

In general, this research supports the efficacy of competency-based training in equipping students for the job market. The high correlation between competency-based education and career readiness emphasizes the need to incorporate experiential learning methods into university programs. The suggested changes, backed by global and Pakistani studies, emphasize the need to harmonize academic programs with industry requirements. Subsequent research must investigate the long-term professional career paths of graduates educated under competency-based practices to further gauge their influence on professional achievement.

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