APPLYING THE Q SORT METHOD: A QUALITATIVE CLASSIFICATION OF FACTORS ASSOCIATED WITH THE ORGANIZATIONAL TRAINING SUPPORT INVENTORY (OTSI)

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Abstract

The Q Sort Method was applied to the Organizational Training Support Inventory (OTSI) in an initial exploratory effort to identify the categories or factors that are measured by the OTSI and included in the general construct of organizational support for training. Subject matter experts (SMEs) used a listing of eight potential categories or factors as a basis for grouping and organizing each of the 25 items which comprise the OTSI. Results of the categorization revealed that seven constructs appear to be measured in the OTSI, which include organizational strategy, finance and budgeting, training evaluation, resource allocation, organizational culture and organizational practices. Further research implications and recommendations are provided.

Introduction

According to the construct of perceived organizational support (POS), employees develop "global beliefs concerning the extent to which the organization values their contributions and cares about their well-being" (Rhoades & Eisenberger, 2002, p. 698). Kennan and Hazleton (2000) have identified the economic transaction process of social capital, and how this capital can be stored, saved and spent like other types of organizational capital. Others have asserted that employees develop these beliefs to "determine the organization's readiness to reward increased work effort and to meet socioeconomic needs" (Eisenberger, Huntington, Hutchinson & Sowa, 1986).

Organizational resources (human, capital and financial) are invested into employee training at an unparalleled rate (McKnight, 2007). Seventy percent of businesses provide some type of formal employee training. To that end, employers spend an estimated $50 to $60 billion annually on training activities (Frazis, Gettleman, Horrigan & Joyce, 2000); as far back as 2002, organizations allocated over $54.2 billion in direct training dollars (Galvin, 2002). Employees spend approximately 30 hours annually in employer provided training (Frazis, Gettleman, Horrigan & Joyce, 2000). According to the U.S. Department of Labor, by the end of 2005 approximately 75% of the workforce, approximately 90 million people, needed to be retrained. This represents a major organizational investment in the human capital of the modern organization.

While an increased emphasis on training and a thorough evaluation of the worth of training are realities, so too is the reality that those responsible for the training function in organizations are at significant risk for job burnout. According to one survey conducted by the American Society of Training and Development, 43% of respondents stated that they were burned out and another 25% felt that they were "in danger" of burnout (ASTD, 1995). Waugh and Judd (2003) established that "burnout is not an infrequent problem within the training profession" (p. 56). Further, because of the frequency and prevalence of this problem, Waugh and Judd (2003) called for future research to "identify specific support characteristics that define an organization that values or fails to value the training function" (p. 57).

Previous studies (McKnight, 2005; McKnight, 2007) have established the Organizational Training Support Inventory (OTSI) as a valid instrument for gauging organizational readiness for training initiatives. However, previous research has treated the OTSI as a single construct, without regard to underlying categories, or factors, that impact the score of the OTSI. The present research is an exploratory attempt to gauge the primary factors at play that collectively comprise the construct of organizational support for training. An understanding of these categories or factors would increase the validity and application of the OTSI.

Should organizational members complete a more fully validated OTSI, and rectifying situations that are identified by the instrument, a higher return on investment for training activities can be realized by the organization. Circumstances in which organizational training efforts fail because of lack of support could be avoided, saving companies the problem of mismanaged training resources.

Methods

The present research took place in two phases. The first phase was completed during the initial focus groups and development of the OTSI (McKnight, 2005). That phase consisted of an identification of potential categories, or factors, which would be components of an instrument that would measure organizational support for training. Focus group participants (nine members of the American Society of Training and Development) were asked to identify the major factors impacting organizational support for training. Their list was then revised by the group through the use of the nominal group technique. The final list is represented below as Figure 1.

1. Organizational Strategy
2. Finance and Budgeting
3. Training Evaluation
4. Employee Development
5. Resource Allocation
6. Organizational Culture
7. Staffing Practices
8. Organizational Practices

Figure 1: Factors Associated with Organizational Support for Training

Phase two of the study utilized four subject matter experts (SMEs) in the field of training and development. Subject matter experts were then asked to use the Q Sort Method to categorize each of the 25 items from the Organizational Training Support Inventory using the factors or categories identified in Figure 1, above.

The Q Sort method has been defined as "in psychometrics, a test in which the respondent classifies items into categories along a dimension such as *Agree/Disagree*, often by arranging a deck of cards showing trait-descriptive statements into a fixed number of piles, such classifications being suitable for analysis by Q-methodology. It amounts to a kind of rating scale" (Colman, 2006).

In the present study, SMEs were each presented with a copy of the OTSI, and a list of categories identified in Figure 1, above. They were then asked to assign the number that corresponds to the list in Figure 1 for each item. The following section details those results.

Findings

The OTSI is comprised of 25 items. The results of the SME categorization of the items by category (Figure 1) are presented in Table 1 below. More specifically, each item is presented, followed by the listing of the category to which the item was assigned, and finally presented is the percentage agreement in the SME's categorization. The percentage agreement illustrates inter-rater reliability for the items.

Table 1

SME Categorization of OTSI Items

Item (Number & Statement)	SME Category	% Agreement
1. My organization is an industry leader.	Organizational Strategy	75
2. My organization is one in which employees proactively take responsibility for their own career development.	Employee Development	100
3. My organization views the selection, training, development and retention of employees as a key strategic objective.	Organizational Strategy	100
4. My organization views a well trained workforce as a competitive advantage.	Organizational Strategy	100
5. My organization has a defined learning strategy.	Organizational Strategy	100
6. My organization's training programs are driven by business needs.	Organizational Strategy	75
7. My organization reimburses educational ventures of employees.	Finance and Budgeting	75
8. My organization's budget has training components.	Finance and Budgeting	100
9. My organization has measurable goals originating from a strategic plan.	Training Evaluation	75
10. My organization encourages, recognizes, and rewards individuals for engaging in personal development.	Employee Development	75
11. My organization provides internal and external resources for employee development.	Employee Development	100
12. My organization provides mentoring relationships.	Employee Development	75
13. My organization provides accessibility to learning resources for employees.	Employee Development	75
14. My organization lacks on-the-job training support after initial training.	Employee Development	75
15. My organization invests in newer technologies (computer systems, robotics, ergonomic work stations, etc.).	Resource Allocation	75
16. My organization has personnel dedicated to the training function.	Resource Allocation	75
17. My organization provides subject matter experts (SMEs) throughout the training process.	Resource Allocation	75
18. My organization emphasizes customer service.	Organizational Culture	100
19. My organization stresses quality.	Organizational Culture	100
20. My organization stresses job satisfaction.	Organizational Culture	100
21. My organization embraces change as a part of the culture.	Organizational Culture	100
22. My organization views employees as equipment.	Organizational Culture	75
23. My organization works to address various learning styles in training.	Organizational Practices	100
24. My organization bases training on results from training needs analysis reports.	Organizational Practices	100
25. My organization does not reinforce or model training on the job.	Organizational Practices	75

Analysis

An analysis of Table 1 indicates several findings relevant to the continued development of supporting data for the OTSI. Of the eight categories of items associated with the OTSI, SMEs assigned OTSI items to seven of them. Only the category labeled "Staffing" did not have items on the OTSI associated with it. A listing of the number of OTSI items associated with each of subsequent seven categories is provided in Table 2.

Table 2
Number of Items Assigned to Factors of the OTSI

Category/Factor	Number of OTSI items assigned to category
Organizational Strategy	5
Finance and Budgeting	2
Training Evaluation	1
Employee Development	6
Resource Allocation	3
Organizational Culture	5
Organizational Practices	3

Additionally, Table 2 provides an initial ranking of the prevalence of each of the categories for the OTSI. Areas such as Organizational Strategy (5), Organizational Culture (5) and Employee Development (6) appear to have high levels of emphasis in the OTSI, while factors such as Finance and Budgeting (2) and Training Evaluation (1) appear to have low levels of emphasis. Resource Allocation (3) and Organizational Practices (3) appear to have moderate levels of representation on the OTSI. An initial ranking of the prevalence of items associated with each category is presented below in Table 3.

Table 3
Ranking of Items Assigned to Factors of the OTSI

Category/Factor	Number of OTSI items assigned to category
Employee Development	6
Organizational Strategy	5
Organizational Culture	5
Organizational Practices	3
Resource Allocation	3
Finance and Budgeting	2
Training Evaluation	1

The level of inter-rater reliability is high, with each of the 25 items showing at least a 75% agreement rate. Twelve of the items had perfect inter-rater reliability, and the other thirteen had reliability coefficients of at least 75%. The overall inter-rater reliability for the present study is 87%. The reliability was calculated as a weighted reliability average for each of the 25 items on the OTSI.

One final note related to analysis of finding is the point that because of the nature of the items on the OTSI, several of the categories, as well as the specific items, show tendencies of overlap. While a specific analysis of the exact nature of this overlap is not yet known, one can surmise that several of the categories are either directly related to one another, and some may even be sub-categories of one another. The section of the present research entitled "Recommendations" will address this more specifically.

Recommendations

With an initial categorization of the factors associated with the OTSI now complete, there are several implications for future research. Generally, future research related to the OTSI and the subsequent reliability and validity of the instrument should seek to establish not only the psychometric information for the instrument, but also contribute to the significance and practical application of the OTSI as well. Specific recommendations for future research include:

1. An exploratory factor analysis is needed in order to quantifiably validate the number of categories identified in the present research. While this will not provide confirmation of the specific nature of the categories, an initial quantitative study will help to validate the present findings.

2. A confirmatory factor analysis will subsequently be needed in order to not only validate the number of categories or factors, but also will be an extension of the present research in that the factors and categories would be labeled following confirmatory factor analysis.

3. Because the OTSI is conceptually derived from a more generalized scale, the SPOS (Survey of Perceived Organizational Support), future research should investigate the extent to which the two instruments' results correlate with one another.

4. Once specific psychometrics are established for the OTSI through the process of factor analysis and other subsequent studies, additional research should provide calibration of the Training Support Index (score of the OTSI). Specifically, organizations that are predetermined to be supportive of, not supportive of or indifferent to training activities should be determined. Then, through the administration of the OTSI to these organizations, exact scoring calibrations should be determined in order to provide insight into the overall meaning and relevance of the Training Support Index.

Conclusions

As training evaluation continues to become more prevalent as an area of organizational concern, organizations are placing additional emphasis not only on the success of training in delivering learning objectives, but actually on the return on investment of training initiatives. The Organizational Training Support Index, through continued efforts to clarify the associated

factors, revise instrument items and calibrate the instrument's psychometric properties, will become a useful and viable diagnostic tool for organizations.

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