Breaking the Glass Ceiling- A Mixed Methods Study using Watkins and Marsick's Learning Organisation Culture Model

Indra Ponnuswamy
Anna University, India
Hansa Lysander Manohar
Anna University, India

Abstract

This paper attempts to understand the factors involved in learning organisation culture that contribute to the empowerment of women in Indian higher education institutions. This paper employs the learning organisation culture model developed by Watkins & Marsick (1993, 1999) as its conceptual framework. Thus, the study analyses the effects of seven independent dimensions of the model and two performance variables, viz., knowledge performance and financial performance using mixed methods research. The qualitative analysis employs in-depth interviews with 18 women staff members who were nominated and selected for a national-level UGC program on "Capacity building of women managers in higher education institutions." The decoded data is summarised after constant comparative analysis. It is inferred that Indian institutions of higher education are yet to become truly learning organisations. Similarly, the quantitative analysis relies on empirical data with a sample of 150 women faculty members from ten different institutions in order to determine the association between the variables. It is evident from the findings of the factor analysis that there are five factors that determine the association between organisational learning culture and the two performance variables, viz., knowledge performance and financial performance.

Key words

Learning organisation culture, financial performance, knowledge performance, higher education institutions, women empowerment

Introduction

As rightly pointed out by Mr. Nehru, the first prime minister of India, "When women move forward, the family moves, the village moves, and the Nation moves." Nevertheless, women are subjugated, dominated and exploited both at the work place and at home. Business organisations in the 21st century have increasingly recognised the role of their women workforce and the contributions they make to business success. It is clear that organisations can be competitive only if they identify, develop, and retain the best talent in their workforce, and that includes women. Particularly, women in Indian organisations are at a crossroads: they are attempting to forge the new horizon of tomorrow by understanding and widening knowledge that generates administrative and/or management competencies. Empirical evidence suggests that the number of women directors on Indian corporate boards is very much behind men and the initial thresholds are higher for women to achieve success (e.g., Banerji, Mahtani, Sealy & Vinnicombe, 2010 ; Kurup, Chandrashekar & Muralidharan, 2011 ; Srinivasan & Pallathitta, 2013). Thus, it is imperative for organisations to create workplaces where a proper policy framework is in place to improve women's access and opportunities. The World Economic Forum released an online repository of information in March 2012 highlighting company best practices that can help close economic gender gaps. The preface of the 2013 report suggests a few types of changes, including cash transfer programmes, equal access to credit and financial services, parental leave, affordable childcare facilities, innovative hiring processes, redesigned career paths, and meaningful mentoring programmes (The global gender gap report, 2013). To engage in these change initiatives organisations must adopt tools and techniques to identify and enable women to overcome the challenges they face at three levels: individual, group, and organisational.

Empowering women professionals from all walks of life is essential and encompasses many components, none of which can be considered in isolation. It is almost universally acknowledged that higher education institutions (HEIs) play a fundamental role in the progression of advanced knowledge economies (e.g., Secundo, Margherita, Elia & Passiante, 2010). Nevertheless, today HEIs, like many other institutions, operate in a volatile and dynamic environment in which they need to

respond and adapt swiftly to the changes in the environment (e.g., Bates, 1997; Levine, 2000; Middlehurst & Woodfield, 2007). This is because of a paradigmatic shift from non-profit institutions to for-profit organisations that call for a more entrepreneurial mode in leading the higher education institutions (e.g., Gibb, Haskins & Robertson, 2013; Altmann & Ebersberger, 2013). According to Terry (1995), empowerment research agrees that the conditions under which teachers work is often accompanied by too much isolation, which denies them a sense of efficacy, success, and self-worth. Further, previous studies have shown that gender exerts an influence on organisational changes that are characterised by learning at work. Thus, this study sets out to explore the effects of learning organisation culture that impacts the empowerment of women in higher education institutions based on two aspects: knowledge performance and financial performance.

Theoretical Background

Learning organization culture and its role in Higher Education Institutions: Gender Perspective

Abrahamsson (2001) argues that in learning organisations the focus is on integration and decentralization where the gender order is challenged. Yet learning organisations that make promises in principle continue to ignore issues of gender, which, in practice, are a distinctive and defining feature in our workplace context (e.g., Alexiou, 2005). The concept of learning organisation introduced by Garratt (1987) and subsequently popularized in the book,The fifth discipline: The art and practice of the learning organization, defines a learning organisation as "a place where people continually expand their capacity to create results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free and where people are continually learning how to learn together." (Senge, 1990a, p. 3).

Thus, we define a learning organisation as a collective activity at the individual level, group/team level, and organisational level in order to achieve performance (Watkins & Marsick, 1993, 1999; Wageman, 1997; Power & Waddell, 2004). Further, the concept assumes learning to be an ongoing process, rather than a simple intervention to solve an extant

problem. This creates an atmosphere where fresh and unrestrained thinking patterns are developed so as to respond to uncertainty and change. The learning organisation culture (LOC) is defined as those characteristics in the organisation that promotes learning through its well-defined structure and processes.

In the literature of restructuring the modern university, the social relations of gender and their impact on learning and work performance are also seen to play a crucial role (Deem, 1998; Blackmore, 2002, 2003; Reay, 2004; Grummell, Devine & Lynch, 2009). Vincent-Lancrin (2008) presented a possible reason for gender inequalities in higher education is due to wage inequalities and argued that it is necessary to reduce the wage inequalities which disadvantage women. The feminist critics as observed in the study by Blackmore (2002) examined the interaction of social relations of gender on learning and work performance in Australian universities. The study found that the gendered effects of the new disciplinary technologies of quality assurance and online learning had a positive influence on the position of women academicians. Similarly, the impact on performance with diverse staff in leadership was studied using five case studies of further education colleges (Lumby, 2009). The results indicate that there exists a relationship between managerialism and centralisation of power in terms not only of gender, but also of socio-economic class, ethnicity, and disability (amongst others). Additionally, the success factors of women academicians that contribute in their career exploration and career establishment stages were found to be the learning and uniqueness of their academic roles (Ismail, Rasdi & Wahat, 2005).

Conceptual Framework

The conceptual framework for this study is the integrative model of learning organisation culture as developed by Watkins & Marsick (1993, 1997, 1999). The framework consists of seven distinct but interrelated action imperatives (dimensions) that demonstrate how institutions become learning organisations. They are:

1. Create continuous learning opportunities.
2. Promote inquiry and dialogue.

3. Encourage collaboration and team learning.
4. Establish systems to capture and share learning.
5. Empower people toward a collective vision.
6. Connect the organization to its environment.
7. Provide strategic leadership for learning.

The first dimension, "Create continuous learning opportunities," considers organisational systems and structures to be designed so that learning is embedded into work; this can be construed as learn-at-work phenomena where people learn on the job through ongoing education and training. The second dimension, "Promote inquiry and dialogue," instigates the assessment of critical reasoning and feedback systems in the organisational learning culture. The third dimension values collaboration and team learning for the mutual benefit of the stakeholders involved. The fourth dimension deliberates the system design that stimulates transformation of tacit knowledge into explicit knowledge for the learning to be shared. The fifth dimension encourages the people in the organisation to work together with a collective vision to achieve the goals and objectives of the organisation. The sixth dimension involves the decision making process that connects the organisation to its environment. Lastly, the seventh dimension evaluates the leadership initiatives for learning and growth. Thus this model integrates two main organisational constituents, the key components of organisational change and development: (i) people and (ii) structure.

This paper employs this framework as the conceptual framework because of its relevance in assessing the organisational learning culture for individual and organisational performance. It was seen that the model promulgates the empowerment of women in higher education institutions, which emphasizes three key components: (1) continuous learning (2) knowledge performance and (3) financial performance

Rationale and Research Questions

A systematic literature review establishes the link between the learning organization culture (LOC) and empowerment in learning organizations (Snell & Chak, 1998; Van Grinsven & Visser, 2011). For instance, Snell & Chak (1998) examined using case studies of two blue-chip companies

that were cited as learning organizations and illustrated a framework that may be used to assemble data for use in testing hypotheses in more empirically-grounded studies of empowerment in learning organizations. It is further found that there are several studies pertaining to analysing the effects of LOC in the higher education sector (Watkins, 2005; Jeffery, 2008; Bui & Baruch, 2012; Ali, 2012). However, in the Indian higher education context, only limited studies deal with understanding the influence of learning organization culture on women's empowerment and performance (Patnaik, Beriha, Mahapatra & Singh, 2013). On the other hand, the assessment of academic performance has gained significant attention over a period of time as these evaluations help administrators, policy makers, funding agencies, employers, staff, parents, and students in making various decisions. Therefore, the study seeks to answer the following research questions:

1. To what extent is the learning organization culture associated with knowledge performance in Indian HEIs as perceived by their women staff?
2. To what extent is the learning organization culture associated with financial performance in Indian HEIs as perceived by their women staff?
3. What is the association between the study variables after controlling for demographic variables?

The first two research questions are analysed using mixed methods research methodology and the last research question is analysed using Hierarchical Multiple Regression (HMR) analysis. There are many methods and performance indicators to measure knowledge and financial performance variables in HEIs (Pollard *et al.,* 2013); however, this paper is based on perceptual study. This is because accreditation agencies and administrators are interested in understanding the perceptions of the staff and other stakeholders involved in order to have a people-centric approach in the management of HEIs (Peterson, 2007).

Methodology for Qualitative Analysis

This paper employs mixed methods research to evaluate the impact

of learning organisation culture on the performance of women staff in Indian higher education institutions. It has been argued in previous studies that mixed methods research results in superior research because of its methodological pluralism or eclecticism (Johnson & Onwuegbuzie, 2004). Hence a sequential mixed methods research design using case study method is employed to gather and analyse qualitative data.

Case Study method

Sample

A nonprobability sampling method using purposive sampling technique is employed in this study. The women participants in this study are from the faculties of Technical Colleges, Arts and Science Colleges, and Business Schools. The staff includes the teaching staff and administrative staff who are permanent employees. In-depth interviews were conducted with the staff members in Indian colleges who had been selected for a national level University Grants Commission (UGC) sponsored program on "Capacity building of women managers in Higher Education." Of the 30 members who were nominated by their respective institutions to attend the program, 18 members volunteered to participate in this study. Of the 18 participants, six are from Arts and Science colleges, five from business schools, and the rest from technical higher education institutions. Assistant professors represented 55 percent, associate professors 20 percent, professors 15 percent, and others who held strategic leadership positions are 10 percent. The average age of the participants is 34 years and average work experience is eight years. For the purpose of anonymity and confidentiality the names of the participants in the following cases have been changed.

In-depth Interviews

This study employs in-depth interviews to explore how organisations can assess and reformulate their structures and policies so as to empower women to break the so called "glass ceiling" (Davies-Netzley, 1998). Fifteen questions were asked to the respondents based on the conceptual framework of learning organisation culture. The interview with each respondent lasted at least thirty minutes and the interview sessions

were conducted for four days to cover the entire pool of respondents. Some of the sample questions that were asked are as follows:

"Does your institution support learning by organizing seminars and conferences?"

"Has your financial performance improved due to your learning and knowledge sharing practices like teaching a new course for the current semester?"

"Do you find your colleagues supportive when you enrol in a new learning program?"

"Do the leaders in your institution offer financial aid for taking up projects outside your institution?"

Since similar themes emerged when the interview excerpts were decoded by employing constant comparative analysis, we choose five relevant and appropriate cases to represent the similar views of the other thirteen participants in this study.

Methodology for Quantitative Analysis

Empirical Study

Sample

The empirical research study for quantitative analysis is based on the data collected from women staff working in higher education institutions in India. Purposive sampling technique is employed not only to select a representative sample but also to minimize sample error. The questionnaire was sent to 200 staff members employed by 10 different institutions and the fully completed feedback from 150 participants resulted in a response rate of 75 per cent. The data collection was made during the year 2014 using paper-pencil method and

email with gentle reminder calls until completely filled responses were received.

Research Instrument

The instrument used for data collection is called Dimensions of Learning Organisation Questionnaire (DLOQ) developed by Watkins & Marsick (1999). However, most studies have used this instrument to

measure learning organization culture in business settings. Since we find that the dimensions of DLOQ have the constructs to be consistent with the practices and context of HEIs, the items of the instrument have been adapted to evaluate learning organization culture in HEIs. Thus, the research instrument in this paper is a structured close ended questionnaire with 60 items that measures the academic staff members' perceptions on learning organization culture, financial performance, knowledge performance, and demographic details. The responses are collected on a 6-point Likert Scale that range from "1-Almost never" to "6-Almost always". The questionnaire consists of four sections. The first section administers the adapted version of DLOQ with 43 items to assess the characteristics of the learning organization. The second section of the questionnaire has a self-rated measure on staff's perception of knowledge performance at the individual level. This section consists of six items that have been adapted from the original version of DLOQ. The third section measures financial performance with four items that have also been adapted from the original version of DLOQ. Finally, the fourth and last section of the questionnaire consists of seven items that collects the demographic details such as name of the institution, age, education attainment, salary, designation, years of experience, and category of institution. Thus, the research instrument employs 60 items in total to measure the necessary variables in order to answer the research questions of this study. Yang, Watkins & Marsick (2004) have validated the DLOQ dimensions and found it to be valid and reliable. The Cronbach coefficient alpha reliability estimate in this study is found to be greater than 0.913. The nomological validity and strong convergent validity of learning organization culture using DLOQ is also observed. Thus, DLOQ is found to be an appropriate tested instrument that is valid and reliable for measuring learning organization culture (Yang, 2003; Moilanen, 2001). Moreover, this instrument has been widely applied in studies conducted in a number of countries (both developed and developing country context) with diverse culture such as Malaysia (Sta Maria & Watkins , 2003), China (Zhang, Zhao, Zhou & Nunamaker, 2004), Australia (Power & Waddell, 2004) and Spain (Hernandez & Watkins, 2003).

Analyses

To analyse the data, SPSS software (IBM Corp. Released 2012, version 21.0, Armonk, NY: IBM Corp) is used. Descriptive statistics is used to report mean and standard deviation of the variables. Reliability and validity of the dimensions are tested using Cronbach's alpha and exploratory factor analysis (EFA) respectively. Pearson correlation analysis is applied to examine the relationship between learning organisation culture, knowledge performance and financial performance. Further, to identify the association between the study variables, multiple regression analysis is used. Additionally, hierarchical multiple regression is used for further analysis after controlling for demographic factors. A p value less than 0.05 is considered significant.

Findings of Qualitative Analysis

CASE 1:

Ms. Janaki has been working as an Assistant Professor for the past four years in a reputed Arts & Science college. She works in the same institution she graduated from. She specializes in communication and teaches television production. She finds her work environment congenial but feels there is a long way to go in terms of individual development. She observes:

> 'Our institution encourages continuous learning amongst academic staff. They organize workshops which are task-based as well as soft-skill based. They are neither methodical in training nor offer any certification per se. My department, in particular, allocates a different set of papers every semester to teach. This equips us in expanding our knowledge base in different subjects, but we master none.'

While frequent seminars and workshops are a regular feature in the academic calendar, Janaki feels the environment is not academically stimulating. She finds a huge difference between specific departments in

terms of research inclination.

> 'The school of commerce is a full-fledged research department. But the school of media is the least academically stimulating. Apart from learning the job, my personal development has been nearly stagnant since I completed my post-graduation. It is been four years now and I have not published any research paper. I suffer from starting trouble and I expect my institution to help me overcome this teething problem.'

CASE 2:

Ms. Kajol works as an Assistant Professor (Senior-scale) in a business school. While she finds her job exciting, she suffers from work-life imbalance. Being a mother of a two year old, she is afraid she is not able to spend quality time either with her family or for her own self. Although she has changed her job twice, she finds her institutions do not provide post-maternity leave. Further, she finds her current job least paying and financially de-motivating. She reflects:

> 'My work timing spans nine hours a day. However I plan, I used to wonder why I cannot log out on time. It took some time for me to realize that there was ever-increasing administrative work which my seniors insist on me and for which I am not financially remunerated.'

Kajol's experience of work-life imbalance requires the institution to motivate on building communication and dialogue with her team and superiors, where she could seek support on sharing the knowledge to complete the task effortlessly. Further, working as team would not only involve collective responsibility in completing the task but also improve better time management and morale. But Kajol's experience of being a working woman is challenging and she struggles to make her learning in the work place to be financially remunerating.

> 'The milestone of bearing a child was important on my personal front. At the same time, being a career woman, I had to make tough decisions due to want of leave. I chose my baby over the job. Yet, I was working at home on consulting jobs that required my skill set. After a break in my career, I took up a full-time job in the current institution and am contemplating taking industry projects for financial leverage.'

CASE 3:

Ms. Lakshmi Menon holds the position of Principal in a self-financed engineering college. She finds her college rules and regulations at staff level to hinder both individual development and organisational development. Though she is at a senior level management position she is not able to bring in change due to several constraints at the structural level. She reflects:

> 'There are national and international conferences coming up in different parts of the world. We have talented professors in our college who would do better in their field of interest given an opportunity. Although our college extends its support for such programs, still I could neither approve sanction for financial support extensively nor grant on-duty leave in most of the cases. In my opinion, I find unless structural changes are implemented that promote research activities amongst staff we cannot expect considerable improvement on the knowledge performance front.'

In most of the higher education colleges, the emphasis is on the total hours of class lectures rather than on the quality of knowledge contributed. Thus, this has resulted in less research and innovation, which has become an area of concern for the industry and policy makers.

'I suppose linking industry and college in research activities is one of the novel ideas to promote new knowledge. We get to know the latest technology that is applied in the industry. Further, the project collaborations ensure team learning and promote innovation. In my opinion, these initiatives will call for a systemic change in the working environment of the college where learning has to be for both individual as well as organisational development.'

CASE 4:

Ms. Anita works as an Associate Professor in a private engineering college. She has been working in the higher education sector for the past 20 years. She is a multifaceted personality and reflects her experiences as follows:

'Although my college gives ample opportunities for self improvement, I find it difficult to maintain a work life balance. I would appreciate if the institution gives me credit for the activities I get involved in apart from teaching. The learning environment for self improvement is not well formulated and hence my allocation of time for learning new subjects has taken a back seat. Further, networking among staffs is very minimal and I find I am working in isolation.'

CASE 5:

Ms. Jennifer works as a Professor in a prestigious arts college in a metropolitan city. She has been associated with her college for the past 23 years. She says,

'I find my college supportive for both learning and un-learning initiatives. My experience has taught me that un-learning is as important as learning is for change management. This helps in gaining new knowledge.'

The above five cases are the excerpts from the interviews conducted with the women faculty members and the summary of all the interviews are tabulated in table 1.

Summary of the Qualitative Data

We have attempted to summarise and systematise the qualitative data as shown in table 1. This helps us to understand how the institutional support for learning has been perceived by the women academicians and its impact on their knowledge and financial performance. The areas of conflict in moving towards learning organisation culture are given as collision sites in the table below as and when necessary.

Table 1
Summary of the data from in-depth interviews

Sl.No	Learning Organisation Culture Dimensions	Knowledge Performance	Financial Performance
1	**Create continuous learning opportunities :** Institutions promote research activities among their staff by organising and extending support to attend seminars and conferences both at national and international level	Women staff members are aware that to climb the corporate ladder it is essential to upgrade one's skills, capabilities and knowledge. Un-learning is also an important aspect in gaining new knowledge. **Collision Sites:** Work-life balance, lack of social networking skills, tend to avoid work related travel	Women staff members view empowerment is at best when financial performance is improved by means of salary increments and promotions for their expertise in their area of interest. **Collision Sites:** Career breaks, do not switch over to other promising jobs due to family constraints
2	**Promote inquiry and dialogue** Institutions promote productive feedbacks through regular and ad hoc meetings	Women staff members update their knowledge for teaching and learning through critical reflection and feedback from peers. **Collision Sites:** Teaching aids/material are not publicly shared, fear of critical comments	Women staff members invest in training and development programs for effective job performance.
3	**Encourage collaboration and team learning** Project-based learning is promoted to encourage collaboration and team learning. Pedagogy shift is from teacher centric to	Women staff members take interest in projects that involve groups/teams. They consider it as an opportunity to learn new technology and to develop interpersonal skills.	Institution / industry sponsored projects have improved the staff's financial performance and overall career growth. **Collision Sites:** Low salary, lack of performance based

Sl.No	Learning Organisation Culture Dimensions	Knowledge Performance	Financial Performance
	learner centric	**Collision Sites:** Too much time spent on class lectures and very little time for industry level interaction	pay structure
4	**Establish systems to capture and share learning** Faculty development programs (FDP) are organised to bring together faculty from various streams. Intranets also help in sharing the tacit knowledge.	Women staff members understand the importance of networking to share tacit knowledge. **Collision Sites:** Fear of losing competitive edge when specialised knowledge is to be shared	Women staff members gain financially when student enrolment is higher in their area of specialization.
5	**Empower people toward a collective vision** Institutions set rules and procedures to strive for common goal and objectives for both organisational and individual development.	Knowledge performance of women staff members is found to improve when they have better communication and delegation.	The motivation in work place results in better job performance and in turn financial gains. **Collision Sites:** Cost cutting measures by institutions for organizing conferences and seminars
6	**Connect the organization to its environment** Institutions collaborate with the industry to gain practical knowledge that best reflects real life situations	Women staff members understand the importance of taking up initiatives to share their specialized knowledge with the industry and with other education institutions **Collision Sites:** Time constraint, financial constraint	Consulting assignments taken up with industry and government agencies lead to better financial performance **Collision Sites:** Lack of interest to interact with outside environment since there is limited financial gain
7	**Provide strategic leadership for learning** Institutions organize various events and seminars to nurture leadership skills to promote learning and accept organisation change	Women staff members are well aware that the institutions that foster an environment conducive to learning result in better knowledge performance and thus build confidence to take new initiatives. It also becomes a competitive advantage when the institution is compared with its peers. **Collision sites:** Do not like organisational change endeavours	Women staff members are empowered financially when the management and people holding key positions understand and motivate learning.

Results and Findings of Quantitative Analysis

Demographic Details

The majority of the participants are found to be in 40-49 years age group (37.5%) and with doctoral degree (55.1%). The highest percentages of respondents have the designation as assistant professor, followed by associate professor, and professor, with 47.1 per cent, 28.2 per cent and 24.7 per cent respectively. Further, 48.1 per cent of the participants have at least 6-10 years of experience in their current institutions. Finally, the percentages of respondents who represent their institutions in this study are from public universities (20.4%), public colleges (36%), private universities (28.7%), and private colleges (14.9%).

Findings

Factor analysis attempts to bring inter-correlated variables together and thus provides an empirical basis for reducing all variables to a few factors. Hence, factor analysis is employed in this study. Previous studies have shown that reliability of factor analysis is also dependent on sample size (Field 2005). In order to check whether the sample is adequate, the result of Kaiser-Meyer-Olkin (KMO-test) measure of sampling adequacy is used. If the value of KMO is greater than 0.5, then the sample is considered to be adequate. The result of KMO-test is found to be 0.817. Further, with statistically significant $x^2(1378) = 6489.253$, $p < 0.001$, exploratory factor analysis (EFA) is done for reducing the variables into few factors. Factor analysis is done using Principal Component Analysis (PCA) with varimax rotation selected during the analysis, in order to procure the simplest dimensional solutions. Acceptable minimum absolute magnitude for an item loading is 0.50. The analysis shows that all 53 items of learning organization culture, knowledge performance, and financial performance items are clearly loaded on five factors. The factors were named as individual level (Factor 1), team/group level (Factor 2), organizational level (Factor 3), knowledge performance (Factor 4), and financial performance (Factor 5). The five underlying factors account for a total variance of 74 per cent for the entire 53 items loaded (table not shown). Furthermore, the

reliability of various dimensions of learning organization culture, perception of knowledge, and financial performance were all at an acceptable range, with Cronbach alpha ranging from 0.75 to 0.92. In addition, there was a significant and positive correlation of the factors of learning organization culture, perception of knowledge, and financial performance with a correlation value ranging from r = 0.65 to 0.87, $p < 0.001$ (Table 2). Further, the nature of the correlations evidently supports the concept of a positive relationship among the constructs.

Table 2
Correlation between the study variables

Factors	Team level	Organizational level	Perception of Knowledge Performance	Perception of Financial Performance
Individual level	0.755	0.650	0.670	0.679
Team level		0.656	0.731	0.874
Organizational level			0.740	0.720
Perception of Knowledge Performance				0.683

All the p-values are significant with $p < 0.01$

Multiple linear regression method is used to assess how the perception of knowledge performance and financial performance contributes to the variance in learning organization culture. The results show that the perception of knowledge performance (beta = 2.935, t = 14.776, $p < 0.001$) and financial performance (beta = 2.583, t = 8.710, $p < 0.001$) together contributed significantly to the variance in learning organization culture (F: 3,546 = 234.14, $p < 0.001$). The "R" square value of 0.564 indicates that perception of knowledge performance, and financial performance accounted for 56.4 per cent of the variability in the perception of learning organization culture (Table 3).

Table 3
Association between learning organization culture, knowledge performance and financial performance using multiple linear regression analysis

Model	Unstandardized Coefficients		Standardized Coefficients	R Square	F-value	t	Sig.
	B	Std. Error	Beta				
(Constant)	61.638	4.543		0.564	234.140	13.569	.000
Perception of Knowledge Performance	2.935	0.199	0.518			14.776	.000
Perception of Financial Performance	2.583	0.297	0.304			8.710	.000

Dependent variable: Learning organization culture
Independent variable: Knowledge performance, and financial performance

Additionally, to further analyse the contribution of variables in the study after controlling for demographic variables, Hierarchical Multiple Regression (HMR) analysis is used. The variables are entered in a set of two blocks, the first with the demographic variables and the second block consists of dimensions of learning organization culture, knowledge performance and financial performance. Since HMR output retained only the category of institutions, further analysis was carried out with only this variable. Thus, the method enables the researchers to understand the contribution of each factor even after controlling the demographic variables. The findings revealed that overall 48.4 percent contribute to financial performance and this is statistically significant. Particularly, the demographic variables alone accounts only for 1.9 per cent but the inclusion of organizational level variable, results in 40.2 percent variance. Further, the addition of knowledge performance (43.1 per cent) slightly improved the variance. Thus, the statistical contribution of the demographic variables, perception of learning organization culture, knowledge performance, and financial performance are analyzed by means of beta weights (Table 4).

Table 4

Association between financial performance, learning organization culture and knowledge performance after controlling for demographic variables using Hierarchical Multiple Regression Analysis

	Model	Unstandardized Coefficients		Standardized Coefficients	R Square	F-value	t-value	Sig.
		B	Std. Error	Beta				
1	(Constant)	18.258	.470		0.019		38.868	.000
	Type of Institution	-.262	.120	-.093			-2.179	.030
2	(Constant)	3.527	.888		0.402	116.929	3.974	.000
	Type of Institution	.251	.099	.089			2.543	.011
	Organizational level	.130	.007	.641			18.260	.000
4	(Constant)	2.724	.869		0.431	102.817	3.133	.002
	Type of Institution	.331	.097	.117			3.425	.001
	Organizational level	.087	.010	.431			8.873	.000
	Perception of Knowledge Performance	.197	.032	.296			6.094	.000
5	(Constant)	2.105	.879		0.484	86.377	2.395	.017
	Type of Institution	.313	.096	.110			3.266	.001
	Organizational level	.066	.011	.328			5.823	.000
	Perception of Knowledge Performance	.205	.032	.307			6.381	.000
	Team level	.100	.029	.145			3.486	.001

Dependent Variable: Financial Performance; Independent variables: Learning organisation culture, Knowledge performance; Controlling variables: Demographic variables

Discussion

It is imperative to examine the unseen barriers in organisations that affect both organisational and individual performance. Organisations need to address the subtle gender bias that disrupts the learning cycle amongst women staff and help them break the psychological "glass ceiling." The context must support and increase the likelihood that the organisation and its members will encourage women staff members to take up challenges and experiments. This will create safe "identity workspaces" to support transitions to bigger roles and anchor women's development efforts to a sense of leadership purpose. It is evident from the qualitative study that the organisational learning culture has a considerable role in the knowledge and financial performance of the women staff in higher

education institutions. For example, the case studies 1, 3, 4 and 5 exemplifies the impact of learning organisation culture on the staff members' knowledge performance. It is seen from the responses of the staff that their institutions must provide a better environment in improving their knowledge. Similarly, the case study 2 focuses upon the financial aspect wherein the stress is for policies that provides remuneration in taking up additional work. Further, the summary table 1 of the case studies show that there exists medium level of satisfaction based on learning organisation culture amongst the participants, thus indicating that their institutions are still in the process of achieving learning organisation status. Thus the findings of this study with respect to gender analysis also support that universities are hardly learning organizations (White & Weathersby, 2005). The phenomenological research also indicates that the women perceive the learning culture embraced by their institution has an effect on their knowledge performance and financial performance both at the organisational level and individual level. At the organisational level, the weekly and monthly departmental level meetings promote inquiry and dialogues whereby suggestions and feedback are received from the staff members. Further, the institutions need to encourage team learning and systems-level thinking to nurture continuous learning amongst its stakeholders. It is also evident that the faculty members expect their institutions to become truly learning organisations by creating systems to capture and share knowledge. At the individual level, the respondents find it increasingly difficult to manage work life balance and change. It is found from this study that organisations have to become accommodating in their culture towards women teaching staff to give them time to improve their knowledge performance. It is also evident from this study that the women staff perceive better financial performance if the organisational culture is focussed towards learning irrespective of the category of institution they belong to. Finally, the dimension "Provide strategic leadership for learning" predicts the knowledge and financial outcomes both at organisational and individual levels and thus stresses the importance of good leadership in HEIs to cope with highly complex and rapidly changing environments.

The quantitative analysis employs DLOQ instrument to measure the learning organization culture. However, the questionnaire is modified to suit the context of the Indian higher education system. It is to be noted

that the original questionnaire was more appropriate for business organizations. Hence the questionnaire is modified and validated using factor and Cronbach's analysis. This results in only five factors to assess learning organisation culture, knowledge performance, and financial performance. This is because a few items do not load to their respective dimensions of learning organisation culture framework, and hence they are subsequently grouped contextually. Since the original version of DLOQ collects the data at the individual, team/group, and organisational levels, the grouping of the items is justified. The findings of this study indicate that only a medium level of characteristics has been reported by the respondents. The middle level scoring on all the items reveal that the perception of women academic staff about their institutions are that they are yet to achieve learning organization status. Further, it is argued that these educational institutions need culture, administration, and leadership to become truly learning organizations. Additionally, hierarchical multiple regression (HMR) analysis in this study indicates that there is a direct and positive relationship between the factors of learning organization culture, knowledge performance and financial performance even after controlling for demographic variables. This indicates that there is a strong association between the variables. Thus, this study supports previous research findings that established the association between constructs of learning organization culture and performance (Ellinger, Ellinger, Yang, Howton, Baldwin & Danielson, 2002; Marsick & Watkins, 2003; Yang, Watkins & Marsick, 2004; Lopez, Peon & Ordas, 2005). Further, it is to be noted that the results reveal that the level of satisfaction depend on individual perceptions to the degree/level of learning organisation characteristics present in a particular higher educational institution. This suggests that this model can be used in HEIs as a human resource development tool to establish measures so as to continually align learning to improve performance. The study thus implicates that it is imperative for universities to concentrate on human resource development (HRD) initiatives that demand a new view of leadership to champion and support learning (Senge, 1990b). This calls for new managerial roles for department heads and for deans of colleges and universities to devise strategies that promote well-defined learning organization culture, thereby empowering women to achieve their fullest potential at the workplace.

Conclusion

All organizations learn through their members, and there is an established link between individual learning and organisational learning (Kim, 1998). Since individual learning advances organisational learning, understanding the nuances of the mental models and learning enablers aid institutions to actively manage the learning process to make it consistent with the institutional goals, vision, and values. Mental models are the explicit and implicit understandings of the world held by the individuals, and they need to be aligned by the organisations through its learning strategies. This is possible by incorporating learning organisation culture in institutions through open communications, risk-taking and knowledge management. Thus, this study explored the subjective interpretation of women professionals in academia to understand the interplay of other aspects of life as well as the influence of their organisational environment in their careers. This was possible by using the learning organisation model as the conceptual framework to understand the internal environment in higher education institutions that foster empowerment in their female staff. The mixed methods research methodology adopted in this study is useful in obtaining data triangulation and thus the study is highly reliable.

Recommendations for further studies

As with every other organisation, universities strive to gain competitive advantage: in the process, they employ various methods to improve their services, practices, and competitiveness. Thus, in this study the role of culture in higher education institutions is analysed with the perspective of women empowerment. The present study has employed purposive sampling technique to select the respondents which limit the results to be generalised. Hence it is recommended to use advanced sampling techniques in further studies. It is also to be noted that only a few studies have applied DLOQ in educational settings, and notably, none have done so from the Indian context. Further studies are recommended in this field. The empirical study can also be furthered for gender based comparative studies. That is a task for future study.

References

Abrahamsson, L. (2001). Gender-based learning dilemmas in organizations. *Journal of workplace learning, 13*(7/8), 298-307.

Alexiou, A. (2005). A tale of the field: reading power and gender in the learning organization. *Studies in continuing education, 27*(1), 17-31.

Ali, A. K. (2012). Academic staff's perceptions of characteristics of learning organization in a higher learning institution. *International Journal of Educational Management, 26*(1), 55-82.

Altmann, A., & Ebersberger, B. (Eds.). (2013). *Universities in Change: Managing Higher Education Institutions in the Age of Globalization*. New York : Springer.

Banerji, A., Mahtani, S., Sealy, R., & Vinnicombe, S. (2010). Standard Chartered Bank: Women on Corporate Boards in India 2010. Retrieved from https://dspace.lib.cranfield.ac.uk/handle/1826/5274

Bates, A. W. (1997). *Restructuring the University for Technological Change*. Retrieved from http://cclp.mior.ca/Reference%20Shelf/PDF_OISE/Bates_Restructuring%20University.pdf

Blackmore, J. (2002). Globalisation and the restructuring of higher education for new knowledge economies: New dangers or old habits troubling gender equity work in universities? *Higher education quarterly, 56*(4), 419-441.

Blackmore, J. (2003). Tracking the nomadic life of the educational researcher: What future for feminist public intellectuals and the performative university? *The Australian Educational Researcher, 30*(3), 1-24.

Bui, H. T., & Baruch, Y. (2012). Learning organizations in higher education: An empirical evaluation within an international context. *Management Learning, 43*(5), 515-544.

Davies-Netzley, S. A. (1998). Women above the Glass Ceiling Perceptions on Corporate Mobility and Strategies for Success. *Gender & Society, 12*(3), 339-355.

Deem, R. (1998). 'New managerialism' and higher education: The management of performances and cultures in universities in the United Kingdom. *International Studies in Sociology of Education, 8*(1), 47-70.

Ellinger, A. D., Ellinger, A. E., Yang, B., Howton, S. W., Baldwin T. T., & Danielson, C. C. (2002). The Relationship between the Learning Organization Concept and Firms' Financial Performance: An Empirical Assessment (and Invited Reaction). *Human Resource Development Quarterly, 13*(1), 5-29.

Field, A. P. (2005). *Discovering Statistics using SPSS*. London: Sage.

Garratt, B. (1987). *The Learning Organization: and the need for directors who think*.

Aldershot: Gower.

Gibb, A., Haskins, G., & Robertson, I. (2013). Leading the entrepreneurial university: Meeting the entrepreneurial development needs of higher education institutions. In A. Altmann & B. Ebersberger (Eds.), *Universities in Change*, (pp. 9-45). New York: Springer.

Grummell, B., Devine, D., & Lynch, K. (2009). The careless manager: Gender, care and new managerialism in higher education. *Gender and Education, 21*(2), 191-208.

Hernandez, M. & Watkins, K., (2003). Translation, Validation and Adaptation of the Spanish Version of modified Dimensions of the Learning Organization Questionnaire. *Human Resource Development International, 6,* 187-196.

Ismail, M., Rasdi, R. M., & Wahat, N. W. A. (2005). High-flyer women academicians: factors contributing to success. *Women in Management Review, 20*(2), 117-132.

Jeffery, J. (2008). "Institutions of Higher Learning and Learning Organizations: An Annotated Bibliography." Prepared for the Teagle Foundation. Retrieved from: http://www.teaglefoundation.org/Resources/Additional-resources#sthash.73MwTL1d.dpuf

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational researcher, 33*(7), 14-26.

Kim, D. H. (1998). The link between individual and organizational learning. *The strategic management of intellectual capital,* 41-62.

Kurup, A., Chandrashekar, S., & Muralidharan, K. (2011). Woman power in Corporate India In conversation with Kiran Mazumdar Shaw, Chairperson & MD, Biocon ltd. *IIMB Management Review, 23*(4), 223-233.

Levine, A. E. (2000). The future of colleges: 9 inevitable changes. *The Chronicle of Higher Education,* B10-B11.

Lopez, S. P., Peon, J. M., & Ordas, C. J. V. (2005). Organizational learning as a determining factor in business performance. *The learning Organization, 12*(3), 227-245.

Lumby, J. (2009). Performativity and identity: mechanisms of exclusion. *Journal of Education Policy, 24*(3), 353-369.

Marsick, V. J., & Watkins, K. E. (2003). Demonstrating the value of an organization's learning culture: The Dimensions of Learning Organizations Questionnaire. *Advances in Developing Human Resources, 5,* 132-151.

Middlehurst, R., & Woodfield, S. (2006). *Responding to the Internationalization Agenda: Implications for Institutional Strategy and Practice.* York: Higher Education

Academy.

Moilanen, R. (2001). Diagnostic tools for learning organizations. *The Learning Organization, 8*(1), 6-20.

Patnaik, B., Beriha, G. S., Mahapatra, S. S., & Singh, N. (2013). Organizational learning in educational settings (technical): an Indian perspective. *The Learning Organization, 20*(2), 153-172.

Peterson, G. F. (2007). *A case study of the perceptions of faculty, administrators, and staff regarding the development of a "culture of evidence" at two Texas community colleges.* Doctoral dissertation, The University of Texas at Austin.

Pollard, E., Williams, M., Williams, J., Bertram, C., Buzzeo, J., Drever, E., et al. (2013). *How should we measure higher education? A fundamental review of the Performance Indicators* (Part One: The Synthesis Report). Bristol, UK: Higher Education Funding Council for England. Retrieved from http://dera.ioe.ac.uk/18967/2/2013_ukpireview2.pdf

Power, J., & Waddell, D. (2004). The link between self-managed work teams and learning organisations using performance indicators. *The Learning Organization, 11*(3), 244-59.

Reay, D. (2004). Education and cultural capital: The implications of changing trends in education policies. *Cultural trends, 13*(2), 73-86.

Secundo, G., Margherita, A., Elia, G., & Passiante, G. (2010). Intangible assets in higher education and research: mission, performance or both? *Journal of Intellectual Capital, 11*(2), 140-157.

Senge, P. M. (1990a). *The Fifth Discipline: The Art and Practice of the Learning Organization.* New York: Doubleday.

Senge, P. M. (1990b). The leader's new work: Building learning organizations. *Sloan Management Review, 32,* 7-23.

Snell, R., & Chak, A. M. K. (1998). The learning organization: learning and empowerment for whom? *Management Learning, 29*(3), 337-364.

Srinivasan, V., & Pallathitta, R. G. (2013). Building the Women Directorship Pipeline in India: an exploratory study. *IIM Bangalore Research Paper,* (427). Available from SSRN, http://ssrn.com/abstract=2346109

Sta Maria, R., & Watkins, K. (2003). Perception of learning culture and concerns about the innovation on use of innovation: A question of level of analysis. *Human Resource Development International, 6*(4), 491-508.

Terry, P. M. (1995). Empowering teachers as leaders. In *National Forum Journal.* University of Memphis.

The global gender gap report. (2013). Retrieved from http://www.weforum.org/re

ports/global-gender-gap-report-2013

Van Grinsven, M., & Visser, M. (2011). Empowerment, knowledge conversion and dimensions of organizational learning. *The Learning Organization, 18*(5), 378-391.

Vincent-Lancrin, S. (2008). The reversal of gender inequalities in higher education: An on-going trend. *Higher education to 2030, 1,* 265-298.

Wageman, R. (1997). Critical success factors for creating superb self-managing teams. *Organizational Dynamics, 26*(1), 49-61.

Watkins, K. E. (2005). What would be different if higher educational institutions were learning organizations? *Advances in Developing Human Resources, 7*(3), 414-421.

Watkins, K. E., & Marsick, V. J. (1993). Sculpting *the learning organization Lessons in the art and science of systematic change.* San Francisco: Jossey-Bass.

Watkins, K. E., & Marsick, V. J. (1997). *Dimensions of the learning organization.* Warwick, RI: Partners for the Learning Organization.

Watkins, K., & Marsick, V. (1999). Looking again at learning in the learning organization: a tool that can turn into a weapon. *The Learning Organization, 6*(5), 207.

White, J., & Weathersby, R. (2005). Can universities become true learning organizations? *The Learning Organization, 12*(3), 292-298.

Yang, B. (2003). Identifying Valid and Reliable Measures for Dimensions of a Learning Culture. *Advances in Developing Human Resources, 5*(2), 152-162.

Yang, B., Watkins, K. E., & Marsick, V. J. (2004). The construct of the learning organization: dimensions, measurement, and validation. *Human Resource Development Quarterly, 15*(1), 31-56.

Zhang, D., Zhao, J. L., Zhou, L., & Nunamaker, J. J. F. (2004). Can E-Learning Replace Classroom Learning? *Communication of the ACM, 47*(5), 75-79.

Biographical Note: **Indra Ponnuswamy,** a full-time research scholar, is a multifaceted personality with many academic laurels to her credit. She has completed her Bachelors in Applied Sciences and Masters in Business Administration. Her subject of interest for her doctoral thesis is in organizational learning and knowledge management. She has presented her papers in several national and international conferences. She is also actively involved with a non-governmental organization that strives for overall welfare of Indian culture, women, and children. E-mail: ponindra@hotmail.com

Biographical Note: **Hansa Lysander Manohar** works as an Associate Professor in a reputed Indian University. Her areas of interest are in operational research and systems engineering. She has also coordinated women empowerment programs sponsored by University Grants Commission (UGC) in India. She is extremely erudite and has guided several research scholars in her career span of nearly over two decades. Email:auhansa@gmail.com