

## Skill Gaps in Innovation and Technology Readiness of Software Professionals

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### Abstract

**Purpose:** The major aim of the present study is to analyze the affective competencies of Software Professionals at workplace and its relationship with innovation and technology readiness. From the facts obtained from the literature review, this article tries to create a logical relationship between the affective competencies and their respective impact on interpersonal relations deal with emotional attributes like feelings, appreciations, motivations, values, and attitudes. The Interpersonal skills are the subset of affective domain skills. Interpersonal skills are referred as the social abilities individuals use to cooperate with others. These skills incorporate the capacity to convey, to gather, and to support associations with others in the workplaces. In workplaces, it is required to communicate with a wide range of people, from customers to colleagues, further team and boss. Good set of interpersonal skills in the workplaces acts as a bridge between confusion and clarity. Workplace skills will be the aid to perform the day-to-day activities in the business. For example, workplace skills shall be a tool to overcome the conflict between coworkers or resilient while working for an activity with a rigid deadline. Thus, workplace skills can impact a workplace in multiple ways. Positive mindset of a worker will impress the employer and the team. Maintaining a rapport with the entire team is one of the most important attributes of a professional. A well-articulated and scientific method is required to correlate the affective competencies of Software professionals with their workplace performance in order to assess skill gaps in

innovation and technology readiness of Software professionals. Therefore, this paper utilizes the Bloom's Taxonomy to ascertain the affective competencies of Software professionals with the innovation and technology readiness of Software professionals.

**Design/methodology/approach:** This study is a part of a survey on Skills Gap Analysis of Cognitive, Affective and Psychomotor competencies of Software industry professionals' in order to explore the skills gap in the competencies. This present study considers the impact of affective competencies. This article explores the survey of 457 employees which covers various IT / ITeS job roles such as Software Developer, Web Developer and other section IT / ITeS employees. The sample group of 457 sample respondents consists of 47 percent male members and 53 percent female members, 19 percent belong to the age group of 20-25 years, 31 percent 25-30 years, 36 percent 30-40 years and the rest 14 percent fall under the category of above 40 years. Among the respondents, 51 percent studied Science Degree courses while 49 percent studied Professional Degree courses at the undergraduate level, 14 percent studied Science Degree courses, 2 percent studied Professional Degree courses, 30 percent studied Master in Computer Applications (MCA) course, 14 percent studied Master in Business Administration (MBA) course at the Post-Graduation level, while 41 percent have not attempted PG courses. Only 26 percent of the respondents are privileged to get educated in Tier 1 city, 30 percent in Tier 2 city, 20 percent in Tier 3 city, and 24 percent had their graduation in Rural area. Regarding marital status of the sample respondents, 57 percent married, 38 percent unmarried and 5 percent Married and Separated. Hence it is inferred that the sample group include majority female members, well educated at UG level while 59 percent have attempted for PG courses and married. The employment profile of the sample respondents consist of 37 percent Software Developers, 32 percent Web Developers and 31 percent working as other Sectors of IT/ITes, 40 percent working in Tier 1 cities, 33 percent in Tier 2 cities, 25 percent in Tier 2 cities and just 2 percent in foreign countries.

**Findings:** From the findings, it is inferred that the sample group consist of individuals with good employment, working in tier cities and with good number of work experience. The observation derived from the survey reveals that 53 percent of the life partners are working and 70 percent of the respondents spend leisure time with the family. From the survey, it is noted that 16 percent learn new concepts once in 3 months, 22 percent learn new concepts once in 6 months, 23 percent learn whenever new concepts introduced and 40 percent learn whenever it was required for the project. Hence it is understood that 37 percent have the regular practice of learning new concepts. The factors like, Acquiring the requirements of the project from the client, Facing the unrealistic task of the client, Accommodating the suggestions of the team members regarding the unsatisfied project design, Meeting the demands of the client for the project before the due date, Coping up with the team mates, Change the entire requirement after the completion of the project, Facing the client when not able

to complete the project on the given time, Dealing with the Non-Cooperative Member, Behavior of Team Leader for the mistake in a presentation by a trainee, Frequent feeling of stress/lack of focus in work because of financial/personal problems, Expecting the appreciation from the boss and Working style/work-life is the source of personal life problems are also observed through this survey. The value of Cronbach's Alpha is more than 0.8 for all the 12 statements and the combined value of Cronbach's Alpha is 0.902 which proves high reliability of conducting further analysis. The t value is high for the statement Facing the client when not able to complete the project on the given time (134.49) and dealing with the non-cooperative member (118) while it is low for the statement meeting the demands of the client for the project before the due date (41.44). The correlation is high for the statement coping up with the team mates (.818) and accommodating the suggestions of the team members regarding the unsatisfied project design (.817) while is low for the statement behavior of Team Leader for the mistake in a presentation by a trainee (.276). the mean is more for the statements dealing with the non-cooperative member (3.80) and behavior of Team Leader for the mistake in a presentation by a trainee (3.74) and is low for Facing the client when not able to complete the project on the given time (1.29). Hence it is understood that Affective Competency is reflected with Facing the client when not able to complete the project on the given time and dealing with the non-cooperative member. The model statistics provides the Chi Square values as 68.225 for degrees of freedom 23 and which is statistically significant as the p value is 0.000, this is less than the standard value of 0.05. The F ratio value is 2.966 which is within the control limit of less than 3, then the Comparative Fit Index (CFI) is 0.992 which attains the standard limit of greater than 0.90, GFI is 0.977 which attains the limit of greater than 0.90, AGFI is 0.921 which is greater than 0.90 and the value of Root Mean Square of Approximation (RMSEA) is 0.066 which is just reached the limit of less than 0.08. Hence this model is a fit well in the light of Affective Competency of the sample respondents. As per Standardized Regression Weights, it is noted that all the statements taken into consideration in the deciding of the Regression Equation for Affective Competency are statistically significant as the p values are less than 0.05 indicating the fitness of the proposed model.

**Practical implications:** This article explored the relationship between affective competencies and technology readiness of Software Professionals in workplace. From the survey results and statistical inferences, this article revealed that, affective competencies play a significant role in technology readiness, coping up with team and clients at workplace in the IT sector. This article also established a relationship between the affective competencies and their corresponding effect on interpersonal relations deal with the emotional attributes such as feelings, appreciations, motivations, values, and attitudes. Hence, the findings of the research study will be very helpful for the policy makers, academia, researchers, human resource professionals, and software professionals of IT industries to

understand the significance of affective competencies to improve the productivity, innovation and technology readiness of Software professionals.

**Research limitations:** The qualitative data are based on a small sample of Software professionals of IT industry.

**Originality value:** The paper provides a new interpretation for the significant relationships between the affective competencies of Software professionals and their productivity, innovation and technology readiness. It also offers new insights into the topic area by emphasizing the need to enhance the affective competencies of Software professionals.

*Keywords: Affective, Cognitive and Psychomotor competencies, Workplace skills, Interpersonal skills, Skills Gap Analysis*