A conglomerate model for identification of the interaction between job satisfaction and job performance in a service institution – a context bound approach

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Abstract: Job satisfaction is a complex, multifaceted concept influenced by both positive and negative experiences at workplace. This study is a context based study, aimed at understanding the mindset of the professors in a government institution. To accomplish the mentioned objective, Oldham and Hackman’s job characteristic model and Bagozzi reciprocal model have been adopted in this study and a causal model has been formed. It was observed from the results of the model that majority of the faculty felt stronger about their sense of work responsibility due to the autonomy experienced in doing the job, which also provided them a sense of contentment. On the contrary, they were uncertain about the meaningfulness of their jobs while task identity and task significance were assessed. Faculty also indicated a strong desire to experience stimulating work and the opportunity to exercise creativity and self-determining thought. Despite appreciating the feedback received from colleagues the faculty members were least satisfied with pay and overall satisfaction with the job. The study thus unravels the knot whether job satisfaction influences job performance or vice-versa.

Keywords: job satisfaction; job performance; structural equation modelling; SEM; Bagozzi reciprocal model; job characteristic model.


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1 Introduction

Job satisfaction is a compound, comprehensive concept that differs from individual to individual based on their contentment with work. It can be interpreted in terms of its relationships with other key factors such as, general comfort, pressure at work, resistor at work, home-work boundary, and working conditions. “Job satisfaction is simply how people feel about their jobs and different aspects of their jobs” (Spector, 1997).

One of the important aspects of job satisfaction is its relation with performance. Job satisfaction leads to higher efficiency, organisational concern, physical and psychological fitness, so an individual will work with a better mood and will learn more skills and finally get promotion by his performance (Coomber and Louise Barriball, 2007). Considering job satisfaction and performance, it can thus be summarised that the productivity of a happy worker is higher. The Hawthorne study (1924–1933) is one of the greatest preludes to the study of job satisfaction. It established a link between the attitudes at workplace and productivity by analysing the impact of diverse conditions at workplace on productivity of workers (Greenwood et al., 1983).

Job satisfaction is moreover linked with motivation, but the nature of this association is not clear as satisfaction is not the same as motivation, rather it is more of an attitude, an internal state. If a worker has a lack of skills, the supervisor can provide training or replace the worker. If lack of motivation is the problem, the manager’s task is even more challenging. Thus, motivation plays a vital role as it might negatively influence an employee’s performance and together with satisfaction and performance, it forms a triad for any work relationship.

Organisational theorists are observed to be divided into three camps with respect to the satisfaction and performance relationship. Human relationship theorists like Vroom (1964), who belong to the first camp, assert that job satisfaction is positively associated with job performance and productivity can be increased by satisfying the needs of the employee. Lawler and Porter (1967) of the second group argue that performance may lead to rewards and rewards in turn to satisfaction pointing out that it is performance that causes satisfaction and not vice versa. The generally low correlations among the variables and the contradictory results observed by the researchers have prompted a third group to propose that moderating variables may be at play in this relationship. Porter and Steers (1973), who belong to the third group, believe that a highly motivated employee with a positive attitude towards job exhibits higher performance and a high performing worker is highly motivated with a positive attitude to work. Thus, the third group does not assume unidirectional relationship but a bidirectional or a circular relationship between the variables.
Several researches have been carried out based on the Oldham-Hackman model to understand work design. Most of the empirical studies to assess the impact of the five job characteristics on the psychological states leading to work related outcomes were more often than not applied to industrial setups (Fried and Ferris, 1987). Bagozzi (1980) was one of the pioneering researchers to investigate the complex relationship that exists between job satisfaction and performance. He proposed a reciprocal model to carry out an empirical study on industrial sales force to study the causal effect between the two variables. However, there was no conclusive evidence on whether job satisfaction contributed to performance or performance contributed to job satisfaction. Moreover, the study on job satisfaction and job performance was constrained to the manufacturing and production sectors, excluding the service sector. The limited studies in the service sector also have not thrown light on job satisfaction and job performance of teaching professionals at the collegiate level.

Structural equation modelling (SEM) provides the ability to accommodate multiple interrelated and dependent relationships in a single model. This flexibility can be used to model the complex relationship among multiple variables. The variables for which direct measurement is not possible can be approximated by measurable variables. Thus, SEM can be used in the field of Educational Science to estimate the strength of the association and the direction of the association between ‘job satisfaction’ of faculties of an educational institution and their ‘job performance’ as such relationship is not directly measurable.

In this paper, an attempt is made to develop a hybrid model based on the job characteristics model proposed by Oldham-Hackman and the reciprocal model of Bagozzi, to predict the success in providing conclusive evidence to this problem. To build this hybrid model, we have adopted the SEM technique, which has proved to be very effective in testing and estimating causal relations.

2 Review of literature

Literature review has been structured in the following manner: the first section deals with the literature related to motivation and the second section emphasises the literature relevant to job satisfaction. The third section focuses on job satisfaction and its links with other dimensions. The fourth section deals with the literature on job satisfaction, job performance and their link with other dimensions. The final section brings out the literature on job characteristic model and Bagozzi model.

2.1 Motivation

Robert and Judith (2000) in their article examined motivation and productivity as essential elements of staff and managerial progress in the educational domain. They concluded that a strong organisation and a positive work environment would encourage and promote greater motivation and productivity. A few researchers revealed that motivation and job satisfaction could significantly and positively contribute to the quality of the institution and to the learning interests of students. De Jong et al. (2003) came to a consensus that high job demands and job control were related to a high degree of work motivation.
Altindis (2011) examined the plane of organisational commitment and motivation as well as the relationship between health staff’s organisational commitment and motivation within state hospitals. The dimensions of commitment analysed were emotional commitment, continuance commitment and normative commitment while the motivation levels were examined in two dimensions namely, intrinsic and extrinsic. The finding of this study supported the argument that organisational commitment of health professionals was playing a major role in determining outcome variables such as, motivation in their work. Ten Brummelhuis et al. (2011) studied the burnout as a separate process that developed over time by considering the conservation of resources theory. The researchers evaluated whether burnout introduced a defeat cycle, draining resources, and better demands. Besides, the intrinsic and extrinsic job motivations were also investigated. Eventually, the study concluded the intrinsic motivation to be a significant factor enabling employees to break through the negative cycle of burnout.

2.2 Job satisfaction

Martin (2008) investigated the relationship between service climate and psychological wellbeing such as, job induced stress and job satisfaction among the university staff. Martin found that a positive service climate was negatively related to job induced tension while positively influencing job satisfaction. Johnson and Johnson (2000), from the Iowa University, investigated the effects of perceived over-qualification on dimensions of job satisfaction. The results of the study suggested that the effects of perceived over-qualification were reflected on work-related deprivation associated with unfulfilled expectations. Overall, it was concluded that a negative relationship prevailed between perceived over-qualification and job satisfaction.

A study by Mortensen et al. (2002) explored the link between job satisfaction and professional involvement among different dieticians. It was found that a positive relationship existed between job satisfaction and markers of professional involvement. The six characteristics that were part of professional involvement were: being a mentor, having a mentor, full-time employment, self-assessed high professional involvement, high annual income and increased working hours per week. The article presented by Prajogo and Cooper (2010) examined and highlighted the importance of relationship between people related elements of total quality management (TQM) practices and employee’s job satisfaction. The major finding that came through this study was that TQM practices had a strong and positive relationship with job satisfaction. The study also supported the use of people related TQM practices to be incorporated as a model of the HR system in organisations.

Doest and Jonge (2006) re-estimated the causal relationships between job characteristics (demands, autonomy and social support) and employee well-being (job satisfaction and emotional exhaustion). The three challenging causal models (regular, reverse and reciprocal) were compared and at the end, regular causation offered the best account as in the previous case. Karsl and Iskender (2009) studied the intensity of effects of job satisfaction on institutional commitment and how teachers having higher job satisfaction had the tendency to showcase higher institutional commitment. The three variables that were taken into consideration during this study were gender, branch and educational status. In the end, it was found that branch teachers had higher job satisfaction than the form teachers.
2.3 Job satisfaction and its link with other dimensions

Majid et al. (2010) in their research tried to identify the communication skills of expert teachers in delivering effective teaching and learning processes and the needs of having the motivation to work. This research focused not only the communication skills but also the social aspects of teaching, about knowledge advancement and the significance of interpersonal relationship that deals with the student’s emotional development. According to Law and Wong (1999), there is a striking difference between the composite and factor outlook of the rapport between multidimensional constructs and their facets. The composite view presumes that the facets are components of the composite constructs while factor view proposes that facets are demonstrations of latent constructs. An empirical study manifests the fact that these contrasting views will yield two different conclusions about the relationship of constructs. In an article authored by Liao et al. (2009), the cause and effect relationships among leader-member relations as well as organisational commitment and job satisfaction were researched upon. The results showed that job satisfaction was the mediating variable between organisational commitment and leader-member relations.

According to Klassen and Chiu (2010), there is a relationship between teacher’s years of experience, teacher characteristics (gender and teaching level), three domains of self-efficacy (instructional strategies, classroom management, and student engagement), two types of job stress (workload and classroom stress), and job satisfaction. The teachers who had relatively higher workload stress had greater classroom management efficacy, whereas the teachers with higher classroom stress had lower self-efficacy and lower job satisfaction. Teachers handling classes for elementary students and kindergarten had higher levels of self-efficacy for classroom management and student engagement.

2.4 Job satisfaction, job performance and their link with other dimensions

Brown and Peterson (1994) conducted a study on the fundamental gap in understanding sales performance and job satisfaction. The gap was determined by the investigation of sales force of a direct selling organisation. The results indicated a direct positive effect of work related effort on job satisfaction, which was not mediated by sales performance. A qualitative and quantitative review of the relationship between job satisfaction and job performance was done by Judge et al. (2001); seven models were organised in qualitative review and the magnitude of the bivariate relationship between job satisfaction and job performance were determined.

Ibrahim et al. (2004) studied the relationship between self-rated performance and job satisfaction among government employees in UAE. The study also addressed the effects of a few moderating variables such as gender, age, tenure, marital status, position and nationality on the relationship between performance and satisfaction. Though the performances were self-rated, position and nationality were significant factors affecting job satisfaction. Facets like pay and benefits, professional development and work environments had no effect on overall satisfaction. Goris (2007), in his article, examined the moderating influence of communication satisfaction on the association between individual-job congruence, and job performance and satisfaction. It was observed that satisfaction with communication received weak support as a moderator of the individual job congruence model. Springer (2011) performed a quantitative assessment of the relationship among job motivation, job satisfaction and job performance of bank
employees. The results of the study showed that by applying managerial strategies to increase job motivation and satisfaction, the manager could improve bank employees’ job performance.

2.5 **Job characteristics model and Bagozzi reciprocal model**

According to Sein and Bostrom (1991), “the dimension of the job characteristics scale of job diagnostic survey (JDS) would be used to examine how workers respond to job plan”. Jackson et al. (2004) professed organisational support as an antecedent of organisational commitment and offered a measure of perceived manager commitment known as, survey of perceived organisational support (SPOS). They used a social exchange view to explain the relationship between these two forms of commitment. Basically, this view suggests that an employee’s inference about the organisation’s commitment to him, contributes to the employee’s subsequent commitment to the organisation.

Buys et al. (2007) analysed the possibility of application of JDS to a particular population and to groups from highly dissimilar backgrounds. The research confirmed that there were no significant differences between the Black and White cultural groups tested, signifying that the JDS could be useful to different population groups. Cross-cultural differences might exist even though the JDS items were interpreted and understood by various groups. The psychometric properties of the characteristics construct, which integrated five subscales used in a Malaysian context using JDS, were primarily examined. The Malay translated version of JDS was inferred to be a useful instrument in assessing the job characteristics construct (Johari et al., 2011).

Hackman and Lawler (1971) in their job characteristics model discussed that the four core job characteristics (variety, autonomy, task identity and feedback) lead to the outcome (job satisfaction, performance, job involvement, etc.). Hackman and Oldham (1975) altered the original core job characteristic model by including new core dimension into the model to analyse the outcome.

The job characteristic model, developed by Hackman and Oldham (1976) is based on the initiation that the mission itself is an input to employee motivation. Specifically, a tedious and repetitive job stifles motivation to carry out well but a challenging job enhances motivation. Diversity, self-sufficiency and decision ability are the three ways of adding challenges to a job. It states that there are five core job characteristic extents (skill variety, task identity, task significance, autonomy and feedback), which blow three critical psychological states (experienced meaningfulness of the work, experienced responsibility for outcomes of the work and knowledge of the actual results), which in turn influence the outcomes of work (job satisfaction). The five core dimensions of job characteristics can be pooled to form a motivational potential score (MPS) for a job, which can be utilised as an index of probability of a job to influence an employee’s attitudes and behaviours.

Care about the work is a state of cognition where employees perceive their work as being valuable and worthwhile, which is concurrent to skill diversity, task uniqueness and task implication. The extent to which an employee feels accountable personally for the outcomes of the work he performs is correlated to autonomy. Learning from the work results is the extent to which an employee, on a regular basis, is knowledgeable about and comprehending how effective he is performing the job tasks, which is related to feedback. According to job characteristic model, the following three critical
psychological states evolve as a result of effective outcomes of work: improved job contentment, internal drive at work, and growth contentment.

Bagozzi (1980) scrutinised whether performance influenced satisfaction or vice-versa. This problem was examined with a causal modelling methodology to unravel the relationship between performance and satisfaction. One of the most striking findings of the study was that job satisfaction would not necessarily lead to better performance. Self-esteem, the key determinant, which is enhanced by regularly providing positive reinforcement in the form of personal recognition and monetary rewards, as well as socially visible acknowledgement of good performance, ends up in better performance. Bagozzi (1978) attempted to determine and explain the relationship among performance, job satisfaction and other behavioural outcomes experienced by salespeople. Each of these factors was assigned an individual variable and its influence on other variables was observed by means of statistical tools and packages. A major conclusion emerging from this study is that it may be meaningful to model the behaviour of salespeople as a function of the person, the interactions the person with significant others in his or her role set, and the situation or her role set, and the situation or environment in which the person must transact.

3 Statement of the problem

The relationship between job satisfaction and performance is an issue of continuing debate and controversy. Researchers have put considerable effort into attempts to demonstrate that job satisfaction and performance are positively related. Although this sounds like a very interesting idea, the results of empirical literature are too assorted to hold the hypothesis that job satisfaction leads to better performance or even that there is a dependable positive correlation between these two variables. On the other hand, some researchers argue that the results are likewise indecisive with respect to the hypothesis that there is no such relationship. As a result of this uncertainty, this relationship prolongs stimulating research and review of previous attempts. Such studies have been carried out mostly in manufacturing- and production-based industries. A study in educational institutes in this regard is yet to gain momentum. This study strives to investigate if a causal relationship exists between job satisfaction and performance among the teaching faculty in a government institution.

4 Objectives of the study

The following are the objectives of this study:

1. to construct a model using Oldham and Hackman’s job characteristic model and Bagozzi reciprocal model to find out the relationship between job satisfaction and job performance constructs

2. to identify the relationship between job satisfaction constructs and job performance constructs on context basis for the faculty in educational institution.
5 Scope of the study

Studies on sales person’s job satisfaction and job performance have been conducted since the early 1900s, using a variety of theoretical constructs and widely different dimensions of satisfaction were measured. While the majority of previous job satisfaction studies have focused on industrial and organisational settings, literature on job satisfaction levels of academic faculty members is still scarce. This study is aimed at understanding the mindset of the professors in government institution.

6 Research methodology

This section of research methodology explains the procedure adopted in arriving at a model to establish the relationship between job satisfaction and performance. This segment is divided into three parts:

1 justification of the framework to assess job satisfaction and job performance
2 estimation of significant constructs based on data using SEM
3 priority of the construct based on the results.

6.1 Justification of the framework to assess job satisfaction and job performance

To develop a model and to find out the relationship between the job satisfaction and job performance constructs using Oldham and Hackman’s job characteristic model and Bagozzi reciprocal model. In order to accomplish the mentioned objective, two well established models have been exploited in this study and a new model has been formed.

The job characteristics model, with the accompanying JDS, represents a comprehensive behavioural science approach to job redesign, as the model considers the characteristics of the job, the characteristics of the work environment, as well as the characteristics of the worker in determining work behaviour. The JDS represents a comprehensive set of measurements with which the different components of the job characteristics model can be tested empirically. The Bagozzi reciprocal causation model helps in identifying and establishing the factors leading to performance and job satisfaction of the sales force in an industrial setting after a detailed study. The conceptual model, clearly outlines the behaviour of the sales people in terms of their job satisfaction and job performance and plausibly explains how the increase in job performance naturally motivates the sales force to contribute more towards their job and hence, subconsciously building an emotional attachment to their jobs. When this performance is being recognised and rewarded, it in turn provides them job satisfaction. This inter-relationship between job satisfaction and job performance is explained through the Bagozzi model.

As seen in the job characteristic model, an employee derives satisfaction from the three critical psychological states involved in one’s job. In the Bagozzi reciprocal model, performance and satisfaction are shown with reciprocal causation between the
Job satisfaction is measured using its indicators and job performance is also measured using a construct.

The analysis of our model is done in three stages. The first stage consists of skill variety, task identity, task significance, autonomy and feedback, which act as predictor construct and the three psychological states act as criterion construct. In the second stage, the three psychological states act as predictor construct and job satisfaction factors act as criterion construct. In the final stage, the three psychological states act as predictor construct and job performance acts as criterion construct. In fact, the Bagozzi model is the deduced model of Hackman and Oldham model, so by combining both, this new model has been developed and a detailed perspective of the model is shown in the diagram below. Based on the given theoretical and empirical support, the reciprocal relationship between job satisfaction and job performance has been explored. Thus, the primary focus of this paper is on satisfaction and performance constructs.

**Figure 1**  Proposed hybrid model

A reciprocal relationship is observed when the causal relationship between the two variables could be explained by each other. A model for such a relationship, represented in Figure 2, has no distinct theoretical foundation.

**Figure 2**  The reciprocal model
6.2 Estimation of significant constructs using SEM based on the data

The model provides ample opportunity to construe as a causal model, which in turn paves the way to apply SEM model to find the relationship between the indicators and constructs. According to Punniyamoorthy et al. (2011), SEM is favoured over other techniques because of the following reasons:

a) SEM unlike other methods does not have a constraint on the number of variables. Additionally, hypothesis testing in SEM is not difficult because it takes the confirmatory approach rather than the exploratory approach for factor analysis.

b) As SEM facilitates the testing of significance of the constructs as well as the indicators, the virtual importance obtained through SEM is more convincing than through any other approach. Besides, SEM also considers measurement error while analysing the data statistically.

To fulfil the objective, a causal model was developed on SEM so as to decide the degree of importance of the critical psychological states, which then resulted in the job core dimensions namely, job satisfaction and job performance.

**Figure 3** Structural model

\[
\begin{align*}
\psi_1 & \rightarrow X_1, \\
\psi_2 & \rightarrow X_2, \\
\psi_3 & \rightarrow X_3, \\
\psi_4 & \rightarrow X_4, \\
\psi_5 & \rightarrow X_5,
\end{align*}
\]

Notes: X – observed variables (skill variety, task identity, task significance, autonomy and feedback)
Y – observed variables (measure 1, measure 2 and measure 3)
ξ – unobserved variables (three critical psychological stages)
ψ – variance of error in X model (indicators)
λ – factor loading of x on ξ
ε – variance of error in Y model
η – unobserved construct matrix
β – effect of latent variables on latent variables in X model
r – effect of latent variables on latent variables in Y model.

The latent variables are related as follows:

\[\beta\eta = \Gamma\xi + \zeta.\]
6.3 Formulation of hypothesis

The hypothesis influences corresponding job characteristic dimensions of the indicators. For instance, if the skill variety dimension is considered, the hypothesis associated with it will be

- skill variety will have a positive influence on cares about the work
- task identity will positively influence the cares about the work
- task significance will have a positive influence on cares about the work
- autonomy will positively affect the personal work outcome of the faculty
- feedback will have a positive influence on learning from the results
- cares about the work will have a positive influence on job satisfaction
- personal work outcome of the faculty will positively influence job satisfaction
- learning from the results will have a positive influence on job satisfaction
- cares about the work will have a positive influence on job performance
- personal work outcome of the faculty will positively influence job performance
- learning from the results will have a positive influence on job performance
- job satisfaction will positively influence job performance
- job performance will positively influence job satisfaction.

7 Application

7.1 Data instrument

For any statistical enquiry, the collection of data or information is done through principle sources identically i.e., by primary sources and secondary sources of data. For the above model, a standard validated instrument (questionnaire) has been used as a framework to get the response regarding job satisfaction and job performance. The primary data was collected using questionnaires (JDS). The JDS developed by Hackman and Oldham (1975) is a non-copyrighted instrument that can be administered without permission of the authors. The survey is useful in measuring the perceptions of employees regarding the core job characteristics, critical psychological states, and personal/work outcomes. The data collection instruments table from the Bagozzi model was also included in the questionnaire which focuses on satisfaction and performance. There were a total of 32 questions so as to cover all aspects of the JDS and the Bagozzi model variables. The questionnaire included structured questions with multiple choice responses where the answers have been designed in Likert scale using five-point scale. A copy of the instrument is furnished in Appendix.
7.2 Data collection

The research design is exploratory, as it is undertaken primarily to study the relationship between job satisfaction and job performance construct of faculty. The population size for the study is 352 faculty member of the various departments in one of the country’s most renowned technical institutions, NIT Tiruchirappalli. The questionnaire was circulated and responses received from 212 respondents representing 61% of the population. This data was used to carry out a context-based study.

7.3 Structural model

The analysis has been done using LISREL software. The path diagram results with the values and error coefficient obtained from LISREL is shown in Figure 4.

Figure 4 The hybrid model – result

The results of the structural model exhibited in Figure 4 that all the path coefficient-values were statistically significant at $p < 0.05$. Hence, the structural model could support all the hypotheses. The influence of job satisfaction and job performance on all the three psychological states, viz., meaningfulness of the work, responsibility for the work outcomes and knowledge of the actual results have been proved by hypotheses. Therefore, it was concluded that the model was saturated and the fit was perfect.

The obtained chi-square values were 804.47 and hence, null hypothesis should be rejected. The other fit indices such as, root mean square error of approximation (RMSEA), normed fit index (NFI), goodness of fit index (GFI), adjusted goodness of fit index (AGFI) and common fit index (CFI) have provided reasonably good results for the model, thereby proving that the model fitted the data. The values of fit indices are depicted in Table 1.
Table 1  Fit indices of the structural model

<table>
<thead>
<tr>
<th>Fit index</th>
<th>Range</th>
<th>Obtained values</th>
<th>Fit</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMSEA</td>
<td>0.05–0.08</td>
<td>0.07</td>
<td>Fit</td>
</tr>
<tr>
<td>GFI</td>
<td>0.0–0.90</td>
<td>0.9</td>
<td>Moderate</td>
</tr>
<tr>
<td>AGFI</td>
<td>0.0–0.90</td>
<td>0.8</td>
<td>Moderate</td>
</tr>
<tr>
<td>NFI</td>
<td>.90–.95</td>
<td>0.8</td>
<td>Moderate</td>
</tr>
<tr>
<td>CFI</td>
<td>0.0–0.93</td>
<td>0.7</td>
<td>Acceptable</td>
</tr>
</tbody>
</table>

The interpretation of these values is provided in the following section.

8  Interpretation

The interpretation of results obtained from the model development could be split into two parts; first part in the analysis depicts the job characteristics model and psychological states. The second part of the analysis portrays the relationship between performance and satisfaction.

While interpreting the model with the help of a questionnaire and the responses received, it was evident that there were both positive and negative influences of indicators taken into account. It has been proved that all the indicators leading to constructs such as, skill variety, task identity, task significance, autonomy and feedback were significant. The routine and predictable jobs did not contribute to the job factor skill variety. Hence, the negative questions related to the above had a negative influence on skill variety. Respondents felt that their job was connecting with people at workplace and their contribution was significant to the survival of institution. In a skill oriented job like teaching and research, there is an opportunity to prioritise the construct based on their coefficients. The consistency in responses of the respondent supported this principle at the institution, in which the study has been conducted. The priority list of the constructs is shown in Table 2:
The organisation has to concentrate more on the core dimension based on priority. This will pave a way to prioritise the strategy, which in turn will enable the organisation to achieve the core dimensions. The responsibility of the work outcomes was interpreted as first, some indicators had an impact on the factor autonomy as follows, the institute where the survey was conducted, required the faculty to do a number of tasks such as, framing the syllabus, setting program evaluation objectives, designing study materials, handling classes, etc. They felt motivated when they were given more challenges and freedom that could bring out their fullest potential to light. This has been derived from the output obtained using the SEM of the responses from the faculty. This shows that most of the members expect higher degree of work freedom. When given more responsibility and freedom, they got motivated and derived more and more job satisfaction, which in turn would result in better motivation.

Meaningfulness of the work outcomes was placed second in the priority. A number of indicators leading to the factor skill variety were interpreted as follows: In a profession like teaching, it is inferred that the faculty members prefer to exhibit a variety of skills such as, communication skills, effective discipline skills, strong rapport with students, etc. Most of the faculty members have decided it to be the second most important factor that influences their motivational level.

Knowledge of the actual result is explained as follows: whatever may be the nature of the job, all kinds of people will prefer to know about their performance level and what others especially, their superiors and peers think about them and their performance. Thus, feedback is an important motivational factor, which was considered to be the third important factor by the faculty who participated in the survey. For questions about the feedback or opinion from their higher authority or colleagues, most of the respondents have unanimously opted to agree or strongly agree with the ratings, which made it clear that they would expect to get feedback and consider it to be a motivational factor if positive.

In task identity factor, the faculty members had a preference to complete a task such as, covering the syllabus on time, concentrating on research publications, etc., since the task involved was more and variety in the task was expected, it was obvious that they needed the liberty to complete the job started by them; the survey results showed that when the faculty were made to work in without a plan, they became unhappy and dissatisfied.

Task significance, in the teaching profession, is a faculty’s understanding of the role played by them in the career of a student and the reputation of the institution. The faculty members are expected to focus on student career by equipping them with subject knowledge. Task significance is described as the understanding of the impact of one’s performance on the organisations. Though in a profession like teaching a higher score for

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**Table 2** Priority of five core job characteristic values

<table>
<thead>
<tr>
<th>S. no.</th>
<th>Core job characteristics</th>
<th>Values</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Skill variety</td>
<td>1.03</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Task identity</td>
<td>0.81</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Task significance</td>
<td>0.68</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>Autonomy</td>
<td>1.05</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Feedback</td>
<td>1.00</td>
<td>3</td>
</tr>
</tbody>
</table>
this variable was expected, it was however ranked the last among the 5 core job dimensions.

On the whole, the first part inferences from this study are that it is freedom and independence that are highly expected by the faculty followed by non-monotonous task, feedback from colleagues and higher authorities, task identity and task significance.

The second part represented the relationship between job satisfaction and performance, an issue of ongoing contest and argument and is illustrated in Figure 6. On integrating the results for five factors or the core dimensions in the hybrid model to the three psychological states, a rearrangement of the priorities was observed. When the equal weighted score of the three-core dimensions, namely skill variety, task identity and task significance were taken, a score of 0.84 (average of 1.03 + 0.81 + 0.68) was obtained. Based on this, the order of priorities of the psychological states is ‘experienced responsibility of work’ followed by ‘knowledge of the work’ and ‘experienced meaningfulness of work’. Researchers have put a considerable amount of effort into attempts to demonstrate that job satisfaction and performance are positively related. From the results, it has been found that when performance was a function of satisfaction, satisfaction had a coefficient value of 1.0861 and when satisfaction was a function of performance, performance had a coefficient of 0.795. This explicitly demonstrated that job satisfaction had more impact on job performance amongst the professors of government institution and the existence of a positive relationship between job satisfaction and performance of the employees was validated. High level of fair promotion, reasonable pay system, appropriate work and better working conditions would lead to a high level of performance, ability to demonstrate and take initiatives, secured job situations and also a high sense of accomplishment.

Figure 6 Hybrid model – part II – results

In other words, job satisfaction of employees had a positive impact on their performance. This challenges the widely accepted view on relationship between job performance and satisfaction in the organisational psychology literature. Decades of research have failed to find a significant or consistent link between job performance and job satisfaction.
A conglomerate model for identification (Brown and Peterson, 1994; Iaffaldano and Muchinsky, 1985); the two constructs are therefore believed to be independent.

Figure 7 Resultant hybrid model

A positive effect of job performance on job satisfaction also had important implications to motivate and retain talented and qualified professors. It implied that actions to increase job performance could also increase the job satisfaction of professors. Thus, the top management must take enough measures to improve the working environment and enhance the responsibilities given to the professors. The teaching community must be encouraged to do more research and contribute more to research and development. From the above mentioned relationship, we could deduce that the performance of a faculty can be measured using several metrics. Some of them are the number of graduates produced with required skill per year, the number of national and international papers published, the number of papers published in conferences, number of patents published and registered and the number of PhDs produced. These metrics have to be closely monitored by the top management to motivate the professors by linking them with their promotion and pay.

9 Conclusions

The primary objective of this study is to identify the nature of association between the two constructs, namely job satisfaction and job performance of a teaching faculty of NIT. The results obtained from the study carried at a premier central government funded institution of higher learning provide evidence for the nature and the strength of the relationship. Based on the results obtained from the hybrid structural model in Figure 4, it can be concluded with a high degree of certainty that at the institution under study, there is a mutual, bidirectional relationship between job satisfaction and job performance. Further, on examining the strength of the relationship, it is observed that job satisfaction has a higher influence on job performance (1.0861) rather than vice versa (0.795).
The scores obtained for the critical psychological states reveal that ‘experienced responsibility of work’ achieves the highest score (1.05) followed by ‘knowledge of results’ (1.00). The ‘experienced meaningfulness of work’, which is the average score obtained for skill variety, task identity and task significance scored the least (0.84). The priority scores of each of the psychological state further indicate that a teaching faculty experiences substantial autonomy in planning the time and the mode of delivery of the job. A 360 degree feedback from the students, the peers and the reporting authority has an influence on contentment. The least score indicates that the teaching faculty believes that the job requires an assortment of skill, providing a sense of distinctive accomplishment and completeness when the knowledge and skill are transferred to the students leading to their career growth.

One of the limitations of this study is the small volume of data from a single institute of a particular character. Hence, we will not be able to generalise the result to all higher educational institution. This study can further be extended to include data from multiple institutes by clustering the institutes based on private individuals, trusts, state and central governments, etc., with an objective of providing a suitable strategy in their job design endeavours. Future perspective includes the study of impact of job satisfaction and job performance on a teaching faculty’s loyalty to the institution.

References


Appendix

Job satisfaction survey

☐ Assistant professor ☐ Associate professor ☐ Professor

Job diagnostic survey scale

1 = Strongly disagree  2 = Disagree  3 = Neither agree nor disagree
4 = Agree  5 = Strongly agree

<table>
<thead>
<tr>
<th>S. no.</th>
<th>Parameters</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I have a chance to use a wide variety of different skills and talents while performing my job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>I get to use a number of complex skills on this job.</td>
<td></td>
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<tr>
<td>3</td>
<td>The job is quite simple and repetitive.</td>
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<tr>
<td>4</td>
<td>My job involves doing a number of different tasks (framing syllabus to evaluation)</td>
<td></td>
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</tr>
<tr>
<td>5</td>
<td>The demands of my job are highly routine and predictable.</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>


### Job diagnostic survey scale (continued)

<table>
<thead>
<tr>
<th>S. no.</th>
<th>Parameters</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>I do a complete task from start to finish. The results of my efforts are clearly visible and identifiable.</td>
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<tr>
<td>7</td>
<td>I make insignificant contributions to my job.</td>
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<tr>
<td>8</td>
<td>My job is arranged so that I do not have a chance to do an entire piece of work from beginning to end.</td>
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<tr>
<td>9</td>
<td>My job provides me with the chance to finish completely any work I start.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>10</td>
<td>What I do affects the well-being of other people (students) in very important ways.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>11</td>
<td>What I do is of little consequence to anyone else.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>12</td>
<td>My job is not very important to the institution’s survival.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>13</td>
<td>Many people are affected by the job I do.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>14</td>
<td>I have almost complete responsibility for deciding how and when the work is to be done.</td>
<td></td>
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<tr>
<td>15</td>
<td>I have very little freedom in deciding how the work is to be done.</td>
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<tr>
<td>16</td>
<td>My job does not allow me an opportunity to use discretion or participate in decision making.</td>
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<tr>
<td>17</td>
<td>My job gives me considerable freedom in doing the work.</td>
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<tr>
<td>18</td>
<td>My higher authority provides me with constant feedback about how I am doing.</td>
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<tr>
<td>19</td>
<td>The work itself provides me with information about how well I am doing.</td>
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<tr>
<td>20</td>
<td>Just doing the work provides me with opportunities to figure out how well I am doing</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Job diagnostic survey scale (continued)

<table>
<thead>
<tr>
<th>S. no.</th>
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<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Feedback (FB)</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>21</td>
<td>My colleagues rarely give me feedback on how well I am doing the job.</td>
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<tr>
<td>22</td>
<td>Higher authority lets us know how well he thinks we are doing.</td>
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<tr>
<td>23</td>
<td>My job provides few clues about whether I’m performing adequately.</td>
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</tbody>
</table>

Bagozzi model

<table>
<thead>
<tr>
<th>S. no.</th>
<th>Parameters</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Job satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Do you feel promotion opportunities are wider in jobs other than yours?</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Would you advise a friend looking for a new job to take one similar to yours?</td>
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<td></td>
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<tr>
<td>3</td>
<td>Do you feel your pay is as high in comparison with what others get for similar work in other institutions?</td>
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</tr>
<tr>
<td>4</td>
<td>How satisfied are you with your general work situation?</td>
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</tr>
<tr>
<td>5</td>
<td>Do you feel it is as easy to demonstrate ability and initiative in your job as in others?</td>
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</tr>
<tr>
<td>6</td>
<td>Do you think that there is as much a feeling of security in your job as in others?</td>
<td></td>
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</tr>
<tr>
<td>7</td>
<td>Do you find your work challenging, exciting and give you a sense of accomplishment?</td>
<td></td>
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<tr>
<td>8</td>
<td>How much control do you feel you have over your work activities?</td>
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</tr>
</tbody>
</table>
### Rating scale

<table>
<thead>
<tr>
<th>Sl. no.</th>
<th>Parameters</th>
<th>Below 6</th>
<th>6–7</th>
<th>7–8</th>
<th>8–9</th>
<th>9–10</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>My level of performance (as per student’s feedback average score for the current year)</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**A conglomerate model for identification**