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# The Development and Validation of a Scale to Measure Training Culture: The TC Scale

Ms. Bushra Muzaffar
Senior Research Fellow, Department of Commerce, A.M.U., Aligarh

**Abstract**
Training culture entails continuous organization of training programs inside the organization rather than being organized at once only at the time of recruitment; and it is designing and delivering training programs according to the needs and requirement of employees rather than seeing it as a burden. Training culture is supported by the aspects of culture of an organization that encourages training, sharing and application of knowledge and skills at workplace. This paper defines the constructs of training culture and describes the development of the Training Culture Scale. Evidence for the validity and reliability of the scale is presented in a series of studies. Evidence is also provided for the discriminant validity of the scale, including with regard to self-esteem measures.
**Keywords:** Design, supervisor, training culture, travel agency.

## 1. Introduction

This paper reports an experience of developing and validating a measurement scale of *Training Culture* at organization. This research has made possible the creation of psychometrically valid tool applicable in studies related to the assessment of training culture. A new scale is constructed when existing scales do not represent the construct adequately, and scales contain lack of reliability, lack of validity, outdated (old words; meaning of words changed; attitudes changed), insensitive for changes (Nussbeck, 2009). Literature is replete with questionnaire, but most of them are assessing training effectiveness, training transfer, training and development etc. (Meyer & Smith, 2000; Abbad, Andrade & Sallorenzo, 2004;Azman, Sieng, Ajis, Dollah, & Boerhannoeddin, 2009;Mwesigwa, 2010; Alhassan, 2012). In order to achieve research goal of assessment of training culture, need to construct a new scale, containing all the important dimensions, was realized. The inclusion of subscales in the measure is theoretically motivated, so that the constituent components of training culture would be reflected in the scale design. An original, valid and reliable measure of TC is expected to be a boon for proper assessment of training culture in LSTAs across culture and demographic segments.

There are good theoretical reasons to believe that having favourable training culture in an organization promotes its well-being, the construct has not yet been examined empirically. The remainder of this article, therefore, reports the results of an attempt to create a scale that could measure training culture. The research has two main goals: 1) to create a valid and reliable scale that accurately assesses levels of training culture as conceptualized in this paper, and 2) to empirically examine the outcomes associated with training culture. The scale was designed to measure the three main components of training culture on separate subscales (training design, trainee characteristics and supervisor support for training), with the intention of summing the subscale scores to create a total score that would represent an organization's overall level of training culture. The inclusion of subscales in the measure are theoretically motivated, so that the constituent components of training culture will be reflected in the scale design. However, the subscales are expected to be highly intercorrelated, and the main object of the scale is to measure training culture as a single overarching construct.

Training culture is directly related to training, but it does not mean to frequently organize training programs without giving due attention to the training requirement of the employees. The definition of training culture, moreover, is distinguished from the mere general definition of training. Training is defined as the process through which skills are developed, information is provided, and attributes are nurtured, in order to help individuals who work in organizations to become more effective and efficient in their work (Davis & Davis, n.d.). Unlike this, training culture is a culture through which skills are developed, information is provided to the employees to make them more efficient. Subsequently, difference lies in the fact that training is a process while training culture entails a culture which requires time to occur.

### Defining Training Culture

According to Lynton and Pareek (2005) the degree to which training climate becomes "institutionalized" and is supported by enduring procedural and physical arrangements it is the "training culture, at least in that particular system or part of it. In a training culture, the acquisition of new knowledge and skills is supported by aspects of the culture of an organization that encourages training, gathering, sharing, and applying knowledge and skills. These conditions are not always readily visible or measurable, but they are always affecting organizational training culture. The culture of an organization, the ways in which trainees communicate with each other, the ways in which people lead, how the organization evaluates employees' performance, the physical environment of training, and transfer of training to the workplace all have an impact on sustaining training culture over time.

This is a culture of getting skills that are required to perform one's job. It is a culture in which staff and volunteers are valued and need-based training programs are frequently organized to update them with changing needs.

## 2. Training Culture (TC) Scale: Construction and Initial Validation

### 2.1 Item Generation

Each item of the instrument has been designed to obtain information from the employees about their organization on how they feel about training culture. Thus, the instrument has undergone through several iterations to achieve the final goal. This questionnaire was developed after a careful review of Bill Gillham's (2000) book, *"Developing a Questionnaire"* and numerous articles on development and validation of scale (Duckworth& Quinn, 2009; Hassad, 2007;Kneff, 2003). Based on research literature as well as an array of instruments for measuring training in previous studies, a list of items for each factor was generated. Initially, most of the items were drawn from previous instruments used in training studies that have established validity (Meyer & Smith, 2000; Abbad, Andrade & Sallorenzo, 2004; Azman, Sieng, Ajis, Dollah, & Boerhannoeddin, 2009; Mwesigwa, 2010; Alhassan, 2012; Pandey, 2011; Tesemma & Soeters, 2006), and were compiled . Each item has been then carefully examined and weighed for its presumed representation of Training Culture. Items that do not appear to be content relevant are eliminated, and unclear items are reworded. The items for the constructs not only measured the knowledge gained but also measured the understanding, interpretation and analysis. The items are then restated based on the nature of the employees of travel agencies for which the instrument was created. Finally a pool of 37 items has been generated. Each item is generated as a statement capturing factors of training culture.

While developing items Researcher employed due diligence in analyzing each item in order to avoid frequencies in item wording, avoid confusing questions, leading or loaded questions, avoid item wordings including negative mood and avoid negatives to reverse meaning of an item (Groves, Fowler, Couper, Lepkowski, Singer & Tourangeau, 2008; Page & Meyer, 2000;Whitley, 2002). The items are then submitted to a panel of content knowledgeable experts. The items were again edited to derive the items and instruments and expert review process was initiated.

### 2.2 Pre-Testing With Subject Expert

The protocol for the content validation process is based on what Kerlinger (1986) and Haynes and O'Brien (2000) have recommended. Content validity deals with how representative and comprehensive the items are in creating the scale and is the representative or sampling adequacy of the content substance, the matter, and the topic of a measuring instrument (Kerlinger, 1986). Content validity in this study is relatively acceptable since the various parts of questionnaire are based on the literature review and on the opinions of several experts who examined the items.

As per the suggestion from Cooper and Schindler (2003), a panel of experts was contacted to judge how well the *Training Culture (TC) Scale* meets the standards. An expert review of the items was conducted to assess the content validity of the survey by requesting detailed responses concerning clarity, relevance, and quality of items. The expert panel consisted of 10 experts, 5 of them were the experts from corporate sector who had more than five year experiences. 2 of experts were from the area of methodology and their interests include quantitative research techniques. The other 3 experts were from Human Resource Development (HRD) background. The researcher contacted these individuals through personal meeting, electronic mail, and by telephone to request their assistance in serving as expert reviewers for this study.

The reviewers were provided with a letter explaining the objectives of the study as well as the process of framing the measurement scale. They were given an expert rating sheet and were asked to rate each item on both clarity and relevance on a three point scale. They were also asked to discuss the effectiveness of the items for each variable. Additional comments on items and measures as a whole were also solicited where the investigator personally noted all the suggestions and comments. The results of the expert review were compiled on a summary sheet. Each item was reviewed considering the individual item comments. Several items were revised due to these comments, some of the items were deleted, and a few new items were added. At the end 25 items were finalized to proceed further.

### 2.3 Pilot Study of Training Culture (TC) Scale

A pilot test was undertaken on completion of the first draft of the questionnaire (Malhotra, 2008). The main rationale of the pilot study was the pragmatic evaluation of instruments with a purpose to probe and examine their psychometric attributes and features in socio-cultural perspective, for subsequent acceptance and utilization in the main study (Welman & Kruger, 2000;Page & Meyer, 2000; Whitley, 2002). This helps the researcher to make improvements where necessary.

The pilot study took place in travel agencies at Delhi, where 31 employees from travel agencies located

at different places answered the questionnaires. After the pilot test, the questionnaire proposed time were revised as it was found that more time was needed. In addition, some items from the scale were revised to make it more easily understandable by participants while safeguarding same objectives of the questions, and some of the items were deleted. Minor amendments were also made to the demographical information section on the piloted questionnaire before it was administered to the larger research sample.

### 2.4 Administration of Training Culture (TC) Scale

The next part is survey administration of *TC Scale*. Therefore the administration of *TC Scale* was done, so that if there is any evaluation issue in the *TC Scale* that can be sorted out and researcher can come to the conclusion whether *TC Scale* can be used for the proposed objectives or not. At this stage *TC Scale* contains 20 items comprised from pilot test. The instrument has a different section eliciting demographic details i.e. age, gender, qualification and experience. Measurement scheme adopted was five-point Likert scale (strongly agree to strongly disagree). Data collection was done over a period of two months i.e. in September 2015 and October 2015. Convenience and snowball sampling were employed. *TC Scale* was administered to 250 employees in travel agencies. Out of which only 171 were found complete in all respects. The profiles of the respondents are introduced in Table 1.

**Table 1: Sampling profile of the Respondents**

| **Gender** | **Males (128)** | **Females (43)** | | |
|---|---|---|---|---|
| **Age** | Below 25 (39) | 25-35 (82) | 35-45 (36) | Above 45 (14) |
| **Qualification** | Post Graduate/ Graduate (69) | Professional Qualification (55) | Graduation (29) | Any Other (18) |
| **Work Experience** | Below 2 (47) | 2-5 (48) | 5-8 (49) | Above 8 (27) |

## 3. Psychometric Evaluation

In order to test the psychometric properties of the scale the following statistical tests have been performed:

3.1 Assumptions of parametric testing
3.2 Sample Adequacy
3.3 Exploratory Factor Analysis
3.4 Confirmatory Factor Analysis
3.5 Reliability Analysis
3.6 Validity Analysis

### 3.1 Assumptions of parametric testing

Conducting parametric test requires fulfillment of certain assumptions. The first assumption is that the data is normally distributed. In order to check the normality of the data collected, descriptive statistics were produced. Skewness and Kurtosis were used to judge the normality of data. Though, a normal distribution has both skewness and kurtosis values equal to zero (Field, 2009;Malhotra, 2008), for psychometric purposes, skewness and kurtosis values between -2 to +2 is acceptable (George & Mallery, 2010; Khan, 2015). It can be noted form the Table 2 that values of skewness and kurtosis fall within the acceptable range of -2 to +2, indicating that the data is fairly normal and the basic assumption of parametric testing is fulfilled.

**Table 2: Descriptive Analysis**

| Scale | No of respondents | Skewness | | Kurtosis | |
|---|---|---|---|---|---|
| | | Statistics | Std. Error | Statistics | Std. Error |
| TC | 171 | -.118 | .186 | -.501 | .369 |

The second assumption of parametric testing is in respect of Homogeneity of variance. This assumption suggests that all data should have same or similar variances. For checking this assumption, researcher employed Levene's Test for equality of variance. If Levene's Test is non-significant (i.e. $p>0.05$) then researcher must accept that the difference between variance is zero (or roughly zero). Researcher found data to be acceptable in this regard.

The third assumption is in respect of Independence. This implies that the behaviour of one participant does not influence the behaviour of another. Since, the data was collected by researcher of employees, utmost care was taken in this regard.

Conclusion from the above discussion is that the data collected for the study met all assumptions of

parametric testing and is fit for further analysis.

### 3.2 Sample Adequacy

Sample adequacy is a measure using Kaiser-Meyer-Olkin (KMO) test (Kaiser & Rice, 1974;Field, 2009). Pre analysis for the suitability of entire sample for factor analysis was computed as recommended by Comrey (1978). KMO Measure of Sampling represents the ratio of the squared correlation between variables to the squared partial correlation between variables. It varies between 0 to 1, where a value close to 1 indicates that patterns of correlations are relatively compact and should yield distinct and reliable factors (Field, 2009). According to Hutcheson and Sofroniou (1999), values between 0.5 and 0.7 are mediocre, between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great, and above 0.9 are superb. Results for this research are identified in Table 3, which shows that the KMO measure of sampling adequacy falls into the good range, as identified by Hutcheson and Sofrinou (1999), which indicates that the sample size is adequate to yield distinct and reliable factors.

**Table 3: KMO & Bartlett's Test**

| | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .758 |
| Bartlett's test of Sphercity | Approx. Chi-Square | 672.213 |
| | Df | 66 |
| | Sig | .000 |

Bartlett's Test (Bartlett, 1954) determines whether the correlations between survey items are large enough for factor analysis to be appropriate. It is another indicator of the strength of relationship among variables i.e. whether or not the correlation matrix is sufficiently different from the identity matrix, testing whether the diagonal elements of the variance-covariance matrix are equal indicating the group variances are the same, and that the off-diagonal elements are approximately zero indicating that the dependent variables are not correlated. In this research, the Bartlett's test results indicate that Chi-squarestatistic is 672.213 with significance less than 0.001. It shows that the sample in this research is a correlation matrix not an identity matrix, hence suitable for further analysis.

### 3.3 Exploratory Factor Analysis

Factor analysis operates on the notion that measurable and observable variables can be reduced to fewer latent variables that share a common variance and are unobservable, which is known as reducing dimensionality (Bartholomew, Knott, & Moustaki, 2011). These unobservable factors are not directly measured but are essentially hypothetical constructs that are used to represent variables (Cattell, 1973). Factor analysis is considered as the method of choice for interpreting self-reporting questionnaires (Byrant, Yarnold, & Michelson, 1999). It uses mathematical procedures for the simplification of interrelated measures to discover patterns in a set of variables (Child, 2006). EFA is normally the first step in building scales or a new metrics. EFA is often considered to be more appropriate than CFA in the early stages of scale development because CFA does not show how well your items load on the Non hypothesized factors (Kelloway, 1995). EFA allows the researcher to explore the main dimensions to generate a theory, or model from a relatively large set of latent constructs often represented by a set of items (Henson & Roberts, 2006; Pett, Lackey & Sullivan, 2003). In this study, since there is no research evidence into the underlying structure of training culture, exploratory analysis was chosen before confirmatory factor analysis.

EFA involves many linear and sequential steps and many options and rules of thumb apply themselves to EFA (Williams, 2012). Firstly for something to be labeled as a factor it should have at least 3 variables, although this depends on the design of the study (Tabachnick & Fidell, 2007). Another consideration when deciding how many factors will analyze data is whether a variable might relate to more than one factor. Rotation maximizes high item loadings and minimizes low item loadings, therefore producing a more interpretable and simplified solution (Williams, 2012). There are several methods to carry out rotations. SPSS offers five: varimax, quartimax, equamax, direct oblimin and promax. For the purpose of this study, researcher selected varimax rotation in the rotation menu, chose to display the factor score coefficient matrix in the scores menu and opted for listwise exclusion, sorting by size and suppression of absolute values less than 0.40 in the options menu. Researcher has chosen for a value of 0.40 because the sample is not very big.

There are many criterian to retain factors, one criterion that can be used to determine the number of factors to retain is Kaiser's criterion which is a rule of thumb. This criterion suggests retaining all factors that are above the eigenvalue of 1 (Kaiser, 1960). A factor loading for a variable is a measure of how much the variable adds to the factor; thus, high factor loading scores demonstrate that the dimensions of the factors are better represented by the variables. Therefore, the bigger the sample the smaller the loadings can be significant. With the sample of 171, a factor loading of 0.50 and above was considered significant at the 0.05 level (Hair, Black, Babin, Anderson & Tatham, 2006), hence factors with a loading of less than 0.50 are not displayed.

Table 4 presents the results of factor analysis for *TC Scale.* In the principal component analysis, results

of this research demonstrate that 3 factors were extracted from the 20 items of TC, explaining 60.092% of the total variance.

**Table 4: Results of Exploratory Factor Analysis**

| | Component 1 | Component 2 | Component 3 | Mean | SD |
|---|---|---|---|---|---|
| **Var_9** | .792 | | | 3.47 | 1.014 |
| **Var_11** | .742 | | | 3.56 | 1.080 |
| **Var_10** | .700 | | | 3.54 | 1.047 |
| **Var_1** | .674 | | | 3.59 | .944 |
| **Var_14** | .608 | | | 4.06 | .899 |
| **Var_16** | | .800 | | 3.95 | .893 |
| **Var_19** | | .783 | | 3.86 | 1.048 |
| **Var_17** | | .735 | | 3.88 | .953 |
| **Var_18** | | .704 | | 3.98 | .861 |
| **Var_5** | | | .782 | 3.61 | .966 |
| **Var_13** | | | .776 | 3.75 | .945 |
| **Var_15** | | | .734 | 4.04 | .923 |
| **Total Variance Explained = 60.029** | | | | | |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

In analyzing the results of the rotated component loadings of *Training Culture Scale*, the factor loadings of all were well above the threshold of 0.50 (Hair, Black, Babin, Anderson & Tatham, 2006) except Var_2, Var_4, Var_6, Var_8 and Var_20. Hence these five were eliminated from the scale. Var_3, Var_12 and Var_7 were loaded on two components, hence these were also eliminated from scale. Finally the themes that emerged after rotated component loadings of *TC Scale are*;Component 1 survey items contains 5 items and relates to supervisor support. Component 2 survey items contain 4 items and relate to training design. While component 3survey items relates to trainees characteristics and contain 3 items. In total TD Scale reported to have 12 items.

### 3.4 Confirmatory Factor Analysis

A line of research begins with studies utilizing EFA while later work demonstrates what can be confirmed. Gerbing and Hamilton (1996) in a study by using Monte Carlo methods found that EFA can add to model specification when applied prior to cross-validation using CFA. Therefore confirmatory factor analysis is recommended.

CFA is ordinarily used in a deductive mode to test hypotheses with respect to unmeasured sources of variability responsible for the commonality among a set of scores (Hoyle, 2000). For this analysis, the entire 20 items were used to determine whether or not good factor loadings could be obtained. In CFA the researcher uses this approach to test a proposed theory (CFA is a form of structural equation modelling), or model and in contrast to EFA, has assumptions and expectations based on priori theory regarding the number of factors, and which factor theories or models best fit (Williams, 2012).

CFA ouput includes fit indices. There are no set rules for assessing the model fit per se. but reporting a variety of indices is advised. For the present study most commonly reported indices have been chosen which include normed chi-square, Root Mean Square of approximation (RMSEA), which is an absolute fit index; Goodness of fit (GFI), Adjusted goodness of fit (AGFI) and, Comparative fit index (CFI). A detailed discussion of model fit indices is carried out in forthcoming sections. All six indices were measured against the following criteria:

- $X^2$/df< 3.0 (Hair, et al., 2006; Kline,2005)
- GFI, TLI, CFI and IFI >0.90 (Hair, et al., 2006)
- RMSEA < 0.08 (Hair, et al., 2006)

The validity assessment of TC Scale was performed using a CFA. The validity inspection of this measurement model indicated that some indices model fit were not satisfied (GFI=.896, AGFI=841, IFI=.875, CFI=.872, RMSEA=.096). All standardized regression weights (or factor loading estimates) were found to be significantly above 0.50, hence no variable dropped out. An examination of modification indices suggested that fit could be improved significantly by freeing the corresponding error covariance parameter between the error terms for the measured variables Var_10 and Var_14, Var_18 and Var_19.

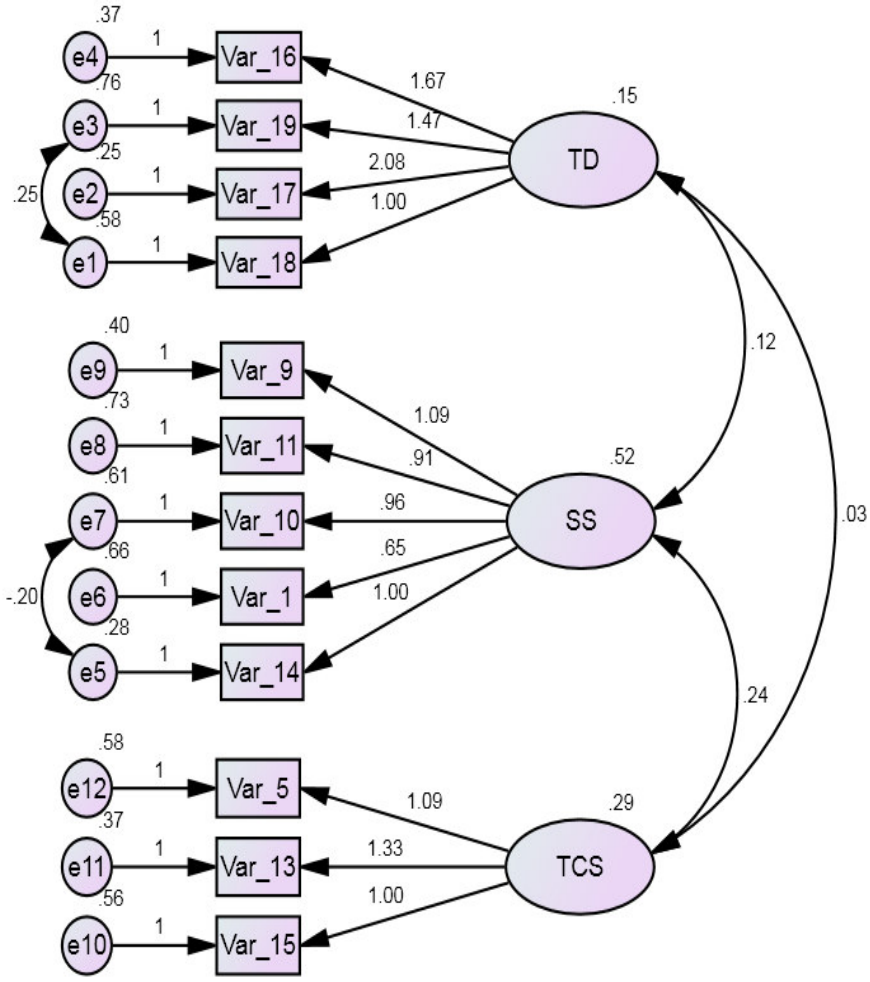
A revised CFA was repeated to examine the improved level of model fit. The final CFA results of the TC Scale are presented in Table 6.5. These result suggested that the measurement model of structural infrastructure provided a reasonably good fit: $X^2$/df=1.986, GFI=0.919, IFI= 0.925, CFI= 0.923, AGFI=0.871, RMSEA=0.076. All factors loadings, ranging from 0.52 to 0.85, were greater than the threshold level of 0.50.

**Table 5: Fit Indices for Confirmatory Factor Analysis**

| Fit Indicators | Observed Value |
|---|---|
| $X^2$/df | 1.986 |
| GFI | .919 |
| IFI | .925 |
| CFI | .923 |
| AGFI | .871 |
| RMSEA | .076 |

**Figure 1: Measurement Model for TCS**




### 3.5 Reliability Analysis

According to Peterson (1994), there is virtual consensus among researchers that, for a scale to be valid and possess practical utility, it must be reliable. Bryman and Cramer (2005) defined reliability as the degree to which an instrument measures the same way each time it is used under the same conditions with the same object.

In this study, the *TC Scale* used three factors to measure the constructs proposed in the research conceptual framework, namely training design, trainee characteristics and supervisor support. To ensure that such a set of measurement scales consistently and accurately captured the meaning of the constructs, an analysis of scale reliability was performed. Cronbach's alpha is by far the most popular measure of reliability (Peterson, 1994; Hogan, Benjamin & Brezinski, 2000;Iacobucci & Duhachek, 2003). Researcher opted for Coefficient alpha to examine reliability of TC Scale. Coefficient alpha takes into account the effect of each item in estimating the overall reliability (Fried & Ferris, 1987). The scale is considered reliable if the Cronbach's alpha is greater than 0.70 (Nunnally, 1978; Hair, Black, Babin & Anderson, 2010). Others have regarded a value greater than 0.50 as workable (Erdogan, 2009; Vashist, Wadhwa & Uppal, 2012). The Cronbach's alpha for all

the constructs exceeded the level of acceptance as suggested by Nunnally (1978), and Hair, Black, Babin and Anderson, (2010) and shown in Table 6.

**Table 6: Internal Consistency**

| Constructs | Cronbach's alpha |
|---|---|
| Training Design (TD) | 0.774 |
| Supervisor Support (SS) | 0.794 |
| Trainees' Characteristics (TCS) | 0.763 |

### 3.6 Validity Analysis

Validity is an altogether more complex concept. Usual definition of validity is that it tells us whether an item or instrument measures or describes what it is supposed to measure or describe, but this is rather vague and leaves many questions unanswered (Bell, 2005). In broad sense, validity means that the data and the methods are right. In terms of research data, the notion of validity hinges around whether or not the data reflect the truth, reflect reality and cover the crucial matter (Denscombe, 2007). Content validity was achieved primarily during the early stages of instrument development, and refers to the extent to which the items in the scale capture or reflect the theoretically and empirically supported facets of the construct being measured (Nunnally, 1978). This was facilitated by a thorough the consultation with experts. Face validity (pilot test) has also been already conducted for the TC Scale. This section would cover construct validity.

### Construct Validity

Construct validity of a scale can be established by convergent validity and discriminant validity. Conversant validity can be established by correlation analysis. For this study, researcher calculated the inter-item correlation values. Barring a few items, the values were in range of 0.2-0.5 as recommended by previous researchers (Blankson & Kalafatis, 2004; DeVellis, 2003; Dhurup, Venter, Ossthuyzen, 2005;Kerlinger & Lee, 2000; Netemeyer, Bearden & Sharma, 2003; Nunnally, 1978; Terblanche & Boshoff, 2004). According to the principle of discriminant validity, measures of theoretically different but related constructs should not correlate highly with each other.

**Table 7: Factor Correlation Matrix**

| Construct | 1 | 2 | 3 |
|---|---|---|---|
| **Training Design (TD)** | 1.000 | | |
| **Supervisor Support (SS)** | .345 | 1.000 | |
| **Trainees Characteristics (TCS)** | .099 | .417 | 1.000 |

For dicriminant validity, researcher examined the factor correlation matrix and found that the values are less than 0.6 as shown in Table 7 (Carlson, Kacmar & Williams, 2000).

A rigorous regime of statistical testing was followed in of the scale development process to ensure that a robust measure of TC is available. The process helped reveal various insights about measurement of TC. In conclusion, the EFA and CFA developed and confirmed good measurement scales for *Training Culture (TC);* training design (TD), supervisor support (SS), trainee characteristics (TCS), with very good reliability, validity and defined components. This scale can be further used by researchers for identifying the relationship of these constructs with outcome variables.

## 4. Discussion

Due to the lack of available instruments to verify the attitudes of employees towards the constructs of training culture viz in India, the study was performed to construct a measurement instrument for the theme, which will be able to cover training culture aspects of an organization. The scale, started with 37 items, was restricted to 12 statements in its final version, distributed into three factors viz. training design, supervisor support and trainee characteristics, with a reduction of nearly three times of the initial amount. The researchers considered this result as an ideal.

The three factors with 12 items in the final TC Scale, according to the initial objective of this study, aimed at defining the constructs of training culture and describing the development of the *Training Culture Scale* that could measure the attitude of employees towards training culture of their organization, covering three different aspects of the training culture, i.e. training design; supervisor support; and trainee characteristics.

Although being initially conceived to measure the attitudes of employees, it was decided that the preliminary version of TC Scale would be consulted with the experts so that the items could be refined. This procedure was adopted to test the content validity of the scale, due to the lack of such studies in Indian context. With the suggestions obtained from this sample of experts, at this stage, 12 items were excluded as per the comments obtained by the experts of different subjects. After this pilot test has been done then TC Scale was distributed to employees. After the collection of data, a complete psychometric evaluation of scale has been

done. Exploratory factor analysis has been employed herein, this exclusion criterion was adopted when considering that even items with factor loading 0.40, considered adequate to compose a factor, must be discarded in the process of building an instrument, since an item represents a factor well when its loading is equal to or higher than 0.50. Therefore 20 items of TC Scale have been detained and 3 factors were extracted. For CFA of the *Training Culture Scale* , the entire 12 items were used to determine whether or not good factor loadings could be obtained. All the standardized regression weights or factor loading estimates were found to be significantly above 0.50, hence no variable dropped out.

The final version of TC Scale consisted of items that were predominantly positive. The prevalence of positive conceptions towards training design, supervisor support and trainee characteristics' statement, which generated the items, can justify this fact. Being predominantly positive, 12 *TCS* items are oriented positively, which means that, the higher the agreement of the subjects towards the item, the more positive their outcomes are. Therefore, for the interpretation of data collected with this scale, the answers to the items can be easily calculated with the scores computed according to Likert scale. Consequently, high scores tend to reflect positive outcomes. Still, regarding the advantages of the instrument presented herein, it can be said that it facilitates the application in India, since it was built in consideration to the Indian context.

## 5. Conclusion

TC Scale was shown to be reliable for the evaluation of attitudes towards the theme. The results achieved through psychometric analysis, showed a satisfactory reliability (accuracy) and validity comprovation, for an instrument that has not been refined yet. As such, the resulting instrument can be considered good, and therefore capable of evaluating attitudes towards training culture. Its application is desirable in samples consisting of employees working in other sectors viz. manufacturing sectors and other area of service sector as well, since it was limited to the employees working in travel agencies, characterizing the work as a preliminary exploration of the psychometric properties of the instrument.

This scale has been used in studies conducted at a single point in time, so a longitudinal study is needed as well. This study provides evidence of the internal consistency, as well as the convergent, construct, and discriminant validity of the scales. This scale can be used by the researchers who approach the study of training through training culture. Researcher has also tried to avoid items that bring ambiguity.

In summary, the results of this study suggest that the TC Scale is a psychometrically sound and theoretically valid measure of training culture. Results also indicate that having high levels of training culture is linked to organizational well-being. It is hoped that the development of the TC Scale will help to initiate a new line of research that explores the relationship between TC and other important outcome variables. It is also hoped that exploration of the training culture construct can make a contribution to the growing movement.

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