

VALIDATION OF EMOTIONAL INTELLIGENCE COMPETENCE INVENTORY (ESCI) ACROSS PAKISTANI HIGHER EDUCATION INSTITUTIONS

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ABSTRACT

For more than 20 years, emotions were not considered as an integral part of intelligence as discussed by earlier philosophers from Greek and Romans. They considered emotions as rationality based on unpredictable nature. Hence it arose many questions about the employees' emotional intelligence feeling across the world. In current research study ESCI construct is validated among faculty members of KP universities. As ESCI is not used so far in educational institutions, hence its validation will open new ways of understanding the concept related to employees' emotional intelligence in higher education sector. For this drive, data is obtained from 500 faculty members from different universities and the response was assessed by CFA via AMOS software. Results indicate that ESCI construct consists of four important clusters with multi-dimensions having a number of items. Results of the current study suggest that the newly adapted version of ESCI with 11 factors (44 items) applied in Pakistan higher education institutions having good results linked to psychometric attributes and to assess employees' emotional intelligence level.

Keyword: *Emotional Intelligence Competence Inventory & Higher Education Institutions*

INTRODUCTION

During the past few decades, emotions were not measured as the vital component of intelligence as emotions were considered rationality based on unpredictable nature (Antonakis, 2004). In the nineteenth century emotions were treated as negative consequences of human behavior and were considered as ruling agent for individuals. Emotions may be controlled by human as succumb to their clout (Leban, Zulauf, Rahim & Psenicka, 2004). Later on, emotions were considered as the prioritizing task, to organize efforts and motivating intrinsically one-self. Finally it was concluded that emotions are holistic in nature and control over all mechanism of human behavior (Higgs, Singh, & Rowland, 2002). According to biological perspective, emotions arise in human because of evolutionary process alike to provide new ways of motivating individuals, new way of bends and variation in human behavior to cope with various demands related to environmental and self-demand (Singh, 2007).

Thorndike (1920) conducted a research study among military personals to understand the personal efficiency from psychological point of view and found that every couple individual was different from another in specific intelligence behavior. The variation in the intelligence level was based on life experience. The literature revealed that human intelligence may be viewed from three vital perspectives comprising the abstract, mechanical and social view as all human varies from each

other on these three perspectives (Ahammed, Abdullah & Hassane, 2010). Further elaborated intelligence as ability of individuals to realize and manage ideas (abstract), from environmental prospective (mechanical) and human interaction capability (social) (Mohzan, Hassan & Halil, 2013). In this regard, numerous researchers explained the social justice as the phenomena to manage human in social context within the cultural ethos for establishment of the social system (Nadeem & Sujit, 2015). For this purpose, current study is an effort to provide an insight of emotional intelligence literature for better understanding of the concept.

LITERATURE REVIEW

The emotional intelligence constructs actually based upon the social intelligence theory presented by Thorndike (1920). Later on, Burns (1978) investigated the concept of social intelligence in the form of separated cognitive abilities as compare to the general intelligence. Gardner use multiple characteristics (interpersonal & intrapersonal) that are an integral part of his multiple intelligence theory. To them, theory of multiple intelligence can be treat as bio psychological capabilities of human to understand information in the given culture and to offer solution to the problem based on values, ethics, regulation of that culture. Gardner (Burns, 1978) stressed that the human have a number of intelligence that cause to interact with each other and produce different results. Further opined that individual can utilize more than single intelligence while communicating with other to produce favorable results. Multiple intelligence consist of music, logics, spatial, body kinetic, linguistic, naturalistic are various other interpersonal and intrapersonal characteristics (Higgs et al., 2002). In order to know concept of multiple intelligence theory, business leader will utilize different intelligent system as compare to musician, lawyers, actors and other.

Gardner theory was based on two important foundation that are interpersonal and interpersonal and intrapersonal attributes of humans. Based on Gardner (Burns, 1978), leadership interpersonal (social activation system) and intrapersonal (emotional system) (Bass & Avolio, 1994; Duckett & Macfarlane, 2003) characteristics were emerged and develop a new construct named as emotional social intelligence. Agreeing to Gardner (1983), intelligence is built on emotional social intellect and other attributes, skills, abilities and characteristics of humans. The model of wellbeing consist of non-cognitive abilities that enable human to collect information, analyzed it, and to control as well as adopt environmental stressors (Duckett & Macfarlane, 2003; Mayer, Caruso & Salovey, 2002). Bar-on model consist of five important components (interpersonal skills among society members, intrapersonal skills (emotions of individual to become part of any society), adaptability skills, stress management and general mood. Bar-on (emotional intelligence) is define as varied but related nature of emotional, cultural and social capabilities that enable human to understand, manage emotions, for solution of personal (interpersonal, intrapersonal) nature, and to effectively manage daily demand and pressures (Leban et al., 2004).

Solavey and Mayer (1990) for the first time define the term emotional intelligence as the ability of individual to critically view one owns and other feeling as well as emotions, to understand the difference among both and to guide for further course of actions. They studied in detail about the previous work about intelligence to drive EIA model. That emphasize on cognitive characteristics as compare to personality attributes (Mayer, Caruso & Salovey, 2002). These cognitive features enhance person ability to perceive, understand, reason, on basic logic and then regulates emotions of one self and others. Late on, the researcher measure emotional intelligence model of four attributes/characteristics (emotion perception about self and others), (facilitation to other during emotions), (understanding the myth behind emotion) and finally management (Mayer, 2002; Goleman, 2002). As the time passed, other researcher defined the emotional intelligence as the tendency of human to differentiate between one owns and others feelings, for motivating ourselves to behave properly to maintain positive relationship (Stough, Saklofske & Parker, 2009).

The researchers express that emotional intelligence is leadership integral part wherein individual may be trained bitterly, having analytical abilities, smart flow of ideas. But still he cannot become a good leader. This model expressed the five different characteristics (self-regulation, motivation, empathy, self-awareness and social skills). But the Goleman theory revolved around four clusters (self and social awareness and relationship management) (Petredis & Furnham, 2002; Mandell & Pherwani, 2003). It can be measured through emotional competency inventory and emotional & social competency inventory instrument (Petredis, 2010). Later on, the researchers developed the most advanced construct of emotional intelligence model based on the traits. The trait emotional intelligence comprise of many qualities linked to individual derived from emotional intelligence constructs (Mohzan et al., 2013). Further, researchers focused emphasize on personality features like competencies, abilities, cognitions and helps. The vital attributes of emotional intelligence inventory model are sociability (social factors), wellbeing (social factor), self-control (personality factor) and emotionality (self-personality) (Nadeem & Sujit, 2015).

RESEARCH METHODOLOGY

In current study emotional and social competence inventory will be initially validate in Pakistani HEI context. Current study consist of sample of (500) faculty members from selected universities. Original (ESCI) scale consist of four cluster namely (the self-awareness, self-management, social awareness and relationship management). Cluster one consist of only one attribute expressed by four questions. The cluster 2 consist of 4 different attributes namely the self-control, adaptability, position outlook and the achievement orientation, each are represented by (04) questions. Cluster three namely social awareness was measured on two attributes (empathy and organizational awareness), also represented by 4 questions. Finally fourth clusters (relationship management) consist of five attributes namely (coach & mentor, inspirational leadership, influence, team work and conflict management). Each attributes each attribute was measured on 4 questions. Total 12

competences are presented by 68 items. Respondent response was recorded five point Likert scale presenting 1 (never) up to 5 (consistently). As it is about demonstrating self-behavior about the underlying phenomena. But they arise questions about self-report, as it many affect desirable results on basis of self-biasness or fake information. At same time it is also possible that person may not judge its abilities properly. That's why self-reported emotional intelligence construct faced problem of lower discriminate validity in earlier studies. In current research study various nature of test like uni-dimensional CFA and multidimensional CFA along with model fit indices will be applied, to validate it importance among faculty members of HEI in Pakistan.

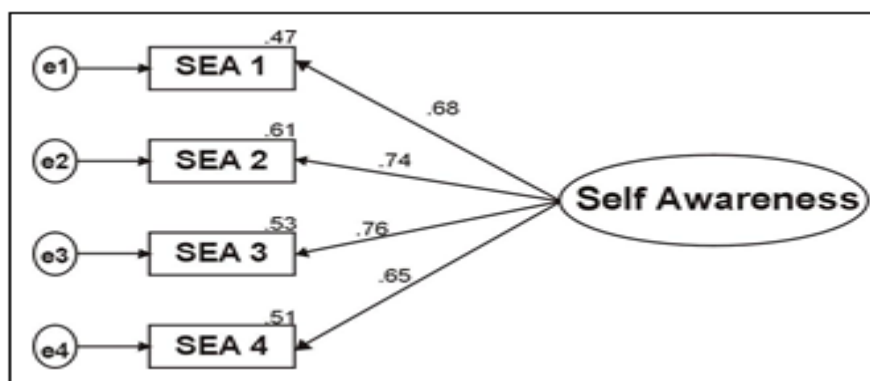
DATA ANALYSIS

In order to check the relevant factors, loading, confirmatory factor analysis was performed on each dimension. As totally there are twelve competences, all these were grouped in four different dimensions. Cluster one consist of single dimension titled self-awareness competences. Total six items represent this dimension but two of the factors were deleted because of poor item loading, while the remaining 4 items loading are appropriate. All the ratios of measurement model for cluster on different dimensions are in acceptable range. Results are presented in table (1).

Table 1 Self-Awareness Model fit indices

Factor	X2/Df	GFI	NFI	CFI	AGFI	RMSEA
Self-Awareness	1.088	.952	.897	.923	.976	.019

Figure 1 Uni-Dimensional CFA Model for Self-Awareness



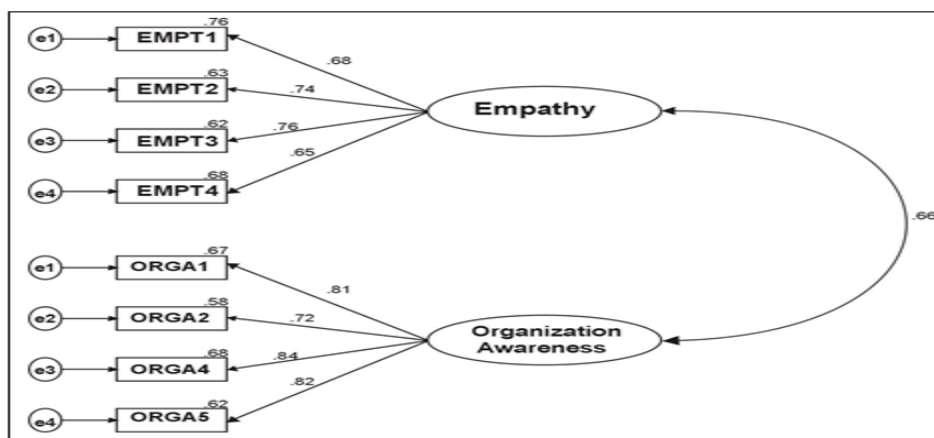
In the next stage self-management cluster was also check through item loading of four different dimensions. These four different dimensions are achievement orientation, adaptability, emotional self-control and positive outlook. For every dimension six items were adapted from previous research studies in the initial stage factor loading was not appropriate, that why all those items were deleted which shows poor loading. In the next stage four dimensions with four items were

again run through CFA. New results indicate that ($\chi^2/df=2.923$, CFI=0.922, and root mean square error values is 0.072). While fit indices for separate clusters are also in the prescribed limits i.e. achievements orientation fit indices are ($\chi^2/df=2.213$, CFI=0.952 & RMSEA=0.088); adaptability model fit indices are ($\chi^2/df=2.522$, CFI=0.951, GFI=0.921, AGFI=0.901 and RMSEA=0.063). Emotional self-control model fit indices are ($\chi^2/df=3.012$, CFI=.922, GFI=.893, AGFI=.822 and RMSEA=0.077). Results are presented in table (2).

Table 2 Self-Management Model fit indices

Factor	X2/Df	GFI	NFI	CFI	AGFI	RMESA
Self-Management	2.923	.942	.997	.922	.966	0.072
Self-Management different dimensions indices.						
Factor	X2/Df	GFI	NFI	CFI	AGFI	RMESA
Achievement orientation	2.213	1.00	0.923	0.952	0.992	0.088
Adaptability	2.522	0.987	0.912	0.991	0.901	0.063
Emotional Self Control	3.021	0.995	0.823	0.910	0.822	0.077

Figure 2 Uni-Dimensional CFA Model for Self-Management

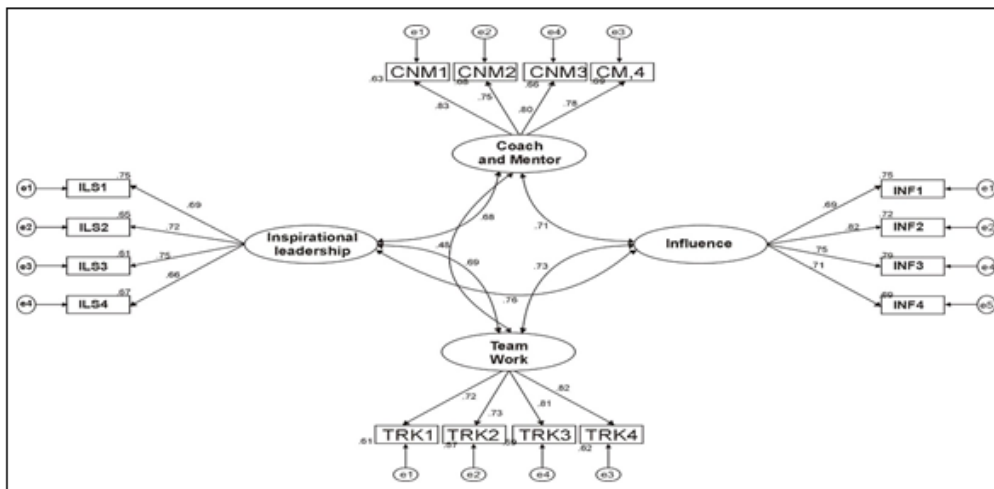


In order to check third cluster that is termed as social awareness, which consist of two important dimensions (Empathy and organizational awareness. Initial CFA shows that one item loading was not appropriate in both dimensions. When these two items were removed the CFA results were than in the prescribed limits. Results indicate that ($\chi^2/df=2.624$, CFI=0.952 and GFI=0.901 and RMSEA=0.0810).

Table 3 Social-Awareness Model fit indices

Factor	X2/Df	GFI	NFI	CFI	AGFI	RMESA
Social-Awareness	2.624	0.901	0.897	0.952	0.976	0.081

Figure 3 Uni-Dimensional CFA Model for Social-Awareness



Finally relationship management was measured on four dimensions (coaching & mentoring of employees, influential behavior, and inspirational leadership characteristics of management attributes). In the initial CFA all the items of conflict management shows poor fit indices. So it was removed. In the second CFA although loading of relevant items was appropriate. But item inf-6 and lead-2 were poor loading. So they were correlated. Model fit indices for relationship management shows that values of ($\chi^2/df=2.828$, CFI=0.953, GFI=0.961, AGFI=0.978 and RMSEA=0.0923).

Table 4 Relationship Management Model fit indices

Factor	X2/Df	GFI	NFI	CFI	AGFI	RMESA
Relationship management	2.828	0.961	0.897	0.953	0.978	.0923

Convergent and Discriminate Validity of ESCI

In order to check reliability of construct through CFA, some of the specific rules, must be tailed (construct reliabilities (loading) must be higher than (0.05) (Fornel, 1982) and composite reliabilities must be higher than (0.70) (Nunnally, Bernstein, and Berge, 1994). The values of AVE should be tried to maximize with minimum limit of 50%. Finally discriminate validity can be measure on the basis of inter correlation among two variables, but the inter items correlation value must be lower than square root of (AVE). During the uni- dimensionality and multi-dimensionality all of the problems related to factor loading were removed. That why the values of all construct, reliabilities, composite reliabilities, AVE square are under the threshold level. Final measurement model of emotional intelligence is shown in figure. Model fit values are presented in table (5). Square root values of average variances excreted are present at diagonals in table

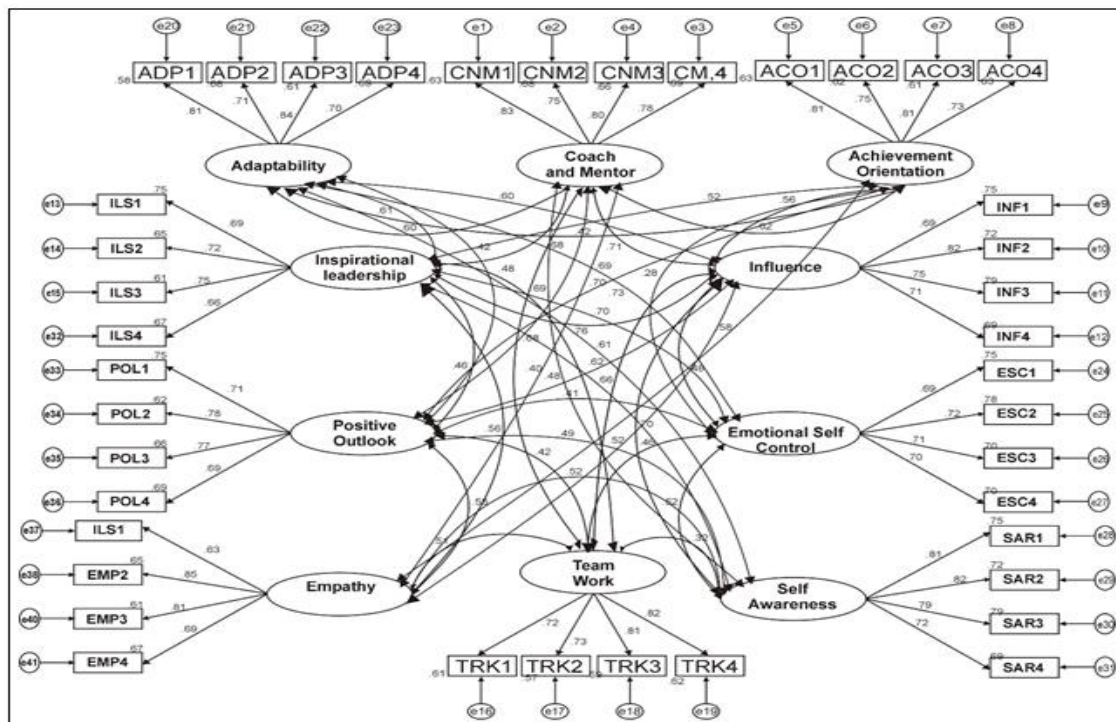
number (5). The values of square root of AVE are higher that shows correlation among variables. This indicate that the construct is ready for more advanced analysis. In current study emotional and social competitive inventory (ESCI) will be initially validate in Pakistan HEI context.

Table 5 Convergent and Discriminate validity of EISC

	C.R	AVE	Team	ESA	Ache	Adapt	POL	EMP	ORG	INSL	INFL	CM
Team	0.823	0.601	0.723									
ESA	0.811	0.623	0.534	0.772								
Ache	0.901	0.588	0.645	0.669	0.808							
Adapt	0.888	0.567	0.756	0.702	0.698	0.798						
POL	0.854	0.621	0.655	0.752	0.678	0.742	0.755					
ESCL	0.863	0.645	0.643	0.809	0.766	0.751	0.657					
EMP	0.812	0.669	0.654	0.564	0.664	0.701	0.622	0.719				
ORG	0.809	0.676	0.675	0.655	0.702	0.776	0.801	0.564	0.808			
INSL	0.833	0.634	0.545	0.531	0.659	0.662	0.651	0.708	0.711	0.745		
INFL	0.902	0.632	0.559	0.581	0.701	0.655	0.698	0.661	0.546	0.551	0.777	
CM	0.842	0.598	0.583	0.543	0.601	0.777	0.651	0.801	0.779	0.773	0.741	0.819

C.R; Composite Reliability, **AVE**; Average Variances Extracted, **ESA**; Emotional self-control, **Ache**; Achievement, **Adapt**; adaptability, **POL**; positive outlook, **ESCL**; Emotional Self-control, **EMP**, Employability, **ORG**; Organizational Awareness, **INSL**, Inspirational Leadership, **INFL**; influence, **CM**; Coaching & Mentoring

Figure 4 CFA Model for EISC



DISCUSSION AND CONCLUSION

The core objective of current study was to investigate and validate the ESCI construct in selected samples of universities faculty in Pakistan. ESCI construct consist of four important clusters with multi dimensions having number of items. In the first stage CFA was run on each cluster having specific items, and on the basis of model fit results were deducted during uni-dimensional CFA the item having lower factor loading were removed, while in multi-dimensional CFA cluster having problematic (poor fit indices) dimensions were also removed. Results show that from each cluster some of the items were removed. Whereas during CFA run for relationship management, full dimension named (conflict management competences) was removed. In the final stage convergent and discriminate validity of ESCI was checked with 11 factors having total 44 items. Results of the current study suggest that the newly adapted version of ESCI with 11 factors (44 items) applied in Pakistan HEI having good results related to psychometric attributes and to asses' employees' emotional intelligence level.

Results of the current study are in lie with (Nath, 2013). In the current study data was obtained from faculty members of varsities. Future study may investigate it in administration work farce. In future more information may be obtained if ESCI may be validated in private universities, college level managerial and administration staff as well as school, non-profitable organizations and selling / marketing staff of pharmaceutical sector. It is also recommended that response of the selected target sample may be obtain during different courses of action and during different interval of time. Furthermore principle component analysis and EFA as well as SEM may be conducted to validate it for more detailed information. In summation 44 item ESCI construct for Pakistani faculty members in HEI demonstrate satisfied results and valid to be used for further studies.

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