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ARTICLES

A Study of Consumer Behaviour towards Permission based.....Pg. 54

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DIAS Technology Review

The International Journal for Business & IT

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From The Editor's Desk

It is our profound delight to present our readers the twenty second issue of DIAS Technology Review.

Modern organizations are chanting a new hymn “Employee Engagement” now a day, for augmenting innovation and productivity, while reducing costs of hiring and retention of workforce. It is a feeling of psychological connects of employees with the organization that emerges from a positive emotional state leading to sense of pride towards the organization. In the article **“Developing a Scale to Measure Employee Engagement”** authors have screened six factors Job Satisfaction, Organizational Commitment, Intent to Stay, Pride, Advocate and Emotional Connect to gauge the construct of highly engaged workforce, the core of astounding organizational growth.-

An organization's excellence hinges on a reservoir of efficient human resource equipped with quality education and right skills, which are infused by enlightened faculty at technical institutions. The workers' dexterity plunges down if edification is compromised due to slackness in tutoring. Faculty attrition at technical institutions not only creates an imbalance between faculty demand and supply, but also escalates associated costs to the organizations. The authors in their study **“A Qualitative Approach to Faculty Attrition Cost in Technical Institutions”** have attempted to delineate a relationship between faculty attrition and cost incurred by the institutions; discovering higher attrition rate churns out higher direct, indirect and opportunity cost. In the current milieu a gainful faculty retention strategy is the panacea to enhance quality of education, to minimize associated costs and to build the brand for gaining a competitive edge in education industry. The research article, **“Confirmatory Factor Analysis of Faculty Retention in Technical Institutions”** highlights authors' focus on retention of the intellectual strength in technical institutions, as they have identified three internal factors - Organizational Policies, Supportive Work Environment and Career and Self Development, influencing faculty retention.

The VUCA global business environment, which is volatile, uncertain, complex, and ambiguous, has constrained firms for struggling hard to stay afloat and manage turbulence. Today high tech firms are devising new marketing strategies like puckering uniqueness in technically sophisticated products flashing as a trump card to win customers' brand loyalty. The article **“Consumer Desire for Uniqueness in High Tech Products”** reveals how continuous innovation for technically superior products offered by firms reduces uncertainty in market and lures consumers to buy these.

In service industry the internet trotting customers explore the 'Functionality' and 'Usability' attributes, before making any transaction. The organizations, therefore, keep on pampering their clients by designing more informative and functional websites. In the article **“An Exploratory Study on the Factors affecting Customer Perception towards Website Usefulness of Indian Banks”,** the authors have identified three factors namely 'Navigation', 'Content' and 'Response', which influence the customer perspicacity towards choice and efficacy of a banking website. Not only tech savvy class, but poor people are also entitled to have an access to financial services. Various public sector and private sector institutions are promoting financial literacy as well as facilitating microfinance to the poor people. The author in the article **“Measurement and Determinants of Financial awareness of Microfinance Clients”** has used 'Microfinance Clients Awareness Index' to gauge the level of financial awareness of microfinance clients, which will be helpful in determining policies for broader developmental goals.

In our endeavor of accumulation and proliferation of knowledge in different areas of business and IT, we are incorporating a Doctoral Abstract of research **“A Study of Consumer Behavior towards Permission based E-mail Marketing in Selected Indian Banks”** focusing on customer centricity and relationship building, in addition to the latest research studies of distinguished scholars. We are hopeful that the present edition of this journal with all its illuminating features will come up to the expectations of our revered readers.

Regards,

Dr. Anju Batra

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DEVELOPING A SCALE TO MEASURE EMPLOYEE ENGAGEMENT

*Prof. Anu Singh Lather & **Mr. V.K. Jain

ABSTRACT

The present research seeks to develop and validate a construct of employee engagement. First, in defining the construct, literature was reviewed and six factors were synthesized appearing in most of the studies. These factors are Job Satisfaction, Organizational Commitment, Intent to Stay, Pride, Advocate and Emotional Connect. A questionnaire with 81 items on these factors was constructed. A sample of 156 associates working at different managerial levels in various organizations was taken. Factor Analysis was applied to validate the questionnaire and reliability score was calculated for each factor and the entire construct. On the basis of factor analysis a questionnaire containing 26 items was finalized. This 26 item questionnaire was then administered on a sample of 1250 associates working at different managerial levels in various organizations to define norms on the basis of which the associates can be categorized in to 'highly engaged' to 'highly disengaged'.

Keywords: *Employee Engagement, Job Satisfaction, Organizational Commitment, Intent to Stay, Pride, Advocate, Emotional Connect*

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INTRODUCTION

Companies with engaged employees outperform those without by up to202%.

*Dale Carnegie and MSW Research*1

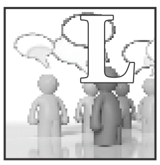
For several years now, 'employee engagement' has been a hot topic in corporate circles. It's a buzzing axiom that has incarcerated the attention of workplace stakeholders, HR managers and the executive group. It's a topic that employers and employees both think they understand, yet can't clearly express or convey the same. The employee engagement research undertaken over the past few years has defined the term differently, and has presented different set of key drivers and implications.

Employee engagement, also speciously called Work engagement, is a broadly employed, yet poorly defined concept, developed primarily from the consulting community. As a result, each consulting firm established their own definitions of the concept, component elements (compensation, job satisfaction, pride, job commitment, discretionary effort. etc), and resulting business outcomes. It is a relatively new term in HR literature and really started to come to prominence from 2000 onwards. Melcrum Publishing (2005) found that from a global survey of over 1,000 communication and HR practitioners 74% began to formally focus on the issue between 2000 and 2004, 36% have a dedicated employee engagement program and 64% apply the philosophy to employee engagement to their people practices.

The world's top-performing organizations understand that employee engagement is a force that drives business outcomes. In few of the best organizations, engagement is more than a human resources initiative -- it is a strategic foundation for the way they do business. World-class organizations unleash their potential for growth by optimizing their employee and customer relationships. Organizations that have optimized engagement have 2.6 times the earnings per share (EPS) growth rate compared to organizations with lower engagement in their same industry.

There is no clarity on the onset of discussions on engagement in academic literature. Some researchers suggest that the emergence of 'employee engagement' was described in the academic literature by Schmidt et al. (1993). A contemporary version of job satisfaction, Schmidt's influential definition of engagement was "an employee's involvement with, commitment to, and satisfaction with work. Employee engagement is a part of employee retention." This integrates the classic constructs of job satisfaction (Smith et al., 1969), and organizational commitment (Meyer & Allen, 1991). While most of others profess that engagement at work was conceptualized by Kahn (1990) as the 'harnessing of organizational members' selves to their work roles. In engagement, people employ and express themselves physically, cognitively, and emotionally during role performances. In 1999, the popularity of the book First Break All the Rules (Buckingham & Coffman, 1999) helped the term employee engagement become an overnight sensation in the business consulting world. The Gallup data on which the book was based presented extensive research evidence on the foundational aspects of employee engagement. Esty and Gewirtz (2008) defined engagement as "Employees are engaged when many different levels of employees are feeling fully involved and enthusiastic about their jobs and their organizations". According to Perrin (2003) "Engagement is the willingness and ability to contribute to company success the extent to which employees put discretionary effort into their work, in the form of extra time, brainpower and energy". Seijts et al (2006) viewed that engaged employees care about the future of the company and are willing to invest the discretionary effort. Engaged employees feel a strong emotional bond to the organization that employs them (Robinson et al, 2004).

In the past five years quantitative research studies have provided HR with a compelling business cases regarding the upsides of an engaged workforce and the downsides of an unengaged workforce. The two specific examples of hard data linking an engaged workforce with increased profitability and an unengaged workforce with decreased profitability are that highly engaged employees outperform their disengaged colleagues by 20 to 28 percent according to the Conference Board, 2006. A 2005 study by Serota Consulting of 28 multinational companies found that the share prices of organizations with highly engaged employees rose by an average of 16 percent compared with an industry average of 6 percent (Esty & Gewirtz, 2008). There are also costs associated with a disengaged workforce. Disengagement has been found to cost between 243 to 270 billion dollars due to low productivity of this group according to a 2003 Gallup poll. In one 2003 study by ISR, companies with low levels of employee engagement found that their net profit fell by 1.38 percent and operating margin fell by 2.01 percent over a three year period. Conversely, companies with high levels of engagement found that their operating margins rose by 3.74 percent over a three year period (Esty & Gewirtz, 2008). Melcrum, a research and information company recently surveyed 1,000 corporate communications and HR professionals and conducted 40 case studies and found that many respondent offering employee engagement programs received the immense benefits. More than 50% report improvements in employee retention and customer satisfaction, 33% report higher productivity, 28% report improvements in employee advocacy, 27% improved status as a "great place to work", 27% report increased profitability, and 25% report improved absenteeism.



ITERATURE REVIEW

Witnessing and understanding the importance of employee engagement the authors of the present research felt that there is an earnest need to have some good measure of employee engagement which can help in differentiating between 'Engaged' and 'Disengaged' employees. In order to develop this scale the literature was reviewed to identify how various researchers have defined 'Employee Engagement'. A thorough screening of literature revealed that the major work in this area is done by consulting organizations.

Digital Opinion specialized in employee engagement for 14 years and managed surveys in more than 30 countries and 25 languages conducted research to determine the key ingredients of employee engagement. They have defined six prerequisites of employee engagement as:

Work –Does it give people the opportunity to do what they're good at? Is it mentally stimulating day-to-day?

Support - Do people feel supported by their line manager and colleagues?

Recognition - Do people feel that their efforts are recognized and valued?

Loyalty - Do people want to stay and develop their careers with the company?

Advocacy - Do people feel proud of their company and recommend it to family and friends as a great place to work?

Values - Do people share the company's values and feel that colleagues' and managers' attitudes and behaviors reflect those values?

They further define engagement as: "Engaged employees enjoy their work, feel valued, and are proud to tell people that they work for the Company. They go the extra mile to help their customers and colleagues, and they want to stay and develop a career with the Company. In the long run they are the real contributors."

On the basis of prerequisites defined they proposed engagement model. The model has two dimensions: the first one is job satisfaction that people get from the work they do characterized by work, support and recognition, and the second one is commitment they feel towards their employer characterized by loyalty, advocacy and values.

Walsh and Martin (2011) proposed a model of employee engagement with the name of 'Ipsos MORI Engagement Model'. According to them engagement comprises three factors i.e. loyalty (feeling part of the organization, desire to stay), involvement (satisfaction, fulfillment, and best of you), and alignment (confidence in management, understanding strategy and support change).

CBSR and Hewitt Associates (2010) defined employee engagement as the state of emotional and intellectual commitment to an organization- the degree to which you have captured the hearts and minds of your employees. They further suggest that an engaged employee can be identified from three components of his behaviour

Say- Consistently say positive things about the organization

Stay- Intend to stay with the organization

Strive- Strive to achieve above and beyond what is expected in their daily role.

Robertson (2013) in his work on New Zealand workplace survey defines employee engagement as the level of personal 'connectedness' an employee feels towards their organization. Engaged employees are the ones displaying real enthusiasm about their jobs and the organization employing them.

Mone and London (2010) authors of the Employee Engagement views this as “a construct that is relatively complex.” They suggested a model to measure engagement which includes involvement (feeling engaged, challenged by the work), commitment (to a long-term career at the company, to the company's success and to consistently working with a high level of focus and energy), meaningfulness (by finding your work meaningful and understanding how you contribute to the success of your company), empowerment (feeling empowered to do your job),

Manager support (job-related training and recognition for a good job and feeling valued for your contributions), and loyalty (intending to remain with your company, recommending your company as a place to work).

Shuck and Wollard (2009) reviewed 140 articles on employee engagement and concluded that Firstly engagement is a personal decision, not an organizational decision as implied by some definitions. Second, Though initial definitions of engagement treated it as an atomic concept, later definitions extended it to comprising of emotional, behavioral and cognitive engagement. Third, Employee engagement has "no physical properties, but is manifested and often measured behaviorally". Different definitions look at behavior as the employee's basic job performance or extended effort or the success of the employer and Lastly, Employee engagement is about the behaviors that meet or exceed organizational goals. Shuck and Wollard found the crux of these articles and defined employee engagement as "an emergent and working condition as a positive cognitive, emotional, and behavioral state directed toward organizational outcomes".

CIPD research (2008) in collaboration with Kingston University and Ipsos/MORI to undertook a survey of employee attitudes (Employee Engagement and Satisfaction Models, 2008). From this research they determined that Engagement can be said to have three dimensions: *Emotional engagement* (being very involved emotionally with one's work), *Cognitive engagement* (focusing very hard whilst at work) and *Physical engagement* (being willing to 'go the extra mile' for your employer). Kenexa (2008) has come up with the Kenexa Employee Engagement Index, which comprises four key components (Employee Engagement and Satisfaction Models, 2008): Pride, Satisfaction, Advocacy and Retention.

Mercer's research (2008) "What's Working?" surveys has gathered data from a cross-section of industries. These surveys had questions grouped into 13 dimensions: Work processes, Quality and customer focus, Benefits, Communication, Work/life balance, Job security and career growth etc. From these dimensions Mercer Identified four global drivers: The work itself, including opportunities for development, Confidence and trust in leadership engagement, Recognition and rewards, and Organizational communication

Then using further data from this research they developed Mercer's Employee Engagement Model (Employee Engagement and Satisfaction Models, 2008):

Satisfied --> Motivated --> Committed --> Advocate

Tamkin (2005) reviews commitment in the literature and highlights an early model byAllen and Meyer (1990), which defines three types of commitment:

Affective commitment– employees feel an emotional attachment towards an organization;

Continuance commitment– the recognition of the costs involved in leaving an organization; and

Normative commitment– the moral obligation to remain with an organization.

Tamkin (2005) further noted that all the three forms of commitment do not superior performance. Employees who feel high level of continuance commitment but lower levels of affective and normative commitment are not likely to produce benefits for the organization. The employee's emotional commitment to the job and company is a key lever for engagement. Emotional commitment here is defined as the extent to which the employee derives enjoyment, meaning, pride or inspiration from something or someone in the organization. Emotional commitment to the job, organization, team and manager has been found to determine stronger performance than rational commitment (the extent to which an employee feels that someone or something within the company provides developmental, financial or professional rewards in employee's best interests). Extraneous variables such as individual differences may not be trivial and could have significant effects (Ferguson 2007).

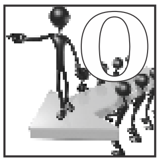
Markos & Sridevi (2010) mentioned that the construct of employee engagement is built on the foundation of earlier concepts like job satisfaction, employee commitment and organizational citizenship behavior. They further noted that though it is related to and encompass these concepts; employee engagement is broader in scope. Employee engagement is stronger predictor of positive organizational performance clearly showing the two-way relationship between employer and employee compared to the three earlier constructs: job satisfaction, employee commitment and organizational citizenship behavior. Engaged employees are emotionally attached to their organization and highly involved in their job with a great enthusiasm for the success of their employer, going extra mile beyond the employment contractual agreement.

Wellins and Concelman (2004) call employee engagement "the illusive force that motivates employees to higher levels of performance" (p.1) "This coveted energy" is similar to commitment to the organization, job ownership and pride, more discretionary effort (time and energy), passion and excitement, commitment to execution and the bottom line. They call it "an amalgam of commitment, loyalty, productivity and ownership" (p. 2). They also refer to it as "feelings or attitudes employees have toward their jobs and organizations" (p. 2).

Robinson, Perryman and Hayday (2004) define engagement as "a positive attitude held by the employee towards the organization and its values. An engaged employee is aware of the business context, works with colleagues to improve performance within the job for the benefit of the organization. The organization must develop and nurture engagement, which is a two-way relationship between employer and employee" (p2). They say that engagement overlaps with commitment and organizational citizenship behavior, but it is a two-way relationship. They say it is "one step up" from commitment.

Sr. No.	Dimensions	Authors
1	Job Satisfaction and Employee Engagement	Digital Opinion (n.a), Bond (2013), Walsh & Martin (2011), Mone & London (2010), Kenexa (2008), Mercer's research (2008), Markos & Sridevi (2010), Wellins & Concelman (2004), Rogel (n.a), SHRM (2012), Harter et al (2002), Saks (2006)
2	Organizational Commitment and Employee Engagement	Albdour & Altarawneh (2014), Agyemang & Ofei (2013), Macleod & Clarke (2012), Mone & London (2010), Markos & Sridevi (2010), Mercer's research (2008), Vance (2006), Ferrer (2005), Tamkin (2005), Wellins & Concelman (2004), Robinson, Perryman & Hayday (2004)
3	Intent to Stay and Employee Engagement	Takawira et al (2014), Thirapatsakun et al (2014), Hussain et al (2013), Bond (2013), Digital Opinion, Walsh & Martin (2011), CBSR & Hewitt Associates (2010), Berry (2010), Berry & Morris (2008), Mone & London (2010), Schalkwyk (2010), Kenexa (2008), Wellins & Concelman (2004)
4	Advocate and Employee Engagement	Fradin (2014), Markey (2012), Digital Opinion, CBSR & Hewitt Associates (2010), Mone & London (2010), Kenexa (2008), Mercer's research (2008)
5	Pride and Employee Engagement	Stockley (2014), Schmidt & Marson (2012), Hogg (2012), Kruse (2012), Digital Opinion, Mone & London (2010), Williams (2010), Kenexa (2008), Wellins & Concelman (2004)
6	Emotional Connect and Employee Engagement	Robertson (2013), Carnegie (2012), Hogg (2012), Kruse (2012), Shuck et al (2011), Walsh & Martin (2011), Markos & Sridevi (2010), Mone & London (2010), Shuck & Wollard (2009), Dicke et al (2007), Little & Little (2006), Tamkin (2005), Harter et al (2003)

The literature suggests that as yet there is no consensus on what comprise employee engagement and there is no standardized construct available of Employee Engagement. Whatever survey questionnaires are available are developed by the consulting practitioners for their own use. Apart from that there is one 12 item survey of The Gallup organization which is majorly and widely used by practitioners and academicians, but the norms for the same are also not available. In the light of this the present research is an attempt to formulate a standardized construct of employee engagement in Indian context.



OBJECTIVES

- To define the construct of employee engagement on the basis of literature review
- To validate the construct of the employee engagement
- To establish norms of employee engagement in Indian Context

Research Methodology

The present study was conducted in three phases.

Phase I: Extensive literature review was done to define the construct of Employee Engagement

Phase II: The questionnaire was developed and validated.

Phase III: The validated questionnaire was used to collect data and norms were framed to complete the standardization process.

Sampling

In Phase II, a sample of 156 associates was taken from different organizations to validate the questionnaire and in Phase III a sample of 1250 was taken to prepare the norms. Both the samples were drawn from associates working at different levels in public and private sector organizations ranging between the age of 20-55 years using systematic sampling.

Results and Discussion

Phase I

After the review of literature we synthesized six factors which are appearing in most of the studies leading to employee engagement. They are:

Job Satisfaction

Organizational Commitment

Intent to Stay

Pride

Advocate

Emotional Connect

Phase II

A questionnaire containing 81 items was constructed out of which 41 items were pertaining to job satisfaction, 15 items were of organizational commitment, 7 items were pertaining to Advocacy, 4 items were related to Pride, 7 items were of Intent to Stay and 7 items were appropriating emotional connect. This questionnaire was then applied on 156 associates from different levels of various organizations. The data was then subjected to confirmatory factor analysis since each dimension here is a separate construct.

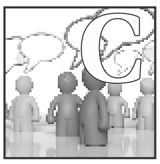
Out of 41 items of job satisfaction only 7 items were retained, out of the 15 items of organizational commitment only 5 items were retained, out of 7 items of advocacy only 3 items were retained, out of 4 items of pride 3 were retained and out of 7 items of intent to stay 5 items were retained, and finally out of 7 items of emotional connect 3 items were retained. In all total 26 items were retained for the final questionnaire. Table 1 shows the model fit statistics and reliability score of each construct. Table 2 below presents retained items along with their individual contribution to the respective construct.

Phase III

Once the questionnaire was finalized it was applied upon 1250 associates working on top, middle and lower level of management in various organizations. Out of these associates 857 were males and 393 were females. The data collected was then computed to find raw scores. These raw scores were then converted in to standard scores by the following formula

Standard Score = (Raw Score- Mean Score)/ Standard deviation

These standard scores were then converted in to Standard Ten scores (sten scores) with Mean = 5.5 and Standard Deviation= 2. Sten scores are calculated for easy interpretation and categorization of respondents on a construct where a sten score of 1 and 2 means Very Highly Disengaged, 3 and 4 means Highly Disengaged, 5 and 6 means Averagely Engaged, 7 and 8 means Highly Engaged, and 9 and 10 means Very Highly Engaged. Table 3 and Table 4 show the sten scores (norms) of male and female associates.



CONCLUSION AND MANAGERIAL IMPLICATIONS

The findings of Harvard Business Review Analytics Services (2013) report of a survey conducted on more than 550 executives of companies from American, Asian and European continents and in depth interviews with 12 best-practice company leaders shows that 71% respondents rank employee engagement as very important to achievingoverall organizational success. They recognize that highly engaged workforce can increase innovation, productivity, and bottom line performance while reducing costs of hiring and retention. This survey further found that many companies find it challenging to measure engagement while only a few claimed their ability to do so. However the challenge faced by most of the academicians and researchers is the consensus on what comprise Employee Engagement. The present research after the synthesis of number of studies identified six major factors defining Employee Engagement. These factors are Job Satisfaction, Organizational Commitment, Intent to Stay, Pride, Advocate and, Emotional Connect. The autors thus define employee engagement as

“Engagement is a feeling of psychological connect with the organization emerging out of pleasurable or positive emotional state leading to sense of pride towards the organization, wanting to stay with the organization, forming emotional connect and recommending others also to work with the organization.”

The present research developed a standardized scale to measure Employee Engagement of associates working at different managerial levels in the organization with the established norms for males and females. This 26 items scale is a quick and accurate measure of Employee Engagement and with the norms established out of the responses of 1250 respondents in Indian Context, a quick categorization of associates can be done in engaged and disengaged associates. The scoring details can be obtained from authors for the same. Very highly disengaged employees can be categorized as those having no psychological connect with the organization. They find no pleasure in working with the organization no matter whatever organization may provide. Such employees are not committed; carry a pessimistic view of the organization. Such employees are trouble shooters, anti establishment and activist against the organization. They involve themselves in non-work activities such as trade union activities, forming associations against the organization etc. They are disgruntled and spread bad news and information which is against the organization. They neither leave the organization nor do good for the organization. Highly disengaged employees are those who do not have psychological connect with the organization. They remain unsatisfied while working in the organization. Such employees are not committed; carry a negative attitude towards the organization. They are silent trouble makers and remain behind the curtain and instigate people in the organization. They may not switch their job immediately but keep exploring options outside however still lingering on with the organization. Averagely engaged employees are those who feel little connect with the organization. They remain satisfied with what they get but may not find pleasure in whatever they do. Their commitment to the organization is average. They remain silent about their feelings towards their organization. They will contribute bare minimum to the productive work in the organization. Highly engaged employees are those who feel psychological connect with the organization. They find pleasure in the work they do. They are committed, and have sense of pride towards the organization. They will always talk positive things about the workplace. They will try to walk extra mile for the organization. Very Highly Engaged employees are boon for the organization. They consider organization as their own family. They are very excited about their work and their organization. They are highly committed, have sense of pride towrads the organization, talk positive about the organization and will recommend others strongly to work for the organization. They will put in their best efforts for the growth of the organization. They are also the star performers of the organization.

Table 1: Showing the Model Fit statistics and Reliability score of each construct

	^{2}	CFI (Comparative of Fit Index)	GFI (Goodness of Fit Index)	SRMR (Standardized Root Mean Residual)	RMSEA (Root Mean Square Error of Approximation)	Cronbach Alpha
Acceptable Levels	Non Significant	≥ .92	≥ .90	≤ .08	≤ .07	.65
Job Satisfaction	26.88, p = 0.07	.984	.955	.041	.07	.870
Organizational Commitment	10.53, p = 0.06	.989	.976	.030	.07	.858
Advocate	0.00, p = 1.00	The model is saturated and the fit is perfect			0.00	.831
Pride	0.00, p = 1.00	The model is saturated and the fit is perfect			0.00	.891
Intent to Stay	7.55, p = 0.18	.992	.981	.030	.057	.806
Emotional Connect	0.00, p = 1.00	The model is saturated and the fit is perfect			0.00	.784

Table 2: Showing retained items with their individual contribution to the construct

Sr. No.	Statement	R^2
JOB SATISFACTION		
1	I am satisfied with the chance to do the kind of work that I do best	.328
2	I am satisfied with the way my supervisor and I understand each other	.401
3	I am satisfied with the chance to make decisions on my own	.395
4	I am satisfied with the way I get full credit for the work I do	.575
5	I am satisfied with being able to take pride in a job well done	.763
6	I am satisfied with the chance to make use of my best abilities	.510
7	I am satisfied with the feeling of accomplishment I get from the job	.545
ORGANIZATIONAL COMMITMENT		
8	I find that my values and the organization's values are very similar.	.539
9	I am proud to tell others that I am a part of this organization	.673
10	I could just as well be working for a different organization as long as the type of work was similar.	.316
11	This organization really inspires the best in me in the way of job performance.	.759
12	I am extremely glad that I chose this organization to work for over others I was considering at the time I joined	.651
ADVOCATE		
13	I enjoy discussing how my company is a leader in the industry in important ways.	.544
14	Yes! I share my great experiences of working in the office with others.	.817
15	When needed, I would definitely recommend my company to a friend, associate or acquaintance seeking employment.	.540
PRIDE		
16	I am optimistic about the future of the company.	.772
17	I am optimistic about my future success with the company.	.890
18	I am proud to work for the company.	.554
INTENT TO STAY		
19	I feel more committed to a career with the company this year than I did a year ago	.429
20	I will try to find the best of the people for this organization so that we can perform together	.517
21	If I have to leave the company it would take a lot from my end to quit.	.594
22	When it comes to the company's success, I walk that extra mile and exceed the expectations of my employers.	.522
23	I would be very happy to spend the rest of my career in this organization.	.278
EMOTIONAL CONNECT		
24.	I do not feel like "a member of the family" at this organization	.859
25	I do not feel "emotionally attached" to this organization	.892
26	It would not be too costly for me to leave my job at this organization in the near future.	.591

Table 3: Showing Norms (Sten Scores) of Male (N= 857) Associates

	Sten	Job Satisfaction	Organizational Commitment	Advocate	Pride	Intent to Stay	Emotional Connect	Employee Engagement
Very Highly Disengaged	**1**	0-15	0-10	0-5	0-5	0-9	0-5	0-60
	2	16-18	11-12	6-7	6	10-11	6	61-68
Highly Disengaged	**3**	19-20	13-14	8	7-8	12-13	7	69-76
	4	21-22	15-16	9	9	14-15	8	77-84
Averagely Engaged	**5**	23-25	17	10-11	10	16-17	9	85-92
	6	26-27	18-19	12	11-12	18-19	10	93-100
Highly Engaged	**7**	28-30	20-21	13	13	20-21	11	101-108
	8	31-32	22-23	14	14-15	22-23	12	109-116
Very Highly Engaged	**9**	33-34	24	15	–	24-25	13	117-124
	10	35	25	–	–	—	14-15	125-130

Table 4: Showing Norms (Sten Scores) of Female (N= 393) Associates

	Sten	Job Satisfaction	Organizational Commitment	Advocate	Pride	Intent to Stay	Emotional Connect	Employee Engagement
Very Highly	1	0-16	0-11	0-6	0-5	0-10	0-5	0-65
Disengaged	2	17-18	12-13	7	6	11-12	6	66-71
Highly	3	19-20	14	8	7-8	13	7	72-77
Disengaged	4	21-22	15-16	9	9	14-15	8	78-83
Averagely	5	23-24	17	10	10	16-17	---	84-89
Engaged	6	25-26	18	11	11	18	9	90-95
Highly	7	27-28	19-20	12	12-13	19-20	10	96-101
Engaged	8	29-30	21	13	14	21	11	102-107
Very Highly	9	31-32	22	14	15	22-23	12	107-113
Engaged	10	33-35	23-25	15	–	24-25	13-15	114-130

REFERENCES

- Agyemang, C.B. & Ofei, S.M.(2013). Employee work engagement and organizational commitment: A comparative study of private and public sector organizations in Ghana, European Journal of Business and Innovation Research, Vol. 1(4), pp: 20-33.
- Albdour,A.A.& Altarawneh, I.I. (2014). Employee engagement and organizational commitment: evidence from Jordan. International Journal of Business, 19(2), pp: 192-212.
- Berry, M. L. (2010). Predicting Turnover Intent: Examining the Effects of Employee Engagement, Compensation Fairness, Job Satisfaction, and Age. PhD diss., University of Tennessee, http://trace.tennessee.edu/utk_graddiss/678
- Berry, M.L. & Morris, M.L.(2008). The impact of employee engagement and job satisfaction on turnover intent. Retrieved from http://files.eric.ed.gov/fulltext/ED501235.pdf
- Bond, S.T.(2013). The influence of job satisfaction, organizational commitment and employee engagement on intent to leave among public school teachers in South Lousiana. PhD Diss. Submitted to Lousiana State University. Retrieved from http://etd.lsu.edu/docs/available/etd-10282013-172517/unrestricted/Bond_diss.pdf
- Buckingham, M., & Coffman, C. (1999). First, break all the rules: What the world's greatest managers do differently. New York: Simon & Schuster.
- Carnegie, D.(2012). Emotional drivers of employee engagement. Retrived from http://prcounts.com/uploads/Emotional_Drivers_of_Employee_Engagement.pdf
- CBSR and Hewitt Associates (2010). Engaging employees through CSR: Webinar, retrieved from http://www.hewitt.com.cy/english/Consulting/TalentManagement/engagement.html
- Dicke,C., Holwerda, J., & Kontakos, A-M. (2007). Employee engagement: what do we really know? What do we need to take action? Retrieved from http://www.uq.edu.au/vietnampdss/docs/July2011/EmployeeEngagementFinal.pdf
- Digital Opinion (n.a.). How do we define Engagement retrieved from http://www.digitalopinion.co.uk/your-challenges/how-do-we-define-engagement and http://www.digitalopinion.co.uk/files/documents/Measuring%20engagement.pdf
- Employee Engagement (2006), A review of current Research and its Implications" published in 2006 by The Conference Board
- Employee Engagement and Satisfaction Models (2008). Retrieved from http://rapidbi.com/created/employeeengagementsatisfactionmodels.html on 2009-06-06.
- Esty, K. & Gewirtz, M. (2008). NEHRA the voice of HR- creating a culture of employee engagement retrieved from http://www.boston.com/jobs/nehra/062308.shtml on 2009-05-04.
- Federman, B. (2003). Employee Engagement. Jossey- Bass : John Wiley & Sons. Inc.
- Ferguson, A. (2007) 'Employee engagement: Does it exist, and if so, how does it relate to performance, other constructs and individual differences?' [online] Available at: http://www.lifethatworks.com/Employee-Engagement.prn.pdf [Accessed 20th June 2007]
- Ferrer, J.(2005). Employee engagement: Is it organizational commitment renamed? Retrieved from http://vuir.vu.edu.au/123/1/wp8_2005_ferrer.pdf
- Fradin, R (2014). The link between employee engagement and employee advocacy.Retirved from http://www.clickz.com/print_article/clickz/column/2341466/the-link-between-employee-engagement-and-employee-advocacy#
- Harter, J.K., Schmidt, F. L., & Hayes, T.L. (2002). Business unit level relationship between employee satisfaction, employee engagement and business outcomes: A meta- analysis, Journal of Applied Psychology, vol 87 (2), pp. 268-279
- Harter, J.K., Schmidt, F.L., & Keyes, C.L.M. (2003). Well-being in the workplace and its relationships to business outcomes: a review of the gallup studies. Retrieved from http://media.gallup.com/documents/whitePaper--Well-BeingInTheWorkplace.pdf
- Harvard Business Review Analytics Services (2013). The Impact of Employee Engagement on Performance. Retrieved from http://www.yorkworks.ca/default/assets/File/analyst-insights-HBR_Achievers%20Report_TheImpactofEmployeeEngagementonPerformance(1).pdf
- Hogg, B. (2012). 8 emotional drivers of employee engagement. Retrieved from http://www.billhogg.ca/2012/06/8-emotional-drivers-of-employee-engagement/

REFERENCES

- Hussain, A., Yunus,N., Ishak, N.A., & Daud, N. (2013). The influence of intention to leave towards employee engagement among young bankers in Malaysia. International Journal of Business and Management, Vol 8 (14), pp: 89-97.
- Kahn, W.A. (1990). 'Psychological conditions of person engagement and disengagement at work.' Academy of Management Journal, 3, 692-724.
- Kruse, K.(2012). What is employee engagement. Retrieved from http://www.forbes.com/sites/kevinkruse/2012/06/22/employee-engagement-what-and-why/
- Little, B. & Little,P. (2006). Employee engagement: Conceptual issues. Journal of Organizational Culture, Communications and Conflict, Volume 10, No. 1, pp: 111-120
- Macleod,D. & Clarke, N. (2012). Engaging for success: enhancing performance through employee engagement. Retrieved from http://www.engageforsuccess.org/wp-content/uploads/2012/09/file52215.pdf
- Markey, R.(2012). Transform your employees into advocates. Harvard Business Review.Retrived from https://hbr.org/2012/01/transform-your-employees-into.
- Markos, S., Sridevi, M.S. (2010). Employee Engagement: The Key to Improving Performance, International Journal of Business and Management, Vol. 5, No. 12.
- Melcrum Publishing (2005) retrieved from http://www.insala.com/Articles/employee-development/employee-engagement-a-review-of-the-most-current-research.asp on 2009-05-03.
- Mone, E. & London, M. (2010). Employee Engagement :Taylor and Francis Group
- Park,J. & Gursoy, D (2011). Generation effect on the relationship between work engagement, satisfaction, and turnover intention among US hotel employees. Retreived from http://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1196&context=gradconf_hospitality
- Perrin, T. (2003) retrieved from http://www.towersperrin.com/tp/getwebcachedoc?webc=hrs/usa/2003/200309/talent_2003.pdf on 2009- 06-06.
- Phillips, J. & Connell, A. (2003). Managing Employee Retention Society for HR Management :Franklin Covey
- Robertson, J. (2013). A combined Workplace Climate-Employee Engagement Survey ; The New Zealand Workplace Survey retrieved from http://www.johnrobertson.co.nz/nzworkplacesurvey/climate-engagement-survey.html
- Robinson, D., Perryman S. & Hayday, S. (2004). The drivers of employee engagement. Report 408, Institute of Employment Studies.
- Robinson, D., S. P. Perryman & S. Hayday. (2004). The Drivers of Employee Engagement. IES Report 408. Retrieved August 1, 2005, from http://www.employment-studies.co.uk/summary/summary.php?id=408.
- Rogel, C. (n.a). Job Satisfaction Vs. Employee engagement. retrieved from https://www.decision-wise.com/job-satisfaction-vs-employee-engagement/
- Saks, A.M. (2006) Antecedents and consequences of employee engagement, Journal of Managerial Psychology, Vol. 21 Iss: 7, pp.600 – 619
- Schalkwyk, S.V., Toit, D.H., Bothma, A.S., & Rothmann, S. (2010). Job insecurity, leadership empowerment behaviour, employee engagement and intention to leave in a petrochemical laboratory. SA Journal of Human Resource Management, vol 8 (1) open access
- Schmidt, F. & Marson, B.(2012). Employee engagement: A foundation for organizational performance. Retrieved from http://www.iccs-isac.org/library/2012/06/PSSF_APSSF_Employee_Engagement.pdf
- Seijts, Gerard H. and Dan Crim (2006). "The Ten C's of Employee Engagement". Ivey Business Journal. http://web.ebscohost.com/ehost/pdf?vid=18&hid=109&sid=21a25099-6e82-4e66-849c-92a8d3ee0c6e%40sessionmgr102. Retrieved 2006-11-09.
- Shuck, B., Reio Jr, T.G., & Rocco, T.S. (2011). Employee engagement:an examination of antecedent and outcome variables. Human Resource Development International, Vol 14 (4). Pp: 427-445.
- Shuck, M. B., & Wollard, K. K. (2009). A historical perspective of employee engagement: An emerging definition. In M. S. Plakhotnik, S. M. Nielsen, & D. M. Pane (Eds.), Proceedings of the Eighth Annual College of Education & GSN Research Conference (pp. 133-139). Miami: Florida International University. http://coeweb.fiu.edu/research_conference
- Society for Human Resource Management, (2012) Employee Job Satisfaction and Engagement: How Employees Are Dealing with Uncertainty, October 2012, 41.
- Stockley, D. (2014). Employee engagement and organizational pride. Retrievd from http://www.derekstockley.com.au/newsletters-05/038-employee-engagement.html
- Takawira, N., Coetzee, M., & Schreuder, D. (2014). Job embeddedness, work engagement and turnover intention of staff in a higher education institution: An exploratory study. SA Journal of Human Resource Management/10 pages. http://dx.doi.org/10.4102/sajhrm.v12i1.524
- Tamkin, P. (2005). The contribution of skills to business performance. Brighton: Institute for Employment Studies.
- Thirapatsakun, T., Kuntonbutr, C., & Mechinda, P. (2014). The relationship among job demands, work engagement, and turnover intentions in multiple groups of different levels of perceived organizational supports. Universal Journal of Management 2(7), pp: 272-285.
- Vance, R.J.(2006). Employee engagement and commitment: A guide to understanding, measuring and increasing engagement in your organization. Retrieved from https://www.shrm.org/about/foundation/research/Documents/1006EmployeeEngagementOnlineReport.pdf
- Walsh, A. & Martin, S. (2011). 'Your views count' Metropolitan Police Service staff survey, retrieved from http://policeauthority.org/metropolitan/committees/cep/2011/0106/08/index.html
- Wellins, R. & J. Concelman. (2005). Creating a culture for engagement. Workforce Performance Solutions. Retrieved August 1, 2005 from www.WPSmag.com.http://www.rightmanagement.com.au/thought-leadership/research/employee-engagement-2012-benchmark-study.pdf
- Williams, R.(2010). Employee engagement define it, measure it, and put it to work in your organization. Retrived from http://www.workforce.com/articles/employee-engagement-define-it-measure-it-and-put-it-to-work-in-your-organization

Confirmatory Factor
Analysis of Faculty Retention in Technical Institutions

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ABSTRACT

Education sector has been identified as a thrust area for growth of the nation with faculty being the major constituent for the dissemination of knowledge. Faculty and their retention have become pertinent for institutions lest they lose them to competitors. The current study has been undertaken to identify the factors which affect retention of faculty. Ten factors were reduced to three through exploratory factor analysis. Confirmatory Factor Analysis (CFA) was employed to further confirm that the three factors - Organizational Policies, Innovative and Supportive Work Environment and Career and Self Development affect faculty retention. The study provides an insight to organizations regarding the need to focus on faculty retention in the current milieu.

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INTRODUCTION

The economic advancement of a country is strongly associated with Excellence in Education. The endeavor of higher education scheme is sustainable expansion for appropriate creation, transmission and dissemination of knowledge and skills for gainful employment. India has one of the largest systems of higher education in the world, offering facilities of education and training in almost all aspects of human creativity and intellectual endeavor. With majority of the population below the age of 25, focus on higher education becomes imperative. The higher education comprises of general education and technical/professional education, the former mainly consists of courses in arts, science and commerce while the latter includes education, research and training in the areas of engineering, technology, architecture, town planning, management, pharmacy and applied arts and crafts. Higher education in India has witnessed an impressive growth over the years. According to UGC Higher Education at a Glance June- 2012 Report, the number Higher Educational Institutions (HEIs) has increased from 30 universities and 700 colleges in 1950-51 to 634 universities and 33,200 colleges in the year 2010-11. The annual enrolment of above 25 million students inclusive of open and distance learning system, propels India to the third position in the countries offering higher education system. With the public expenditure remaining close to 1% of the Gross Domestic Product (GDP), the private sector has stepped in to fill the increasing requirements of this sector. Their numbers have seen a 60% increase during the 2007 and 2012 period.

Excellence in Higher Education to a large extent is determined by the faculty and their quality characterizes the brand of the teaching programmes and research offered. Faculty with good academic credentials and drive for excellence can outshine in teaching and research. Thus faculty is more important than facilities and infrastructure, even though the latter is also necessary for the survival of institutions. There exists a mismatch between the number of faculty available and the student enrolment. The student enrolment has increased from 397,000 in 1950-51 to 16,975,000 in 2010-11, while the corresponding increase in the number of teachers for the same period has been 23,549 to 816,966.

Faculty shortages and the failure of the educational institutions to attract and retain well-qualified teachers has been a major challenge to reckon with for many years. A study by the National Skill Development Corporation (NSDC) has estimated that an augmented requirement of about 3,171,000 educators in higher education between 2008 and 2022 is being seen to ensure 1:20 faculty student ratio resulting in more than three-fold increase in the number of educators present in the system. Hence attracting and retaining faculty need to be focused upon by institutions if they ought to stay in competition. The current paper undertakes to study the various factors affecting the retention of faculty in technical institutions.

LITERATURE REVIEW

Teacher's data from North Carolina and Michigan was analyzed by Murnane et al. (1991). They identified that teachers working in school districts that paid comparatively high salaries stayed longer than teachers who were offered low salaries. Teachers who received low salaries were, one and a half times as likely to leave teaching after the first year on the job as compared to teachers who received high salaries. They also established that compensation had major effect on the duration of a teacher's first term in teaching for primary teachers, in comparison to secondary teachers. Akila (2012) revealed that employee retention can be increased by providing regular feedback for resolving employee grievances, problems and stress management.

Dolton and Von Der Klaauw (1995) examined 923 individuals in UK, all of whom who took to teaching as their first job. They identified that, with an across-the-board increase of 10 percent in teacher salaries, there was an associated nine percent reduction in the probability of teachers exiting the profession after five years. Further Boe et al. (1997) examined teachers' career decisions one year after the initial survey was administered and found that salary positively and significantly predicted retention for special and general education teachers at all levels of experience. Ballou and Podgursky (1997) identified some flaws in across-the-board pay raise model. Kirby, Berends, and Naftel (1999) determined that an increase of $1,000 in salary reduces attrition rate of teachers by 2.9 percent.

Stinebrickner (2001) examined the effect of pay on teacher's retention in professional institutions and concluded that, with higher income, the total number of years spent in teaching would increase from 0.50 (of the total years possible for work in one's life) to 0.80. Also higher salaries were, on an average, associated with a longer stay in teaching during the first nine years. Feiman- Nemser, (2001) suggested that quality of mentoring had little impact on new teacher's retention. Several studies suggested that induction was also related to new teacher retention. Smith and Ingersoll (2001) found that large number of workings provided during the induction to new teachers reduces the predicted chances of leaving. Tye and O'Brien (2002) tracked the graduates of a large teacher education program wherein the respondents who had already left teaching ranked the pressures of increased accountability (high-stakes testing, test preparation, and standards) as the most important reason for leaving, while respondents who were still teaching but reported they would consider leaving, ranked paperwork and accountability pressures, high- second and third, respectively. Buckley, Schneider, and Shang (2004) suggested that spending money to improve facilities (one-time expense) would have greater impact on teacher retention than increase in pay. Johnson et.al (2004) identified that professional development, new roles, and career ladders were three potential ways to bolster retention efforts.

According to Ingersoll & Kralik, (2004), well-conceived, carefully implemented, soundly supported, mentoring and induction showed positive affect on retention. Hausknecht (2008) listed major 12 retention factors published in the literature over the last 60 years from 24,829 employees in leisure and hospitality industry of US, they were: .Job satisfaction, Extrinsic rewards, Constitution attachments, Organizational commitment, Organizational prestige, Lack of alternatives, Investments Perceptions about the length of service to the organization, Advancement opportunities, Location, Organizational justice, Flexible work arrangement, Non-work influences. According to Samuel and Chipunza (2009), the major objective of retention was to prevent the loss of skilled recruits from leaving the organization as this could have adverse effect on productivity and profitability. According to Budhwar et al. (2009), the success of a service organization depended on their ability to attract and retain high quality employees. Rehman, S. (2012) revealed that more psychologically satisfied employees remained in organization and also helped to attract new talent pool. According to Brigitte Kroon and Charissa Freese (2013) work experience, career development and independence were some of the major reasons for employees to stay in the organization. Gaurav Bagga (2013) posited that clear career path in the organization helped in long employee tenure.

Author, Year	Factors Reviewed	Dimensions Identified
Darling-Hammond (2003), Guarino et al (2006), McGrath & Princiotta (2005)	Safe Environments, Firm Administrative Leadership, Colleagues' Cooperation, and Necessary Learning Resources	Work Excitement(A1), Relationship with Colleagues and Supervisors (A3)
Chen et al, (2006) Luthans, (1998)	Work Itself, Pay, Supervision, Co-Workers, and Promotion	
Hay (1999), Samuel & Chipunza (2009), Hequet (1993)	Training and Development	Adequate Career Planning (A2), Ample Opportunity provided for Recognition (A5), Challenges Involved in the Job (A13)
Bradley et al (2004), Ballot et al (2006)	Job Specific Training, On-Going Learning, Training at Workplace, Latest Pedagogical Tools	
Laden & Hagedorn (2000) Olsen et al (1995) Rosser, (2005) Tack and Patitu (1992)	Morale, Institutional Fit, Institutional Support, Autonomy, Promotion and Tenure	Fit with Organization Culture (A7), Flexibility in Approach, Encouraged to Innovate (A9), Fair Compensation Supportive and Approachable Management (A4), Extent of Participation in Decision Making (A11)
Comm & Mathaisel (2000), Zuber (2001)	Work Load, Working Environment and Pay & Benefits, Flexible Timing Offered	Great Work Environment (A8), Presence of Work Life Balance (A12)
Rockwell (1999)	Reward, Support and Institutional Research	Value and Reputation (A6)
Olsen, (1993)	Morale, Rank, Tenure Status, Increased Work Hours on Administrative Tasks, University Support, University Structure, and The Institutional Reward System	
Betts (1998)	Job Security, Career Exploration, Over all Job Satisfaction, Opportunity to Diversify Teaching	Job Security (A10)
Zaini, Nilufar and Syed (2009)	Training and Development, Team Work, HR Planning, and Performance Appraisal	Regular Appraisal (A14), Use of Proper Method of Appraisal (A15)
Olson (1986)	Cognitive Appraisal	

OBJECTIVE OF THE STUDY

- To explore and confirm the factors responsible for retention of faculty in technical institutions.

RESEARCH DESIGN

A structured questionnaire was designed to collect the data. Different factors were identified through exploratory study of literature and validity of the questionnaire was checked through face validity. Fifteen factors were selected as constructs for the survey, they are:

SAMPLE PROFILE

The list of approved Technical Institutions by the All India Council for Technical Education Technical Institutions

(AICTE) in Delhi and NCR was procured from the AICTE's website. The combined list had 284 institutions. This list was considered for the sampling frame. Elements of sampling were faculty. The data was collected by contacting them personally. Questionnaires were also sent through e-mails.

Questionnaires were sent to approximately 900 faculty members and out of the received questionnaires, 452 were found usable. The sampling technique applied in selecting the institutes was simple random sampling. There were many institutes with no professors or limited number of associate professors that led to unequal ratio in the final sample. The sample distribution was as follows:

Table 1: The Sample Distribution of Study Based on Responses of Faculty

Gender	Males	177
	Females	275
Age	Less than 25 Years	56
	25-Less than 35 Years	252
	35- Less Than 45 Years	118
	45 years and above	26
Marital Status	Married	350
	Unmarried	102
Education Qualification	Graduate	11
	Post Graduate	228
	Doctorate	64
	NET Qualified	130
	Doctorate + NET	19
Current Designation	Assistant Professor	336
	Associate Professor	82
	Professor	19

STATISTICAL TOOLS

Factor analysis is a multivariate statistical process that decreases a large number of variables into a smaller set of variables. It ascertains underlying dimensions between measured variables and latent constructs, thus allowing the construction and refinement of theory. It provides construct validity of self-reporting scales. The Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) are considered as the two major modules of factor analysis. In EFA, the number or nature of the variables is not known and it provides an opportunity to explore the dimensions to create a theory, or model from a large set of latent constructs whereas, in CFA testing of an anticipated theory, or model is permissible. CFA also has assumptions and expectations based on priori theory regarding the number of factors that offer best model fit.

DATA ANALYSIS

Exploratory factor analysis was applied to develop a tool for measuring the perception of faculty on retention strategies adopted by the institutes using SPSS V 17. For this pool of 15 items comprising of Work Excitement (A1), Adequate Career Planning (A2), Relationship with Colleagues and Supervisors (A3), Fair Compensation Supportive and Approachable Management (A4), Ample Opportunity provided for Recognition (A5), Value and Reputation (A6), Fit with Organization Culture (A7), Great Work Environment (A8), Flexibility in Approach , also Encouraged to Innovate (A9), Job Security (A10), Extent of Participation in Decision Making (A11), Presence of Work Life Balance (A12), Challenges Involved in the Job (A13), Regular Appraisal (A14) and Use of Proper Method of Appraisal (A15) were selected on the basis of review of literature as mentioned above. The data on these items was collected on a 5 point likert scale.

The factors were reduced through exploratory factor analysis from fifteen to ten. Principal component analysis was used with varimax rotation. The correlations between factors and the different items expressed by means of the factorial loads were significant. The Kaiser- Meyer-Olkin measure of sampling adequacy came out to be 0.882 with chi- square value of Bartlett's Test of Sphericity being significant (chi sq= 1515.663, p= .000). This implies that the factor analysis was acceptable. The factor analysis generated three components with eigenvalues above 1. The factor loadings along with Cronbach alpha values for the three components have been shown in Table 2.

Table 2: Rotated Component Matrix

	Components		
	1	2	3
A14	0.818		
A15	0.764		
A11	0.632		
A12	0.573		
A7		0.845	
A10		0.682	
A9		0.629	
A8		0.596	
A1			0.843
A2			0.766
Reliability- Cronbach Alpha	0.771	0.791	0.688

On the basis of exploratory factor analysis a diagram depicting the preliminary measurement model was designed. The model displayed ten measured indicator variables and three latent variables which were subjected to CFA with AMOS V21. The latent variables were identified as

(1) Organizational Policies consisting of Extent of Participation in Decision Making (A11), Presence of Work Life Balance (A12), Challenges Involved in the Job (A13), Regular Appraisal (A14)

(2) Innovative and Supportive Work Environment comprising of Fit with Organization Culture (A7), Great Work Environment (A8), Flexibility in Approach , Encouraged to Innovate (A9), Job security (A10) and

(3) Career and Self Development containing Work Excitement (A1) Adequate Career Planning (A2).

The principal task in CFA model was to determine the goodness of t between the hypothesized model and model determined by the sample data. The adequacy of model t was evaluated using the Chi square statistic, Confirmatory Fit Index (CFI) and Root Mean Square Error of Approximation (RMSEA). Preliminary model did not provide a good fit for the data (Figure 1), with value of CFI being 0.836 (Chi square value

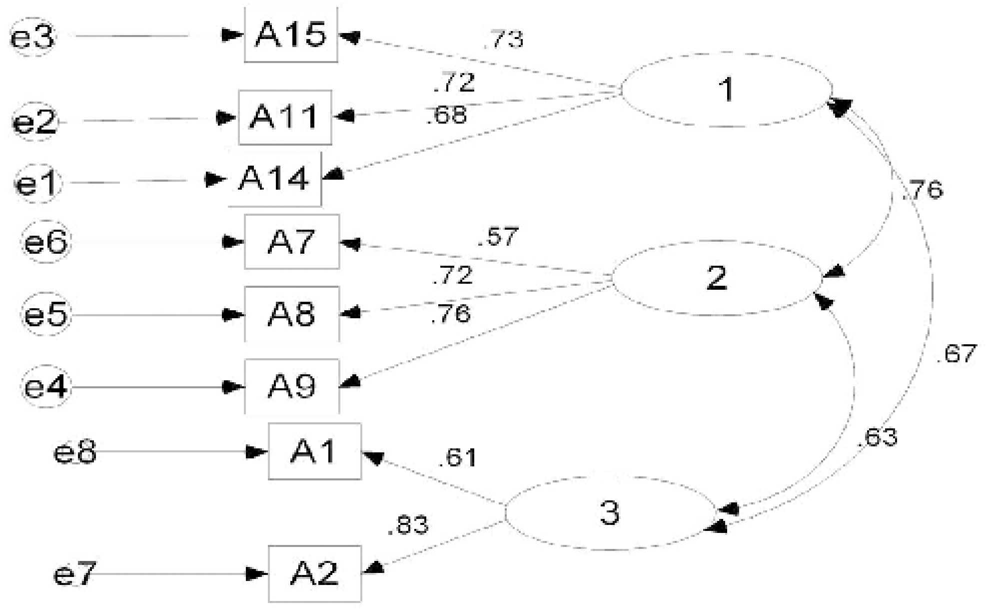

Figure 1: Preliminary Model

of 86.3 with p = 0.000).

Hence the preliminary model was amended to improve the model fit. Modification indices and standardized residuals calculated through AMOS V 21 was used to modify the model resulting in the final model (Figure 2).

The final model was significantly better fit in comparison to the preliminary model with Chi Square value = 31.5915, p=0.00046825. The CFI for the final model was 0.9762, indicating that the model provided a good fit. Other indices also indicated a good fit (CMIN=3.159, RMR= 0.0247, GFI=0.9802, RMSEA=0.069, PCLOSE=0.1080). All the indicators had moderate to strong standardized factor loadings ranging from 0.51 for A7 to 0.94 for A9. Squared multiple correlations provided information about the extent of variance of observed variables the factor can account for. The R2 statistics was found highest at 0.5184 for A11, 0.8836 for A9 and 0.6889 for A2 corresponding to all the three latent variables identified in the final model. It can be stated that Career Planning, Innovation and Participation in Decision Making contribute the most to faculty retention. Hence institutions should provide opportunities for growth and development of faculty and involve them as strategic partners in order to achieve the institutions goals and objectives.

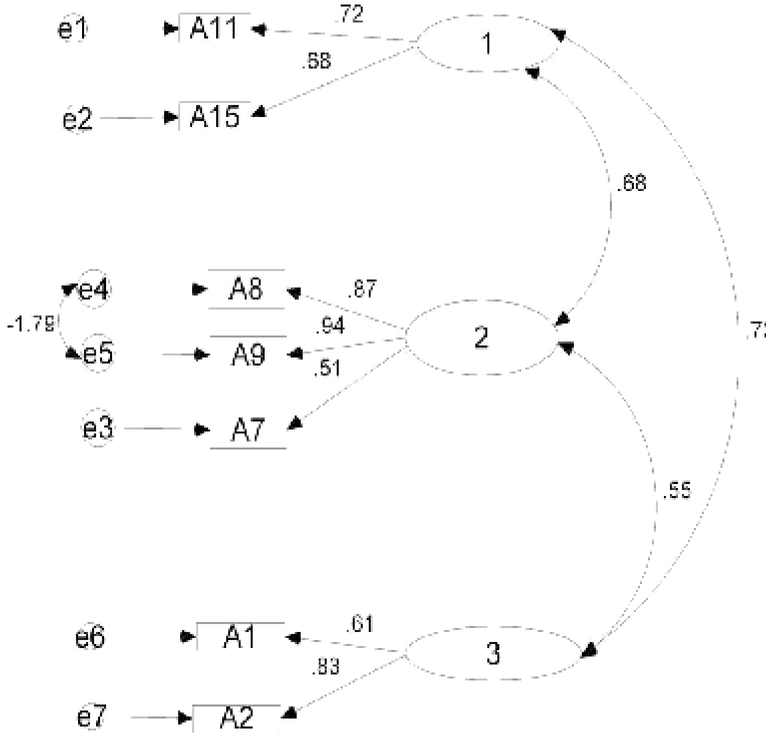

Figure 2: Final Model

CONCLUSION

In the current times focus for institutions has to be on retaining their competent faculty. The costs incurred by the institutions are high and frequent turnover of faculty results in increase in both direct and indirect costs. Hence the human resource policies in the institutions should foster employee retention. The current study revealed that retention of faculty can be enhanced by providing a clear set of Organizational Policies along with Innovative and Supportive Work Environment and adequate Career and Self Development plans. Study undertaken by Kumar and Dhamodharan (2013) also suggest that Challenging Assignments, Remuneration & Recognition, and Opportunities to learn new things, Infrastructure, Potential Talent and the Prospective Roles can aid in employee retention. Further, Malati et al (2013) observed that Work Environment; Training & Development, Compensation and Role of HOD show a positive impact on faculty retention.

The institutions ought to comprehend that with growing demand for experienced faculty, their retention will become a pertinent issue for the organizations as competent faculty has become a prized possession. Hence, sooner organizations plan a retention policy and put it in place the better it would be for their long term sustenance.

REFERENCES

[1] Akila R.(2012), " A Study on Employee Retention Among Executives at BGR Energy Systems Ltd, Chennai". International Journal of Marketing, Financial Services & Management Research, Vol.1(9), pp.18-32.

[2] Bagga Gaurav. (2013),"How to keep the Talent you have got". Human Resource Management InternationalDigest, Vol. 21(1) 2013, pp. 3-4.

[3] Ballou, D., & Podgursky, M. (1997). "Teacher Pay and Teacher Quality". Kalamazoo, MI: W. E. Upjohn Institute for Employment Research.

[4] Ballot, G., Fakhfakh, F. & Taymaz, E. (2006). "Who Benefits from Training and R & D, the Firm or the Workers? British Journal of Industrial Relations, 4, pp. 473-495.

[5] Betts, K. (1998). "An Institutional Overview: Factors Influencing Faculty Participation in Distance Education in Postsecondary Education in the United States: An Institutional Study" [on-line]. Online Journal of Distance Learning Administration, 1, 3. Available:http://www.westga.edu/~distance/betts13.html [1998,September 30].

[6] Boe, E. E., Bobbitt, S. A., Cook, L. H., Whitener, S. D., & Weber, A. L. (1997). "Why Didst Thou Go? Predictors of Retention, Transfer, and Attrition of Special and General Education Teachers from a National Perspective" .The Journal of Special Education, 30(4), 390-411.

[7] Bradley, S., Petrescu, A. & Simmons, R. (2004). The Impacts of Human Resource Management Practices and Pay Inequality on Workers' Job Satisfaction. Paper presented at the Western Economic Association 79th Annual Conference Vancouver.

[8] Buckley, J., Schneider, M., & Shang, Y. (2004).The Effects of School Facility Quality on Teacher Retention in Urban School Districts. Chestnut Hill, MA: National Clearinghouse for Educational Facilities.

[9] Budhwar, P., S., Varma, A., Malhotra, N., & Mukherjee, A. (2009), "Insights into the Indian Call Centre Industry: Can Internal Marketing Help Tackle High Employee Turnover"? Journal of Services Marketing, No.23 Vol.5,351–362.

[10] Chen, S.H, Yang C.C, Shiau, J.Y and Wang, H.H., (2006), The Development of an Employee Satisfaction Model for Higher Education, The TQM Magazine, 18(5), pp 484-500.

[11] Comm, C.L. and Mathaisel, D.F.X., (2000), Assessing Employee Satisfaction in Service Firms: An example in Higher Education, The Journal of Business and Economic Studies, 6(1), pp 43-53.

[12] Darling-Hammond L., (2003), Keeping Good Teachers: Why it matters, what leaders can do? Educational leadership, 60(8), pp 6–13.

[13] Dolton, P., & von der Klaauw, W. (1995). "Leaving Teaching in the UK: A Duration Analysis". The Economic Journal, 105(429), 431-444.

[14] Guarino CM, Santibanez L and Daley GA., (2006), Teacher Recruitment and Retention: A Review of the Recent Empirical Literature, Review of Educational Research 76(2), pp 173–208.

[15] Feiman- Nemser, S. (2001). "'Helping Novices Learn to Teach", Journal of Teacher Education, Vol.52, No.1.

[16] Hausknecht J. P. (2008). Targeted Employee Retention: Performance Based and Job-Related Differences in Reported Reasons for Staying. Cornell University.

[17] Hays S (1999). Generation X & Y and the Art of the Reward. Workforce.78 (11), pg. 44-48.

[18] Ingersoll, R., & Kralik, J. M. (2004). The Impact of Mentoring on Teacher Retention: What the Research Says. Denver, CO: Education Commission of the States.

[19] Johnson, S. M., et.al. (2004), "The Project on the Next Generation of Teachers". Finders and Keepers: Helping New Teachers Survive and Thrive in Our Schools. San Francisco: Jossey-Bass.

[20] Kirby, S. N., Berends, M., & Naftel, S. (1999). "Supply and Demand of Minority Teachers in Texas: Problems and Prospects". Educational Evaluation and Policy Analysis, 21(1), 47-66.

[21] Kroon. Brigitte, Freese Charissa. (2013),"Can HR Practices Retain Flex Workers with their Agency". International Journal of Manpower Vol. 34 (8), 2013 pp. 899-917.

[22] Kumar, S. P. & Dhamodharan, V. (2013), "An Empirical Study on Talent Retention Strategy by BPO's in India". Interdisciplinary Journal of Contemporary Research in Business, Vol. 5(4), pp.207-219.

[23] Laden, B.V., and Hagedorn, L.S., (2000), Job Satisfaction Among Faculty of Color in Academe: Individual Survivors Or Institutional Transformers, In L. Hagedorn (Ed.), New Directions For Institutional Research, San Francisco, CA: Jossey Bass, 105, pp 57-66.

[24] Luthans, F., (1998), Organizational Behavior 8th ed", Boston: Irwin McGraw-Hill.

[25] McGrath DJ,and Princiotta D., (2005), Private School Teacher Turnover and Teacher Perceptions of School Organizational Characteristics, NCES 2005-06. Washington, DC: National Center for Education Statistics.

[26] Malati, N., Tiwari, P. & Sharma, P. (2013), "A Comparative Analysis of Factors Affecting Faculty's' Intention to Stay at Post Graduate Diploma in Business Management (PGDBM) and GGSIP University Affiliate MBA Institutions", Asian Journal of Management Research, Vol. 4(1), 197-207.

[27] Murnane, R., & Olsen, R. J. (1991). "The Effects of Salaries and Opportunity Costs on Length of Stay in Teaching: Evidence from Michigan." The Review of Economics and Statistics, 347-352.

[28] Olsen, D., (1993), Work Satisfaction and Stress in the First and Third Year of Academic Appointment, Journal of Higher Education, 64(4), pp 453-471.

[29] Olsen, D., Maple, S.A. and Stage, F.K., (1995), Women and Minority Faculty Job Satisfaction: Professional Role Interests, Professional Satisfaction, and Institutional Fit, Journal of Higher Education, 66(3), pp 267-293.

[30] Rehman. S (2012), "A Study of Public Sector Organizations with Respect to Recruitment, Job Satisfaction and Retention", Global Business and Management Research: An International Journal, Vol. 4 No. 1, 76-88.

[31] Report on Annual Status of Higher Education of States and UTs in India (ASHE 2013). Retrieved from http://www.deloitte.com/assets/Dcom- India/Local%20 Assets/Documents/Thought ware/Annual Status of Higher Education of States and UTs in India,%202013.pdf

[32] Report on Higher Education in India at a Glance (Feb 2012). Retrieved from http://www.ugc.ac.in/ugcpdf/208844_HEglance2012.pdf.

[33] Rockwell, S.K., Schauer, J., Fritz, S.M., & Marx, D.B. (1999). Incentives and Obstacles Influencing Higher Education Faculty and Administrators to Teach via Distance. Retrieved from http://www.westga.edu/~distance/rockwell24.html .

[34] Rosser, V.J., (2005), Measuring the Change in Faculty Perceptions Over Time: An Examination of Their Work Life and Satisfaction, Research in Higher Education, 46(1), pp 81-107.

[35] Samuel M.O, Chipunza C (2009) Employee Retention and Turnover: Using Motivational Variables as a Panacea, African Journal of Business Management Vol.3 (8), pp. 410-415.

[36] Smith, T., & Ingersoll, R. (2001). "Reducing Teacher Turnover: What are the Components of Effective Induction?" American Educational Research Journal, 41(2).

[37] Stinebrickner, T. R. (1998). "An Empirical Investigation of Teacher Attrition" Economics of Education Review, 17(2), 127–136.

[38] Tack, M.W., and Patitu, C.L., (1992), Faculty Job Satisfaction: Women and Minorities in Peril, ERIC Clearinghouse on Higher Education Washington, DC

[39] Tye, B. B., & O'Brien, L. (2002). "Why are Experienced Teachers Leaving the Profession?" Phi Delta Kappan, 84(1), 24-32.

[40] Zaini A., Nilufar A., Syed S. A., (2009), The Effect of Human Resource Management Practices on Business Performance Among Private Companies in Malaysia, International Journal of Business And Management, 4(6), pg.65-72

[41] Zuber A (2001). A Career in Food Service Cons: High Turnover, Nations Restaurant News, 35 (21), pg.147-148.

A Qualitative Approach to Faculty Attrition Cost in Technical Institution

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ABSTRACT

In order to generate the most effective human resource for national development, quality education has become crucial. The attainment of this objective is entirely dependent on faculties who are the source for dissemination of effective knowledge and right skills. In this era of imbalance between faculty supply and demand, technical institutions are facing the problem of faculty attrition cost. Considering this fact, the analysis of these costs has become imperative for all the technical institutions. The current study attempts to understand the relationship between cost incurred by the institutions and faculty attrition. Exploratory Factor Analysis (EFA) was undertaken, followed by categorical regression. EFA was applied to develop the measurement tool for identifying factors of costs and brought forth three costs – direct, indirect and opportunity costs. To assess these costs of faculty attrition, categorical regression was applied with factors of direct, indirect and opportunity cost as dependent variables and four categories of attrition i.e. attrition less than 5%, 5%-less than 15%, 15%- less than 25%, and greater than 25% as independent variables. Direct cost was comprised of Recruitment Costs, Application Processing Cost, Interview Process Costs, Hiring Costs, Orientation and Training Costs, Professional Development and Ongoing Support and Separation Costs, Indirect costs was explained through Productivity Costs and Cost of Morale and the components of Opportunity costs were Loss of Business, Loss of Students, Loss of Faculty/Adjuncts, Loss of Reputation. Further, through CATREG it was observed that higher the attrition, higher the direct, indirect and opportunity costs. This research can be an effective input to many technical institutions to reconsider their approach towards their faculties and seek cost effectiveness by reducing faculty attrition and its negative impact on institutions growth.

Keywords: *Direct cost, Indirect cost, Opportunity cost, Faculty attrition, Technical institution.*

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INTRODUCTION

The Department of Higher Education(2014) states that the Indian Higher Education sector has become largest in the world in terms of number of Institutions and second largest in terms of number of students. The sector is already educating nearly 28 million students in nearly 726 universities and 38,000 college still date. This massive expansion has brought forth number of developments as well as challenges. Every nation's development is dependent on the effective rearing of its youth. Students are the strategic source for gaining advantage for any nation. It's essential to provide these students with upgraded knowledge, right skill and attitude to build them as the future asset for national development. The 12th Five year Plan and progressive policies give a clear focus on higher education which has aided in the growth of educational institutions. With the increase in the number of institutions, quality has become an important concern. The quality of education is majorly dependent on faculties and their intellectual strength. Due to the imbalance between the demand and supply it has become more challenging for institutions to attract, retain and satisfy the right talent.

The major problem faced by most of the institutions is faculty attrition because of which institutes strike hard to sustain and disseminate quality education. Many a times the talent and acumen remain stored in a leaky bucket. Faculty attrition not only results in problem of deteriorating quality but also result in capital loss in terms of both human and financial. Institutes incur high costs in hiring and training faculty who leave before mastering the art of creating a cohesive learning culture for the students. Institutions invest in turning their faculties into knowledge assets by undertaking the costly process of training and development but faculties exit the system for a better opportunity resulting in expense to the Institute. Due to these problems the institutions are unable to provide the students with right aptitude and experienced faculty. The faculties hired in an unstable environment feel dissatisfied, unable to successfully meet the needs of the students and helplessly decide to quit the working place.

It's high time for the institutions to realise the problems of their faculty members and understand the reasons for attrition. The evaluation of trends in attrition enables them to eliminate the problem from the root and lower the associated costs of annual recruitments, training and hiring. The study tries to understand the costs incurred by institutions due to faculty attrition.

BACKGROUND FOR THE STUDY

Technical education is defined as programmes of education, research and training in engineering, technology, architecture, town planning, management, pharmacy, applied arts and crafts and such other programmes or areas as the Central Government may, in consultation with the Council, by notification in the official Gazette, declare. As per Ministry of Human Resource Development, the Gross Enrolment Ratio (GER) in higher education has increased to 20.4% from 13.5% resulting in the huge expansion in the education sector. This has also lead to an increase in the number of premier institutes like IITs, IIMs, NITs, and IISERs etc. According to the AICTE, the number of private investors in the area of technical education has also increased from 4, 491 in 2006-07 to 8,562 in 2012-13. Further, significant number of university level technical institutions, such as deemed universities and private universities established by the State legislatures, have also come into existence in recent years. This has also brought forth pertinent focus on modes of delivery of the programme, degree of regulation, creation and sustenance of talented faculty etc.

The National Knowledge Commission (2006-2009) in its 'Report to the Nation' also reiterates the high growth. It has been stated that evaluation of the institutions is largely dependent on the 'Intellectual Capital and Faculty' making it increasingly important to develop a mechanism to arrest, conserve, retrieve the intellectual capital of the management institutions (Doctor and Ramachandran, 2008). According to a University Grants Commission (UGC)2012 report, India currently possesses only half of the required strength and needs about 300,000 more faculties, revealing the extent of faculty crunch in India's higher education system. Ministry of Human Resource Development (MHRD) in a statement reveals that "establishment of a reliable database itself is a major hurdle in addition to the issue of faculty shortage". The report also states that India requires about 100,000 more teachers per year in next 10 years for its colleges. The Ministry has been urged by the task force take a stock of the situation, without which higher education policy projections for the 12th Year Five Plan (2012-17) cannot be met. Suneja. K. (2013) reiterates that 92% of the total institutions imparting technical education are unaided private institutions. It has become essential for the colleges to comprehend that a higher attrition rate results in declining quality, lowering prestige and decreasing capability in attracting students, all of them influencing the costs.

LITERATURE REVIEW

In current times the demand for teachers has grown while a shortage in supply due to attrition and mobility has further added to the imbalance. **Grissmer & Kirby (1987)** argued that attrition is something that results in the negative image of work place. **Calfee and Pessirilo (1980)** postulated that attrition fails to attract the right talent. This helped organizations accept the fact that attrition is an inevitable phenomenon. Some sound organizations consider it as an objectionable cost or wastage and have worked out strategies to boost staff retention. Every organization thus tries to calculate cost associated with attrition and reduce this cost by following different practices. HRA experts defined cost of attrition as a combination of two major components - direct and indirect costs.

Tziner and Birati (1996) recognized direct and indirect costs related to dysfunctional turnover and also suggested that such cost can be included in the calculation of cost of attrition due to their potential contribution. **Morrell et al (2004)** identified direct and indirect costs of turnover as costs incurred on account of replacement, recruitment and selection, temporary staff, management time, low morale, pressure on remaining staffs, costs of learning, product or service quality, organizational memory, and the loss of social capital.

Rodgers (2005), Dooney (2002) stated that costs associated to attrition of online faculty ought to be grounded on predetermined measures related to costs established by an institution, based on direct, indirect and opportunity costs. **Brogden (1949), Cronbach and Gleser(1965)** suggested that the methods to calculate the cost were available for years but gained importance of researchers in mid-1970's. Further, lack of monetary relationship between the costs and the employee exit behavior made it difficult to compute these costs. Different views on qualitative and quantitative aspects of cost have made it even more difficult to define the parameters to be covered under the umbrella of total cost.

Collins and Smith(2006) opined that, most of the times this cost is general and directly associated with employee's recruitment and training costs. **O'Connel and Kung (2007)** proposed three main components of turnover costs- recruitment cost, potential loss of business and training and development cost. The total time spent for on-the-job training is also one of the costs incurred by the organizations, according to **Sorensen (1995)**. Searching, attracting and hiring new faculty amounts to an expensive deal. **Cascio & Aguinis(2005)** stated that the adopted recruitment methods involve cost of different sources such as a classified advertisement in a local newspaper to postings in regional, state, and national employment sources.

Hinkin and Tracey (2000) generated the opinion through the interviews of managers that indirect costs of turnover were high and an important component of turnover. **Cascio (2000)** projected a model for estimating turnover costs. The model used a mathematical approach to analyze the cost related to both the faculty leaving the organization and the new recruit. He described seven elements that signified the costs of replacing the left worker **Cascio (2000), Cascio & Ramos (1986).** These elements include: advertising job availability, screening of applicants, entrance interviews, interview expenses, reference/ background checks, pre-employment testing/assessment procedures, and appointment procedures for a new hire. He further made a mention of different costs associated with meals and travel. These costs were unevenly dependent on the number of candidates, location and length of interview.

Cascio (2000) suggested that the sum of these training costs, separation costs, and replacement costs represent the total direct cost of employee turnover. **Betts and Sikorski (2008)** suggested that a university incurs indirect, opportunity and direct costs when faculty leaves an institution. Indirect cost is directly related to the productivity and morale. Opportunity cost amounts to lost resources negatively impacting faculty turnover while direct cost is the summation of fixed and variable cost that goes into recruiting, retaining, and losing faculty members. This makes the total cost eventually hard to be quantified or itemized. Institutions are affected by indirect cost incurred on account of faculty attrition.

Latimer (2002) identified lost productivity as a major cost and depicted it in the form of (a) lost productivity of the leaving faculty member, (b) lost productivity in vacant position, (c) lost productivity in search committee members, (d) lost productivity of peers who take on displaced work, and (e) lessened productivity of a newly hired member while adjusting and going through new training. **Dee (2004)** also recognized that the costs of recruiting faculty and disruption of work significantly impact universities. Cost also escalates due to declining morale of the remaining faculty members on account of increased responsibilities **Wenger (2003).** So it's vital for the institutions to arrest attrition and minimize cost associated with it.

OBJECTIVE OF THE STUDY

To identify and investigate the impact of faculty attrition costs in technical institutions.

RESEARCH DESIGN

A structured questionnaire was designed for the collection of data. The different factors that were crucial to define costs were identified through literature review and exploratory study. Exploratory factor analysis was applied to develop the measurement tool for identifying factors of costs. A total of 38 items were identified on the basis of literature review. The Cronbach alpha was 0.72. Cost was considered to be dependent variable and the level of faculty attrition was taken as an independent variable. Validity of the questionnaire was checked through face validity method and was found to be high. Items were rated on likert scale of five points where weight of 5was indicated as “very high”. To evaluate the cost of faculty attrition in the institutions, a total (summated) score was calculated for each respondent by summing across items.

Exploratory Factor Analysis (EFA) was undertaken, followed by categorical regression. EFA is applied to find the underlying relationship between the different factors resulting in faculty attrition cost.

Further to EFA, Categorical Regression was applied to study the relationship between cost and faculty attrition. Categorical regression quantifies categorical data by assigning numerical values to the categories resulting in an optimal linear regression equation for the transformed variables. It is also known by the acronym CATREG. To assess the cost of faculty attrition, categorical regression was applied with factors of cost as dependent variable and four categories of levels of attrition i.e. attrition less than 5%, 5%-less than 15%, 15%- less than 25%, and greater than 25% as independent variables.

SAMPLING AND DATA COLLECTION

A sample of 102 Technical institutions (approved by AICTE) in the Delhi and NCR region was drawn using simple random sampling. Questionnaires were circulated in 102 institutions and 61 completely filled in questionnaires were received. The response rate was 59.80.The data on these items was collected through a sample of sixty one Directors/HODs of various technical institutions.

DATA ANALYSIS AND RESULTS

On applying Exploratory Factor Analysis, three factors which were identified and named as direct cost, indirect cost and opportunity cost. The split half reliability measure Cronbach's alpha values and KMO for sampling Adequacy was found to be acceptable in all the cases as shown in Table 1.

Table 1: Rotated Component Matrix and calculated Cronbach's KMO for Sampling Adequacy and Barlett's test of Sphericity Significance.

	Cost	Components				Cronbach's	KMO for Sampling Adequacy
(I)	**Factor 1 Direct Cost**						
1	Recruitment Costs	.51					
4	Application Processing Cost	.81					
8	Interview Process Costs	.84					
11	Hiring Costs	.57				0.66	
10	Orientation and Training Costs	.74					
6	Professional Development and Ongoing Support	.70					.751
7	Separation Costs	.80					
(II)	**Factor II Indirect Cost**						
12	Productivity Costs			.84		0.69	
9	Cost of Morale			.88			
(III)	**Factor III Opportunity Cost**						
2	Loss of Business				.80	0.83	
5	Loss of Students				.78		
13	Loss of Faculty/Adjuncts				.88		
3	Loss of Reputation				.79		

Barlett's test of Sphericity Significance= 0.00

Direct Cost comprised of Recruitment Costs, Application Processing Cost, Interview Process Costs, Hiring Costs, Orientation and Training Costs, Professional Development & Ongoing Support and Separation Costs.

Indirect Cost was characterized by Productivity Costs and Cost of Morale and

Opportunity Cost comprised of Loss of Business, Loss of Students, Loss of Faculty/Adjunct and Loss of Reputation.

Individual mean scores of the variables and their factors were studied as depicted in Table 2.

Table 2: Mean Scores of Direct, Indirect and Opportunity costs

Dependent	Mean Scores	Factors and Mean Scores
Recruitment Cost	3.24	
Application Process Cost	3.38	
Interview Process Cost	3.18	
Hiring Cost	2.91	
Orientation and Training Cost	2.84	Direct Cost 3.13
Professional Development and Ongoing Support	4.11	
Separation Costs	2.30	
Productivity Cost	2.96	Indirect Cost 3.08
Morale Cost	3.18	
Loss of Business	3.41	
Loss of Students	3.49	Opportunity Cost 3.40
Loss of Faculty/Adjuncts	3.51	
Loss of Reputation	3.22	

In case of Direct Cost, "*Professional Development and Ongoing Support*" has the highest impact with mean value of 4.11 and "*Separation Cost*" has least impact with the mean value of 2.30. On analyzing the Indirect Cost it was found that "Morale Cost" (3.18) has a higher impact in comparison to "*Productivity Cost*" (2.96). Also, mean value of "*Loss of Faculty*" (3.51) contributed the most and "*Loss of Reputation*" (3.22), the least in case of Opportunity Cost. The overall analysis revealed that Opportunity Cost has the highest mean value (3.40) followed by Direct Cost (3.13) and Indirect Cost (3.08).

To assess the cost of faculty attrition categorical regression was applied with factors of cost as dependent variable and four categories of attrition i.e. attrition less than 5%, 5%-less than 15%, 15%- less than 25%, and greater than 25% as independent variables.

Results could not be achieved when all the four categories were taken together as it generated zero tolerance implying high collinearity between the independent variables. So results were generated by removing one of the independent variables every time. The level of tolerance of categories (nearing 1), have been considered for the study.

Further, mean of various items were taken to understand the variation across the attrition levels with respect to elements of costs.

DIRECT COST: In the case of direct cost (Table 3), the results depicted in II case were considered. The results exhibited in II case show that the category greater than 25% has significant negative effect on direct cost. This means higher the attrition lower is the direct cost incurred. The result illustrates that in greater than 25% attrition category shows that 1 standard deviation change leads to .332 standard deviation decrease in cost. Also the individual prediction power of attrition category greater than 25% is 10.89%. Looking at the importance of the predictors, the attrition category of greater than 25% attrition was the only important predictor.

Table 3: Categorical Regression of Faculty Attrition Rate on Direct Cost

	Standardized Coefficients					**Correlations**				**Tolerance**	
$R^2 = .123$	Beta	Std. Error	df	F	**Sig.**	Zero-Order	Partial	Part	Importance	After Transformation	Before Transformation
When IInd Independent Variable was removed											
Greater than 25%	–.332	.134	1	6.140	**.017**	–.291	–.328	–.325	.781	.958	.958

The screening of mean scores of institutions on direct cost with respect to different attrition rates depict that the direct cost incurred by institution with low attrition rates is average(mean = 3.25), while the institutes with attrition greater than 25%, the cost is below average (mean = 2.8). This signifies that higher the attrition, lower is the direct cost incurred. The direct cost incurred by institution with low attrition rates is average while the institutions with attrition greater than 25%, incur average cost.

INDIRECT COST: The scrutiny of Table 4 shows that there is a significant effect of various attrition categories on indirect cost. In this case also the results depicted in I and II cases were considered. The results show that in I case the category of attrition greater than 25% has significant positive effect on indirect cost and in II case the category 15%-less than 25 % has significant adverse effect on indirect cost. This means higher the attrition, lower is the indirect cost in case of attrition category 15% to less than 25% while in case of attrition greater than 25% the higher attrition leads to high indirect cost. The results show that with 1 standard deviation change in attrition rate between 15% to less than 25%, the indirect cost decreases by0.297 standard deviation. While in greater than 25% attrition category, 1 standard deviation change leads to .286 standard deviation increase in indirect cost. The prediction power of attrition category greater than 25% is 8.4%. Looking at the importance of the predictors, the attrition category of 15% to less than 25% attrition is most important predictor followed by attrition category of greater than 25%.

Screening of mean of institutions on indirect cost with respect to different attrition rates reveal that the indirect cost incurred is average in institutions with low attrition rates (mean=2.9) while it is above average in institutions with high attrition rates (mean = 3.4).

OPPORTUNITY COST: In the case of opportunity cost the results depicted in I and II cases were considered. The results show that both in I and II case the category greater than 25% has significant positive effect on opportunity costs. This means higher the attrition higher is the loss in opportunity costs. The results show that in greater than 25% attrition category 1 standard deviation change leads to .332 to .412

Table 4: Categorical Regression of Faculty Attrition Rate on Indirect Cost

	Standardized Coefficients					**Correlations**				**Tolerance**	
$R^2 = .161$	Beta	Std. Error	df	F	**Sig.**	Zero-Order	Partial	Part	Importance	After Transformation	Before Transformation
When I Independent Variable was removed											
Greater than 25%	.286	.131	1	4.784	**.003**	.270	.293	.281	.481	.961	.961
When II Independent Variable was removed											
Greater than 25%	–.297	.133	1	4.941	**.031**	–.267	–.297	.285	.493	.924	.924

Table 5: Categorical Regression of Faculty Attrition Rate Opportunity Cost

	Standardized Coefficients					**Correlations**				**Tolerance**	
$R^2 = .189$	Beta	Std. Error	df	F	**Sig.**	Zero-Order	Partial	Part	Importance	After Transformation	Before Transformation
When I Independent Variable was removed											
Greater than 25%	.412	.129	1	10.280	**.002**	.377	.410	.404	.823	.961	.961
When II Independent Variable was removed											
Greater than 25%	.332	.129	1	6.659	**.013**	.377	.340	.325	.663	.958	.958

standard deviation increase in opportunity cost. Also the individual prediction power of attrition category greater than 25% is 11.56% and 16.81%. Looking at the importance of the predictors, the attrition category of greater than 25% is the only predictor with an importance of 82% (Table 5).

The screening of mean score of institutions on opportunity cost with respect to different attrition rates show that opportunity cost incurred by institutions with low attrition rates is below average (mean =2.03) and in case of institutions with attrition greater than 25% is average (mean= 3.39).

CONCLUDING OBSERVATIONS

The well-being of any institution depends on its ability to recruit and retain a talented professoriate. The present study was conducted to comprehend the impact of faculty attrition on various types of costs incurred by the technical institutions. It has become imperative for universities and institutions to build positive environment to build healthy relations with their faculty members by providing them learning experiences and opportunities.

According to the results of the current study it was found that opportunity cost is most affected by faculty attrition. This signifies that higher is the attrition higher is the loss of business cost, loss of student cost, faculty/adjuncts cost and reputation cost. Due to high attrition the institute starts losing its business because of lost faculties and students who move to their competitors due to poor reputation of the Institute. As a result, there is decrease in student enrollment, faculty research and publications, student's placement opportunities, institutions reputation and sense of belongingness from faculties as well as students. Opportunity cost is followed by direct cost. On examination of direct cost it was observed that attrition has negative effect on it. The institution incurs expenditure of direct cost for the recruitment of the right talent and knowledge managers. Faculty attritions results in the failure of all the efforts put in by the institutions for selecting the right professoriate, training and developing them professionally, giving them learning and development opportunities. So it's very important for the institutions to manage the attrition rates so that attraction and retention of right candidature becomes most cost effective and value oriented. Indirect cost has the least impact on faculty attrition but the institutions still need to keep a check on morale of their faculty members and their productivity. Morale and productivity are directly related and an important area of concern for gainful retention.

Hence, the management ought to maintain a healthy working environment and focus on providing good infrastructure and facilities to their faculty members. Growth and development opportunities, fair and transparent institutional policies, regular appraisal, flexibility at work place can be some of the factors leading to effective faculty retention. The institutions will be able to lessen the problem of faculty attrition and also minimize the associated costs by focusing on internal factors.

REFERENCES

- **Amey, M. (1996).** "The Institutional Marketplace and Faculty Attrition". *The NEA Higher Education Journal*. Retrieved from http://www2.nea.org/he/heta96/s96pg23.pdf
- **Betts, K. S. and Sikorski, B. (2008),** "Financial bottom line: Estimating the cost of faculty/adjunct turnover and attrition for online programs", *Online Journal of Distance Learning Administration, XI*(*I*).
- **Bliss, W.G.,** "Cost of Employee Turnover," *The Advisor* (available on line at http://isquare.com/turnover.html);
- **Brogden, H.E. (1949).** "When Testing Pays off", *Personnel Psychology*, 2, 171-183.
- **Collins, C.J. and Smith, K.G. (2006),** "Knowledge Exchange and Combination: The Role of Human Resource Practices in the Performance of High-Technology Firms", *Academy of Management Journal, Vol. 49 No. 3,* 544-60.
- **Cork, B. (2008).** "The True Cost of Employee Attrition", *Human Capital,* retrieved http://www.catalystmag.com/Blog/2008/The_True_Cost_of_Employee_Attrition.html
- **Cronbach, L.J., andGleser, G.C. (1965).** *Psychological Tests and Personnel Decisions.* 2nd ed. Urbana: University of Illinois Press
- **Dee, J. R. (2004),**"Turnover Intent in an Urban Community College: Strategies for Faculty Retention", *Community College Journal of Research and Practice, 28,* 593-607.
- **Dooney, J. (2005).** "Cost of Turnover", *Society of Human Resources Management.* Retrieved on February 1, 2008 from http://www.shrm.org/login.asp?clickth=http://www .shrm.org/research/briefly_published/ROI%20Series_%20Cost%20of%20Turnover.asp
- **Fitz-enz. (1997).** "It's Costly to Lose New Employees". *Workforce, 76,* 50-51.
- **Hill, D., and Barth, M. (2004).,** "NCLB and Teacher Retention: Who will Turn Out the Lights?" *Education and the Law,* 16(2-3), 173-181.
- **Holtom, B. C., Mitchell, T. R., Lee, T. W., and Eberly, M. B. (2008),** "Turnover and Retention Research: A Glance at the Past, a Closer Review of the Present, and a Venture into the Future", *The Academy of Management Annals,* 2(1), 231-274.
- **Ingersoll, R. M. (2001).** "Teacher Turnover and Teacher Shortages: An Organizational Analysis", *American Educational Research Journal, 38*(*3*), 499-534.

- **Ingersoll, R. M. (2001).** "Teacher Turnover and Teacher Shortages: An Organizational Analysis", *American Educational Research Journal, 38*(*3*)*,* 499-534.
- **Ingersoll, R. M. (2002),** "The Teacher Shortage: A Case of Wrong Diagnosis and Wrong Prescription". *NASSP Bulletin,* 86(631), 16–30.
- **Johnsrud, L. K., and Rosser, V. J. (2002).** "Faculty Members' Morale and Their Intention to Leave: A Multilevel Explanation". *Journal of Higher Education*, 73, 518–542.
- **Krieg, J. (2004),** *Teacher Quality and Attrition*. Bellingham, WA: College of Business Economics.
- **Latimer, D. (2002),** "The Cost of IT Staff Turnover: A Quantitative Approach". *EDUCAUSE Center for Applied Research: Research Bulletin 2002*(4), 1-12.
- **Luekens, M. T., Lyter, D. M., Fox, E. E., and Chandler, K. (2004).** *Teacher Attrition and Mobility: Results from the Teacher follow-up Survey, 2000-01*. Washington, D.C.: National Center for Education Statistics.
- **Macdonald, D. (1999).** "Teacher Attrition: A Review of Literature". *Teaching and Teacher Education,* 15(8), pg.835-848.
- **Mehta S. (2012)** "Faculty Attrition: A Challenge for Private Management Institutions", *International Journal of Business and Management Tomorrow* 2(9), 1-10.
- **Morrell Kevin M, John Loan-Clarke and Adrian J. Wilkinson, (2004)**"Organizational Change and Employee Turnover", *Personnel Review,* 33(2), 161 – 173
- **Nagowski, M. (2006).** "Associate Professor Turnover at America's Public and Private Institutions of Higher Education". *American Economist*. http://findarticles.com/p/articles/mi_qa5461/is_200604/ai_n21392104
- **O'Connell, M., and Kung M. (2007).** "The Cost of Employee Turnover". *Industrial Management,* 49(1), 14-19. Retrieved from http://www.iienet.org/public/articles/ index.cfm?cat=38
- **Pinkovitz, William H., Moskal, Joseph and Green, Gary P(1996);.,** "How Much Does Your Employee Turnover Cost?," *Small Business Forum,* 14:707
- **Rodgers, K. (2002).** "Lessons in HR Metrics". *Webster Buchanan Research*. Retrieved from http://www.websterb.com/articles.php?ID=8c28386503551212
- **Sorensen, N. (1995).** "Measuring HR for Success". *Training and Development,* 49, 49-51
- **Wenger, D. C. K. (2003 May-June),** "Conducting a Cost-benefit Analysis of Faculty Development Programs: Its Time has Come", *Academic Physician & Scientist,* 5-7.

Consumer Desire for Uniqueness in High Tech Products

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ABSTRACT

This research examines the role of uniqueness in a high tech product marketing strategy. Primary data is used to uncover information important for high technology firms in regards to consumer personality type and their desire for unique high technology products. By using the information provided, a high technology firm could lower the level of uncertainty associated with high technology products. Our findings are of interest to managers involved in marketing high technology products and academician engaged in this stream of research.

Keywords: *High tech products, product uniqueness, consumer desire for uniqueness, marketing implications*

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INTRODUCTION

In 2009, amidst a global recession, the high technology firm, Apple Co., reported record profits, while other high technology firms such as Microsoft suffered. This trend has continued, some companies like Apple and Samsung, continue to grow while others tend to languish. It is widely theorized that the basis for this selective success is due to superior product uniqueness and continuous innovation in offering unique high tech products, which encourages consumers to remain loyal to the brand. Consider "Think different", a past marketing campaign of Apple, this defines the firm's marketing and product development attitude that has led to Apple's domination in most product fields it enters (Schneider 2011).

This is merely one illustration of many that demonstrate the importance of uniqueness in the high technology [ht] industries. The goal of this research is to develop an understanding of the uncertainty associated with high tech products (Mohr 2000) using the consumer desire for uniqueness theory propounded by Lynn and Harris (1997). This research examines uncertainty in ht products, with an intent to reduce uncertainties associated with being first to market, while using uniqueness in ht products as a differentiation and a competitive advantage. Reduced uncertainty may bring down costs, allow for R&D costs to be recovered more quickly, and, as a result, reduce new product introduction costs and yield higher satisfaction.

Importance of product uniqueness in a high tech sector can be witnessed in the urgency demonstrated by ht companies attempting to be the first to a market. This urgency may be rooted in the need for firm's products to be viewed as unique. By being the first to introduce an innovative product, never before seen in the market, this need is addressed, and in the process, companies gain market share. It is often difficult for firms who enter late to overcome the established market leader. This causes certain firms to push products out ahead of rivals, even when the product itself is not ready for the market. In the software industry for instance, beta products (products not ready for commercial release) are often rolled out prematurely just because firms can manage the release of these beta products by using fireware to install updates once the customer has already purchased them (McCracken 2011).

In the following sections, we discuss the current status of high technology products in regards to their significance, definition, and the attached uncertainty. We then delve into understanding the element of uniqueness, its importance in innovative product development, the consumers' individual differences in the desire for uniqueness, as well as how ht products benefit from uniqueness. We then develop scales in order to capture the respondent's personality types and desire for uniqueness. The scale is based on prior work of Tian, Bearden, and Hunter's (2001) "Consumer's Needs for Uniqueness." Their scale was modified to obtain an understanding of respondent's desired level of unique high technology products, as well as ht products that have the ability to facilitate individuals to stand out. Based on findings from our primary data we discuss the significant relationships between consumer personality types and their desire for unique high technology products.

REVIEW

Technological innovations are driving today's global economy Innovation has driven almost all economic growth since the Industrial Revolution, and is the key to continual growth in the economy and an increasing standard of living. (West 2011). According to the Global Insight World Industry Service database, which provides production data for the 70 countries that account for more than 97% of global economic activity, the global market for high-tech goods is growing at a faster rate than for other manufactured goods (Investing in America's Future 2006). Firms who compete in an advanced technological arena, as well as countries that look to excel in this area, should spend a considerable amount of time and effort understanding what exactly makes up "high technology." Successful high-tech firms are associated with innovation. Firms that innovate tend to gain market share, create new product markets, and use resources more productively. High-tech firms are also associated with high value-added production and success in foreign markets, which helps to support increased compensation to the workers they employ (National Science Foundation 1998).

How can one distinguish between low technology and high technology? For one, the Organization for Economic Co-operation and Development (OECD) identifies high-tech industries based on a comparison of industry R&D intensities, a calculation dividing industry R&D expenditures by industry sales. Four research-intensive industries: aerospace, computers and office machinery, electronics and communications equipment, and pharmaceuticals, are classified as high technology (National Science Foundation 1998). If you are attempting to conclude if a good, service, or industry is high technology, there will be noticeable R&D expenditures relative to revenue.

However, these are only the preliminary steps in understanding the essence of high technology. Mohr (2000) argues that high technology industries must have three characteristics: market uncertainty, technology uncertainty, and competitive volatility, and without one of these characteristics a product cannot be considered high technology. Market uncertainty arises from fear and doubt about what needs and/or problems new technology will address, and how well it will meet those needs. Technological uncertainty arises when it is unknown whether the technology, or the company providing it, can deliver on its promise. The product release date may be unspecified, there may be unknown side effects, or it may be unknown how long this product will be functional. Lastly, competitive volatility occurs when there are a number of competitors that have potential to change the competitive landscape through products offered and tools they use to compete.

Product Uniqueness and Consumer Decision Making

Merriam-Webster defines the word unique as "being without a like or equal." Firms which produce consumer products must understand the implication of this word and apply it to their product offerings. Uniqueness is found to be an element ever so important in the mind of the consumer. When trying to understand the determinants of new product success, a reoccurring theme has been known to be product innovativeness, or uniqueness (Cooper 1994, 1997). When a product lacks individuality in relation to the rest of the market, it is a key contributor to its failure.

Lynn and Harris (1997) in their seminal work propose three causes of the variability of individual differences in their desire for uniqueness. Their research indicates these three causes to be: the need for uniqueness, social status aspirations and materialism. They point out, first, that people strive for a moderate level of uniqueness by acquiring scarce products. Secondly, social aspirations evolve into a desire for dominance and leadership in social hierarchies, and one way to achieve a higher ranking is through possessions and consumer products. In order to be an effective status symbol, a product must be scarce or unique. Lastly, materialistic people are individuals that are focused on their possessions, and it is thought that this type of people will be more inclined to acquire unique or scarce consumer products. Lynn and Harris (1997) research shows empirical evidence that there is a positive correlation between the above three constructs and a person's actual desire for uniqueness.

In sum, several ways consumers can satisfy their need for product uniqueness include ownership of scares items, possessing new products before they are adopted by the majority, customizing products, and unique shopping venues (uniqueness enablers). This insight into the desire for uniqueness is crucial for consumer goods manufacturers, as well as marketers. A superior understanding of the source of consumer desire for uniqueness as well as diverse ways to satisfy that desire has profound marketing implications, especially in the ht sector. These two functions must work together to develop a product as well as a product position that is seen as being without a like or equal. If performed successfully, a firm's product offerings should exhibit these elements, and be able to be extremely competitive.

In the creation of communication campaigns for the high tech sector, advertisers understand the importance of uniqueness. Findings show that the majority (51%) of the advertisements in ht touted the originality of the product. It is crucial that marketers relay the innovativeness of the products so they can develop a competitive edge based on their individual characteristics (Gerhard, Brem, Bacccarella, and Voight 2011).

Possessing ht elements that are unique compared to the rest of the marketplace will truly benefit the firm. In Kansas City, MO, the International House of Prayer (IHOP) has been establishing a worship center for perpetual (24 hour) prayer. It is the first of its kind and has achieved rapid success, with over $30 million dollars realized in private donations. One of the contributing factors to this success has been in their use of high technology, in the form of webcams, to broadcast their prayer room via the Internet to countries all over the Globe. By having a unique offering to viewers, and using ht, this IHOP has achieved so much within the last twelve years (Erik Eckholm 2011).

Another strong example of how ht can reach success in the marketplace, while incorporating elements of uniqueness, is through the introduction of Electronic Cigarettes (e-cigs). The battery-powered mechanism, which can be bought through a number of various channels, delivers an odorless dose of nicotine and flavoring without cigarette tar or additives. It also produces a vapor mist nearly identical in appearance to tobacco smoke. The Chinese manufacturer of the product claims it to be a safe alternative to the deadly tobacco cigarette products that millions smoke every day. The electronic-cigarette industry generates an estimated $100 million in annual sales versus the tobacco industry's estimated $614 billion in 2009. In the USA, e-cigs have been I headlines recently. Judging by these numbers, e-cigs are not quite as accepted as tobacco cigarettes yet, which satisfies consumers need for uniqueness. People strive for uniqueness and one way to achieve higher ranking is through possessions and consumer products that are not mainstream; perhaps this is an underlying cause of consumer preference.

Based on our discussion so far, research shows that individuals seem to desire products viewed as unique. Past research demonstrates that people naturally desire uniqueness (Harris and Lynn 1997) and a major contributing factor to new product success is whether the product is indeed viewed as unique (Cooper 1993, 1996). No surprise then, that when high tech firms create advertisements for a product, the majority point out the fact that the product is unique (Gerhard, Brem, Bacccarella, and Voight 2011).

What impacts the individual's desired level for uniqueness in high technology products? We built upon Tian, Bearden, and Hunter's (2001) Consumer's Need for Uniqueness (CNFU) scale to address this research question. Scale items were modified specifically for the high technology product context. There are three categories within the CNFU: (1) Creative Choice, (2) Unpopular Choice, and (3) Avoidance of Similarity. We also used another scale originally developed by Harris and Lynn (1997) which measures consumers' desire for unique products (with no focus on high technology). These scales are presented in Table 1.

Table 1: Scale items

Creative Choice/Counterconformity
I collect unusual high tech products as a way of telling people I'm different
I have sometimes purchased unusual high tech products or brands as a way of creating a more distinctive personal image
I often look for one-of-a-kind high tech products or brands so that I create a style that is my own
I often try to find a more interesting high tech version of a run-of-the-mill product because I enjoy being original
The high tech products and brands that I like best are the ones that express my individuality
I'm often on the lookout for new high tech products or brands that will add to my personal uniqueness
Unpopular Choice/ Counterconformity
I often buy unconventional high tech products even when its likely to offend others

When it comes to high tech products I buy and the situations in which I use them, I have often broken customs and rules
I have often violated the understanding rules of my social group regarding when high tech products to buy or own
Avoidance of Similarity
When high tech products I like become extremely popular, I lose interest in them
I avoid high tech products that have already been accepted and purchased by the average consumer
High tech products don't seem to hold much value for me when they are purchased regularly by everyone
Desire for Unique Consumer
Products
I am very attracted to rare objects
I tend to be a fashion leader rather than a fashion follower
I am more likely to buy a product if it is scarce
I would prefer to have things custom-made rather than have then ready made
I enjoy having things that others do not
I rarely pass up the opportunity to order custom features on the products I buy
I like to try new products and services before others do
I enjoy shopping at stores that carry merchandise that is different and unusual

The Creative Choices are the choices that are different, yet likely to be considered good choices by these others. Unpopular Choices are choices that deviate from group norms and thus risk social disapproval that consumers withstand in order to establish their differentness from others. Avoidance of Similarity concerns the loss of interest in, or discontinued use of, possessions that become commonplace in order to move away from the norm and reestablish one's differentness.

In an attempt to assess what drives an individual's desire for uniqueness, we modified Gosling, Rentfrow, and Swann's (2003) Personality Inventory and reduced it to twenty personality categories as seen below in Table 2. We developed hypotheses for each personality type in relation to whether they have a significant impact on one another or not (neutral); these hypotheses are summarized in Table 2.

Table 2: Summary of Hypothesized Relationships

Personality type	Creative Choice	Unpopular Choice	Avoidance of Similarity
Extraverted	Significant	Significant	Significant
Enthusiastic	Significant	Significant	Significant
Critical	Significant	Significant	Significant
Quarrelsome	Insignificant	Insignificant	Insignificant
Dependable	Neutral	Neutral	Neutral
Self-Disciplined	Significant	Significant	Significant
Anxious	Significant	Significant	Significant
Easily Upset	Neutral	Neutral	Neutral
Open to new Experiences			
Complex	Significant	Significant	Significant
Reserved	Insignificant	Insignificant	Insignificant
Quiet	Insignificant	Insignificant	Insignificant
Sympathetic	Neutral	Neutral	Neutral
Warm	Neutral	Neutral	Neutral
Disorganized	Insignificant	Insignificant	Insignificant
Careless	Insignificant	Insignificant	Insignificant
Calm	Neutral	Neutral	Neutral
Emotionally Stable	Significant	Significant	Significant
Conventional	Insignificant	Insignificant	Insignificant
Uncreative	Significant	Significant	Significant

METHODOLOGY

According to Gosling, Rentfrow, and Swann's (2003) Personality Inventory and the modified version of Tian, Bearden and Hunter's (2001) Consumer's Need for Uniqueness, we asked participants to rank their responses to the proposed statement using a modified Likert-type scale with 1 being "strongly disagree" and 5 being "strongly agree". There was an additional section of questions in regards to participant's demographic information. The survey rotated through several rounds of pretesting in order to check for human errors, redundancy, and unnecessary questioning. We worked diligently to make sure the survey was manageable and efficient for the individual taking time to complete it. We distributed this survey on-line nationally via email and social media. A sample size of 196 usable responses was achieved for the purpose of this study.

Findings

As seen below in Table 3, there were more females (55%) then males (45%) who participated in the survey. As one might have expected from a survey based out of a higher educational institution, there was a large percent of 18-22 year olds (52%), with the next age group being 46 or older, making up 34 % of the respondents. To coincide with the above data, 52% of respondents were currently in college, and 13% had undergraduate degrees. Household income level was much more equally distributed than age and education levels. Participants responded most to having a household income of $201,000 or more (21%), followed by $101,000- 150,000 (20%), then $151,000- 200,000 (18%).

Table 3: Sample Profile (n=196)

Gender	n	%
Male	90	45.9
Female	106	54.1%
Age	**n**	**%**
18-22 years old	107	54.6%
23-29 years old	15	7.7%
30-45 years old	27	13.8%
46 years and over	47	24%
Level of Education	**n**	**%**
Some high school/ High School Graduate	5	2.6%
Currently in College	103	52.6%
Undergraduate degree	26	13.3%
Currently in graduate school	5	2.6%
Postgraduate degree	57	29.1%
Household Income	**n**	**%**
$30,000 or less	20	10.2%
$31,000-$75,000	27	13.8%
$76,000-$100,000	31	15.8%
$101,000-$150,000	40	20.4%
$151,000-$200,000	36	18.4%
$201,000 or more	42	21.4%

We examined the relationship between the twenty personality types listed above along with the Creative Choice scale (Chronbach Alpha .933), Unpopular Choice scale (Chronbach Alpha .802), and Avoidance of Similarity scale (Chronbach Alpha 0.883). All scales exhibited acceptable validity and reliability scores. The creative choice scale (Alpha 0.933) showed excellent psychometric properties and validity, the other two scales with Alpha values in 0.80 range have good psychometric properties that indicate scale validity. All scales have been used in the past and exhibit excellent face and content validity, our validity results were in line with prior research in the area. We then devoted our attention to any relationship we found to be significant at the 0.10 level of significance. A complete list of our findings along with the corresponding F values can be found below under Table 4.

Table 4: Personalities and Interaction with the Four Scales (F values reported)

Personalities	DUCP	Creative Choice	Unpopular Choice	Avoidance of Similarity
Extraverted	2.2*	1.6	1.6	7.1***
Enthusiastic	3.1**	1.7	.6	2.2*
Critical	2.5**	1.6	2.5**	1.03
Quarrelsome	1.4	1.4	3.0**	1.8
Dependable	.07	.92	.1*	1.3
Self-Disciplined	1.1	1.9	2.8**	1.0
Anxious	4.1***	1.1	1.4	1.0
Easily Upset	1.9	.9	.1	1.9
Open to new experiences	7.8***	2.1	2.3*	.04
Complex	1.8	1.7	.5	1.5
Reserved	.4	.9	1.2	.3
Quiet	2.6**	2.1*	4.3***	2.7**
Sympathetic	2.3*	.51	.62	.6**
Warm	2.6**	1.8	.8	.6
Disorganized	1.2	.9	.9	.3
Careless	1.3	1.0	.2	.4
Calm	1.8	1.1	1.3	.9
Emotionally Stable	1.3	1.3	1.1	2.1*
Conventional	2.2*	1.0	2.7**	2.2*
Uncreative	1.9	.8	.6	1.8

* = < .10; ** = < .05; *** = < .01

We found individuals who characterize themselves as extraverted, enthusiastic, critical, anxious, open to new experiences, quiet, sympathetic, warm, and conventional have a desire for unique consumer products. Quiet individuals demonstrated a significant relationship to the Creative Choice scale. In regards to Unpopular Choice, our findings were that individuals who are classified as critical, quarrelsome, dependable, self-disciplined, open to new experiences, quiet, and conventional all had a significant relationship with the scale. Lastly, the Avoidance of Similarity scale demonstrated a significant relationship with people who are extraverted, enthusiastic, sympathetic, quiet, emotionally stable, and conventional.

Further, we examined whether there were significant relationships between various demographics and desire for products. ANOVA results indicated ethnicity of the respondent has an impact on the desire for unique high technology products (F=5.745 p: 0.001). Our results indicated there was also a significant relationship between gender and age and the desire for unique high technology products as found in the modified scale developed by Tian, Bearden and Hunter's (2001) Consumer's Need for Uniqueness.

Lastly, we used regression analysis and found several significant relationships. We used the composite desire for uniqueness scale for ht products as a dependent variable and the other three composite scales as independent variables. The data indicated an excellent fit between Creative Choice scale and the desire for ht uniqueness (F=.97.815; p=0001, R2 = .335). Next, we found Unpopular Choice had a significant impact on the desire for ht uniqueness (F=.38.27; p=.0001, R2 = .399). Lastly, we found Avoidance of Similarity had a significant impact on the desire for ht uniqueness (F=.22.46; p=.0001, R2 = .428).

CONCLUSIONS

The findings in this research provide high technology marketers with a deeper insight into their target consumers. Results indicate the importance that uniqueness has on customer's desire for high technology products. Firms are now aware that by producing and marketing unique products, they can reach a higher level of market success, such as the success Apple Co. experienced. Through this research, ht firms can observe who reacts best to their unique high technology products. For instance, we now are aware that ethnicity, age, and gender have a significant impact on desire for unique high technology products. We found that Asians and African Americans, although the sample size is small, tend to favor unique high technology products over Caucasians and Hispanics. We also found that individuals under the age of 29 favor unique high technology products over those who are 30 years old and over. Lastly, we have found that males tend to favour unique high technology products on average more than females.

Marketing managers can use this information to create marketing strategies which can target these potential customers more effectively. Furthermore, our results indicate that various personalities react in a significantly positive or significantly negative way to unique high technology products. A marketer can use this information, along with the other significant relationships between personality types and desire for uniqueness, to create a campaign which attracts these various personality types. A strong example of this can be seen in our new understanding of how "reserved" individuals reacting poorly to unique high technology products while "extroverted" individuals react strongly. As a maker of a high technology product, one can create an advertising campaign based on this information, and then choose the appropriate targeted communication content and media strategy.

There is often a lot of uncertainty for a firm when entering the market for high technology products. The three characteristics of high technology products as outlined by Mohr (2000): market uncertainty, technology uncertainty, and competitive volatility can be a deterrent for anyone entering the market with a product viewed as high technology. Our findings are applicable to the market uncertainty aspect of Mohr's (2000) research. This aspect focuses on the uncertainty that arises from potential customers not believing the product can meet their needs. However, through the use of the information provided through our research, a high technology firm could lower the level of uncertainty associated with high technology products.

We must alert the reader to certain inherent limitations of our research: the sample was dominated by younger participants, mainly because of the researcher profiles and topic that attracted younger respondents; there was an inadequate representation of the older generations. As is often the case with self-reported psychographic research, people in general have a tendency to believe that they do not have negative personality types (such as being easily upset and quarrelsome). People also tend to over-report personality traits which are positive (such as enthusiastic). This might have impacted our results. We feel that if the sample size was larger there would possibly be much stronger significant relationships.

We believe that more extensive future studies could add further insights. Future research on this topic can go a number of ways in improving upon our findings. We did not examine why certain personality types react certain ways to unique high technology products. Being able to answer "why" will develop a superior understanding of consumer preference. We suggest that future research build upon our findings in terms of a larger and wider sample that accounts for cultures, subcultures, and national differences. While USA has traditionally been the bedrock of advances in R&D of high-tech products, nations such as Japan and Taiwan (and other Asian markets) have traditionally been the frontrunners in accepting and adapting innovations in high-tech, as evidenced by the early product launches in these markets that are used as indicators of commercial success in the rest of the global marketplace. We suggest that studies that extend understanding of our constructs in diverse markets present a fruitful opportunity for further research.

REFERENCES

- Anderberg, Marc, and Froeschle."Rethinking Technology Classification: An Alternative Approach to Discussing Texas Technology Skills Shortages."BEYOND THE NUMBERS.Web.
- Cooper, R. G., & Kleinschmidt, E. J. (2007). Winning businesses in product development: The critical success factors. Research Technology Management, 50(3), 52-52-66. Retrieved from
- Cooper, R. G. (1994). New products: The factors that drive success.International Marketing Review, 11(1), 60-60. Retrieved from
- Echholm, Erik. Where Worship Never Pauses. 9 July 2011. Web.http://www.nytimes.com/2011/07/10/us/10prayer.html>.
- "Electronic Cigarette Burning Into U.S. Market."NBC Chicago - Local News, Weather, Traffic, Entertainment, Events, Breaking News Chicago News, Sports, Weather, and Traffic |. 2 June 2009. Web.<http://www.nbcchicago.com/news/health/Electronic-Cigarette-Burning-Into-US-Market.html>.
- Gerhard, D., Brem, A., Baccarella, C., & Voigt, K. (2011). Innovation management and marketing in the high-tech sector: A content analysis of advertisements.International Journal of Management, 28(1), 330-330-348, 395. Retrieved from
- Gosling, S. D., Rentfrow, P. J., & Swann, W. B., Jr. (2003). A Very Brief Measure of the Big Five Personality Domains.Journal of Research in Personality, 37, 504-528.
- "Investing in America's Future."National Science Foundation. Sept. 2006. Web.<http://www.nsf.gov/pubs/2006/nsf0648/NSF-06-48.pdf>.
- Lynn, M., & Harris, J. (1997). The desire for unique consumer products: A new individual differences scale. Psychology & Marketing, 14(6), 601-601-616. Retrieved from
- McCracken, Harry. "It Just Doesn't Work: Why New Tech Products Are Increasingly Unsatisfying - TIME." Breaking News, Analysis, Politics, Blogs, News Photos, Video, Tech Reviews - TIME.com. 28 July 2011. Web.<http://www.time.com/time/business/article/0,8599,2085630,00.html>.
- Mohr, J. (2000). The marketing of high-technology products and services: Implications for curriculum content and design.Journal of Marketing Education, 22(3), 246-246-259. Retrieved from
- Nanowerk. "IBM and Intel Lead Group to Invest $4.4bn in Next-generation Chip Technology in New York." Nanotechnology and Nanoscience | Nanowerk. 28 Sept. 2011. Web.<http://www.nanowerk.com/news/newsid=22897.php>.
- Phillips, Theresa. "Enzyme Biotechnology - Everyday Uses for Enzymes - Enzymes Biotech Used Daily - Common Enzyme Products." Biotechnology - Biomedical - Biotech. 10 June 2010. Web. 29 Sept. 2011. <http://biotech.about.com/od/whatisbiotechnology/a/EverydayEnzymes.htm>.
- Renn, Ortwin, and Mihail Roco."Nanotechnology and the Need for Risk Governance." 10 Nov. 2005. Web.<http://www.nsf.gov/crssprgm/nano/reports/jnr_nanorisk_preprint.pdf>.
- Schneiders, Sascha. Apple's Secret Of Success - Traditional Marketing Vs. Cult Marketing. Munich: GRIN, 2010. Print.
- Tian, Kelly T., William O. Bearden, and Gary L. Hunter (2001), "Consumers' Need for
- Uniqueness: Scale Development and Validation," Journal of Consumer Research, 28 (June), 50-66.
- West, Darrell M. "Technology and the Innovation Economy - Brookings Institution." Technology and the Innovation Economy. 19 Oct. 2011. Web.

An Exploratory Study on the Factors Affecting Customer Perception towards Website Usefulness of Indian Banks

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ABSTRACT

Banking industry is advancing rapidly across the globe. With technology affecting all spheres of life, banking industry too has not been left behind. Today, majority of the banks are offering Internet banking features and services to their customers that are standardized in nature. To become successful in providing a rich customer experience, the banks need to understand which aspects of internet banking influence the customer behavior. The objective of the paper is to study the perception of the customers towards website usefulness which can be defined as a combination of 'Functionality' and 'Usability' attributes of the banks' websites. The study was undertaken on 150 users who avail e-banking services in Delhi-NCR. The data was analyzed using Factor Analysis, ANOVA and Levene's t-test. Three factors namely 'Navigation', 'Content' and 'Response' were identified which influence the customer perception towards Website Usefulness. The influence of demographic parameters like age, gender and occupation on these factors was also studied. It was found that age influences the Navigation factor only; gender does not influence the website's usefulness while occupation influences all the three factors. The banks can use these research findings and incorporate the factors on their websites which would result in higher levels of customer satisfaction.

Keywords : *Customer Perception, E-banking, Functionality, Usability, Website Usefulness*

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INTRODUCTION

Expansion of the banking sector has been tremendous- both in terms of number of banks and their branches leading to ever increasing competition among these banks. On one hand, the banks are continuously looking out for innovative ways to reach out to existing and potential or new customers by catering to their ever changing needs and demands. While on the other hand, banks are trying to find out ways to minimize their expenses and yet deliver excellent customer service. One approach to bind both these requirements is by providing Internet Banking Services to the customers.

E-banking can be defined as the use of electronic and communication networks to carry out banking transactions. Through e-banking, customers are not required to visit the bank premises for carrying out the transactions or for seeking information. The same can be done at their own convenience by accessing bank's website through their desktops, laptops, mobiles or such electronic devices. It has been well established that e-banking is a win-win situation for both the banks and their customers. There are a number of advantages of using e-banking to the customers. It saves time, money and effort to visit the branch premises. Banking services are available at all the time irrespective of bank's timings or holidays and there is an easy access to information regarding services, products etc. offered by the bank. At the same time there are many advantages of e-banking to the banks. It provides faster delivery of services to customers, reduced transaction costs, increased productivity and availability of an additional channel of delivery. There are many reasons for the immense popularity and growth of e –banking like increased awareness in users, availability of affordable computers and laptops, good internet facilities, rise in income levels of the customers and rise in number of tech savvy people. Another popular method of accessing the websites is through mobile phones. The operating guidelines issued by RBI on the "Mobile Banking Transactions in India – Operative Guidelines for Banks" stated that the growth of mobile phone users has also made this channel an important platform for extending banking services to customers. Anand N. (2014) described that there has been an exponential growth in mobile banking transactions with the increased use of smartphones. According to RBI Report of the Technical Committee on Mobile Banking (2014), India has 870 million mobile connections and around 450 million bank accounts. The number of subscribers who access Internet by wireless phones has grown to about 143 million. There has been a three fold increase in the mobile banking transactions of ICICI bank. The mobile transactions of June quarter increased from Rs 941 crore in 2013-2014 to Rs 2,635.37 crore in 2014-2015. HDFC Bank's transactions tripled to Rs 795.6 crore in June 2014 from Rs 266.3 crore in the month last year. Axis Bank also witnessed a five-fold increase during the same period from Rs 115.8 in June 2013 to Rs 586.1 crore in June 2014. BSaiKrishna (2014) estimated that India is going to have 160-170 million smartphone users by the end of 2014.

LITERATURE REVIEW

Charif et al. (2006) described that World Wide Web has become a vital tool for doing the business. Moreover, consumers spend their valuable time on Internet for purchasing products and searching for information. Shah et al. (2009) explained the changing customer dynamics. Consumers demand customized services at low cost and as quickly as possible. Therefore, companies need to continually transform their business model, using new and emerging technologies to provide innovative and cost effective services to their customers.

Wandaogou et al. (2011) defined e-banking as deployment of banking services and products over electronic and communication networks directly to the customers. Alagheband (2006) discussed that evolution of e-banking started from automated teller machines (ATM) which gradually shifted to phone banking, electronic fund transfer and revolutionary online banking. According to Afrouz (2006) e-banking transformed the working of banks. It allowed the customers to check accounts, make payments online and transfer money between accounts without visiting the bank's premises. Bauer (2005) defined several benefits of adopting electronic services including satisfied and retained customers, attraction of new customers, increased sales, reduced costs and increased profit margins Kalakota & Whinston (1997) &Bauer (2005) explained an increased of IT adoption in the delivery of banking services due to the benefits offered by online banking. Sreelatha et al. (2012) described that Information Technology (IT) brought a complete paradigm shift in the working of banks. It is further discussed that innovative IT services are no longer enablers but have become the business drivers for banking sector.

The Technology Acceptance Model (TAM) developed by Davis (1989), stated that user's acceptance of the technology can be measured by three factors: perceived usefulness, perceived ease of use and attitudes towards usage of the system. If a system is not easy to use then it will probably not be perceived as useful. According to the model, the attitude of the user towards technology and ease of use result in a behavioral intention to use or not to use the system.

Safeena et al. (2010) found that perceived usefulness, perceived ease of use, consumer awareness and perceived risk have a strong influence on customers for adoption of Internet Banking. Fozia (2013) explained the customer's perception towards the e-banking services. The study showed that demographic factors including age and occupation have a significant impact on the internet banking behavior. Jain et al. (2013) examined that some demographic factors such as age, education, occupation and annual income have a significant impact on the perception of customer towards efficiency of e-banking services whereas gender does not have any major affect on consumer perception towards the efficiency of e-banking services offered by the commercial banks.

Lu et al. (1998) proposed a framework for effective web applications that described functionality and usability as sub-features of website usefulness as vital factors for system acceptability. Akrimi et al. (2014) studied the relationship between website design and satisfaction of the user. The results indicated that interactivity and usability are significant predictors of satisfaction towards website. F. Calisir et al. (2011) described functionality and usability as the key parameters in a software design project. According to them navigation and interaction emerged as the most significant factors; and satisfaction and efficiency as the least important factors.

Website Usefulness

Based on the review of literature, the research paper has identified a gap in research wherein a study dedicated to the websites of a bank has not been done in much detail. The focus is on studying the usefulness parameters of a website. A website can be said to be 'useful' when it has the following two features:

1) ***Functionality:*** It implies that website should function or perate in the way it is expected to operate by the users. The following attributes describe the functionality of the website:

- Response time: It is the time taken by an interactive website to respond to the user activity. It could be the time taken for the webpage to load or to open a link. Websites should allow users to work quickly to attain their desired goal with the minimum number of clicks.
- Security: It refers to the features provided by the website to protect users' privacy and confidentiality of data during online transactions. The websites must provide adequate information about safe banking guidelines to develop users' trust on the website.
- Search Options: The users should be provided with search specific results quickly and precisely. The websites must offer both simple and advanced search options and display the results in an organized manner.
- Information Provision: It provides users with accurate and appropiate information about bank, its products and services. The content offered to customers should be updated regularly. Site Maps should also be provided to the users.

2) ***Usability:*** It is the extent to which websites facilitates users to use the offered functions easily and appropriately. The following attributes describe the usability of the website:

- Navigation: It is the pathway that the users take to find the desired information by browsing through menus, graphical components, links, page sequence and page layout. The homepage should be the most effective and compelling page of the bank's website. Layout of graphics, multimedia content and information should look attractive and should be easy to understand.
- Ease of use: It refers to being able to operate a web site without experiencing any difficulty and trouble. The users must be able to find all the necessary features without undue efforts. The interest of the users would be retained on a website if they find it easy to use.
- Services/Facilities: These are the facilities offered to the user to assist them in decision making like loan EMI calculators, ATM Locator etc. These facilities can differentiate the website of one bank from another.
- User Guidance or Support: Websites should offer un-customizable (such as FAQ) or/and customizable help (such as online help) and provide information about the steps to follow for logging a request or when they encounter a problem.

After a careful study of websites of a few Indian Banks a list of activities that can be performed using the bank's website has been formulated. These activities can be grouped as:

I. Financial Transactions: It refers to the activities performed for funds transfer, NEFT payments, online payments, tax payment, Filing of Income Tax Return etc.

II. Account Related Enquiry: They can be for checking account balance, checking interest earnings, ordering cheque books, changing pin or passwords etc.

III. Seek information about bank, its products and services like interest rates, charges, fees, offers, discounts, notices released by RBI, KYC guidelines etc.

IV. Others: These are specialized services provided by banks in the form of loan EMI calculators, Annual Reports, Policies and Procedures of the bank.

OBJECTIVES

The objectives of the study are:

- To measure the significance of demographic variables on 'Frequency of use of websites' by the users.
- To measure the significance of demographic variables on 'Type of information' (Financial Transactions, Account related enquiry, about bank products/services or others) that users seek from the website of the bank.
- To identify the factors influencing the perception of internet banking users about the usefulness of bank's website.
- To determine the association between the various demographic determinants and the perception of identified factors impacting the bank's website usefulness.

Hypothesis Testing

Ho1: There is no significant association of age with perception that Navigation aspect impacts the bank's website usefulness.

Ho2: There is no significant association of occupation with perception that 'Navigation' impacts the bank's website usefulness.

Ho3: There is no significant association of gender with perception that 'Navigation' impacts the bank's website usefulness.

Ho4: There is no significant association of age with the perception that 'Content' impacts the bank's website usefulness.

Ho5: There is no significant association of occupation with the perception that 'Content' impacts the bank's website usefulness.

Ho6: There is no significant association of gender with the perception that 'Content' impacts bank's website usefulness.

Ho7: There is no significant association of age with the perception that 'Response' impacts bank's website usefulness.

Ho8: There is no significant association of occupation with the perception that 'Response' impacts bank's website usefulness.

Ho9: There is no significant association of gender with the perception that 'Response' impacts bank's website usefulness.

RESEARCH METHODOLOGY

The descriptive research is based on obtaining detailed opinions of the users of banks' websites. Both primary and secondary data was collected. Primary data was collected through use of a self-constructed structured questionnaire. Different attributes to measure the user perception were identified through literature review and exploratory study. First part of the questionnaire obtained the demographic details of the users like their age, gender and occupation. Data was also collected to determine frequency of use of the bank's website and type of information users seek while visiting the website of the bank. In the second part users rated the different website usefulness attributes on the basis of the level of perception on a five-point Likert scale with 5 being Strongly Agree and 1 being Strongly Disagree.

Face validity method was used to check the Validity of the questionnaire by 30 users of internet banking. The users read the questionnaire to assess whether it meets the research objectives. 29 out of 30 respondents agreed that the purpose of the questionnaire is clear. Hence, the face validity was found to be high. A reliability test using SPSS17.0 was also performed. The value of Cronbach's Alpha for 10 items was 0.873 which implies high internal reliability of the questionnaire.

SAMPLING AND DATA COLLECTION

Respondents were the users of e-banking services in Delhi NCR. The sample size was determined using a common rule of thumb i.e. there must be at least 10-15 respondents per item studied. 15 items or statements were studied for which a sample size of 150 can be taken as sufficient. The questionnaire was widely circulated by using Snowball sampling technique. The first member for snowball sampling was identified as the Bank Manager of a private Indian Bank who supplied a list of customers using internet banking. Those customers were contacted and further references were generated from them. The questionnaire was sent to 175 users from which 150 responses were received. The response rate came out to be 86%. The secondary data was collected from various articles, research papers and websites.

DATA ANALYSIS AND INTERPRETATION

I. Descriptive Statistics for the respondents

Table 1: Demographic Profile of the Respondents

Variables	Category	Frequency	Percent
Age	18- less than 25 years	92	61.3
	25- less than 50 years	50	33.3
	50 and above	8	5.3
Gender	Male	78	52.0
	Female	72	48.0
Occupation	Student	76	50.7
	Service	69	46.0
	Self-employed	5	3.3

Interpretation: Most of the respondents were in the age group of 18-25 years i.e. 61% in terms of gender 52% were males and in terms of occupation 51% were students.

ii. Frequency of Use of Websites by the Users

Table 2: Frequency of use of websites by the users

Variables	Category	Frequency	Infrequent	Total
Age	18- less than 25 years	27	40	67
	25- less than 50 years	35	15	50
	50 and above	16	17	33
Gender	Male	52	26	78
	Female	26	46	72
Occupation	Student 20	20	37	57
	Service	53	16	69
	Self-employed	5	19	24

Note: Frequent users- those who access websites Daily or weekly; Infrequent users who access websites Monthly or sometimes

Interpretation: Maximum number of respondents i.e. 38% uses the bank's websites weekly. The table reveals that the users in age group of 18-25 years are mostly infrequent users as most of the respondents were students. Most frequent users are in the age group of 26-50 years as they are in service. Respondents of above 50 years are equally distributed as frequent or infrequent users. In terms of gender, males are frequent users while females are infrequent users. In terms of occupation service class are frequent users whereas students and self employed are infrequent users. Banks can target the females and users in age group of 18-25 years to increase their use of the bank's websites by giving lucrative offers to these groups like discounts or special plans etc.

Table 3: Type of information users seek from the website of the bank

Frequency of information seeked	Financial Transactions		Account related enquiry		Information about bank products/services	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Frequently	135	90	110	73	35	23
Infrequently	15	10	40	27	115	77

Note: Frequent users- those who access websites Daily or weekly; Infrequent users who access websites Monthly or sometimes

iii. Type of Information Users Seek from the Website of the Bank

Interpretation: This result demonstrates that the users access the bank's websites most frequently to perform financial transactions i.e. 90% followed by Account related enquiries at 73% and least to gather information for bank's products and services at 23%. It is imperative for the banks to build the trust of the customers about the safety of online transactions by efficient and effective communication through emails, banners and advertisements.

v. Exploratory Factor Analysis

a) Measure of Sampling Adequacy

KMO & Bartlett's Test of Sphericity are measures of sampling adequacy. The KMO ranges from 0 to 1. Kaiser (1974) has recommended the values greater than 0.5 as acceptable. Values between 0.5 and 0.7 are mediocre. The Bartlett's Test of Sphericity relates to the significance of the study and thereby shows the validity and suitability of the responses collected to the problem being addressed through the study. The Bartlett's Test of Sphericity must be less than 0.05 for Factor Analysis to be recommended as suitable.

Table 4 indicates that in the present test Kaiser-Meyer-Olkin (KMO) measure was 0.665 and Bartlett's sphericity test indicates Chi-Square = 624.113, df = 45 with a significance of 0.000. This implies that factor analysis can be used for the data analysis. If a factor analysis is conducted, the factors extracted will account for fair amount of variance but not a substantial amount.

b) Principal Component Analysis

Extraction communalities are estimates of the variance in each variable accounted for by the components. For the data communalities were ranging from .572 to .827, which indicates that the extracted components represent the variables well.

Table 4: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.665
Bartlett's Test of Sphericity	Approx. Chi-Square	624.113
	df	45
	Sig.	.000

Initially the factor analysis was run on 15 statements. The variables with factor loadings less than 0.5 were rejected and the SPSS output of the exploratory factor analysis extracted three factors with 10 statements. The dropped five statements were "Items on the home page are clearly focused on user's key tasks", "Most important information is provided on top of the page", "Website offers demos for using various options", "After return to the website, remember how to perform the key tasks" and "Download publications/reports from the bank's website".

Factor-1 loading was 36.77%, Factor-2 loading was 17.79% and Factor -3 loading was 13.41%. The three factors explained nearly 68% of the total variability.

Table 5 explains the different attributes under different factors based on their factor loadings. It also depicts the Reliability Tests of the Factors using Cronbach's Alpha.

All the resulting alpha values are high and indicates a good internal reliability among the factors' attributes.

c) Naming of the Factors

Factor 1 - Navigation

It has an Eigen value of 3.678 and explains 36.7% of variance. This factor groups attributes of home page, search options, site

Table 5: Rotated Component Matrix

Attributes	Component			Factor Name	Cronbach Alpha
	1	2	3		
Home Page creates a positive first impression	0.793			**Navigation**	0.755
Search option is clearly visible on top right of the page	0.781				
'Site Map'	0.692				
Easy to find information on the website	0.645				
Website offers various tools for users (Ex. EMI calculator)		0.773		**Content**	0.752
Online 'HELP' is very useful		0.721			
Content/Information is updated regularly		0.718			
'Safe Banking' guidelines are adequately represented		0.676			
Results of Search are displayed in a organized manner			0.878	**Response**	0.832
Web pages load quickly(within 5 sec or less)			0.859		

map and ease of finding information on website. It can be named as Navigation as all the attributes relates to movement on the website by user. While designing websites for users, the banks should ensue that it is easy to find information on the website as it will enhance the overall experience of the users.

Factor 2- Content

It has an Eigen value of 1.78 and explains 17.7% of variance. This factor groups attributes of different tools available on the website for users, Online 'HELP', regular updating of Content and Information on the website and 'Safe Banking' guidelines. All these attributes pertains to the need of the users to find out information using the website of the bank. By use of the content users can make well informed decisions of their future investments or to purchase various products and services offered by the bank etc. Banks should ensure regular updating of the content on the websites as it is readily accessed by the users.

Factor 3- Response

It has an Eigen value of 1.34 and explains 13.4% of variance. This factor groups attributes of Results of Search are displayed in an organized manner and Web pages load quickly (within 5 sec or less). This factor relates to the response a user gets after performing an activity on the website. The users would like the responses to be well organized and quick. To ensure this the websites should be designed in a way that there is not too much clutter or data on a webpage.

d) Test of Association

To test the association between dependent variables (demographics) and independent variable (perception of users) one-way analysis of variance (ANOVA) is used. It determines whether there is any significant difference between the means of two or more independent or unrelated groups.

Before running the test following assumptions of ANOVA were checked:

1. Independent variable should have two or more categorical and independent groups: in the study age has four groups (less than 18 years; 18- less than 25 years; 25- less than 50 years; 50 and above) and occupations have four groups (Student; Service; Self-employed; others).

Gender has only two groups (Male; female). Hence independent-samples t-test is more appropriate for its analysis.

2. There should be independence of observations: all the respondents in the survey belonged to only one group there is no relationship between the observations in each group or between the groups themselves.

3. There are no significant outliers present in the data.

4. Dependent variable should be approximately normally distributed for each category of the independent variable. Normality of data was checked using the Shapiro-Wilk test.

The table below shows the test results for comparing the demographic variables Age, Occupation (by One-Way ANOVA) and Gender (by Levene's t-test) based on the factors affecting perception of users for banks' website usefulness.

If the significance value is less than or equal to 0.05, the null hypothesis is rejected and it implies that there is an association between the demographic variable and the factor studied. The implication is that the factors which have sig < 0.05 have significant influence on the independent variable. The table 6 below depicts an analysis of the association between different demographics and the factors identified.

Table 6: Significant values of Age and Occupation for Factors

Factor	Age		Occupation	
	F	Sig	F	Sig
Navigation	3.445	0.034	4.323	0.015
Content	1.76	0.176	9.49	0.000
Response	2.665	0.073	7.996	0.001

Table 7: Significant values of Gender for Factors using Levene's Independent Samples Test

		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Navigation	Equal variances assumed	1.5	0.22	1.748	148.44	0.083	0.15946	0.09123	–0.0208	0.3397
	Equal variances not assumed			1.761	146.41	0.08	0.15946	0.09056	–0.0195	0.3397
Content	Equal variances assumed	6.71	0.01	0.004	148	0.997	0.00053	0.12239	–0.2413	0.2424
	Equal variances not assumed			0.004	134.98	0.997	0.00053	0.12354	–0.2438	0.2449
Response	Equal variances assumed	5.34	0.02	–1.43	148	0.155	–0.19444	0.13589	–0.463	0.0741
	Equal variances not assumed			–1.42	133.44	0.159	–0.19444	0.13728	–0.466	0.0771

Interpretation for Navigation: the above table reveals that the difference between the mean was significant in the case of Age (p= 0.034) and the null hypothesis H01 is not accepted. This implies that users of different age groups perceive the Navigation aspects of the bank's websites leading to its usefulness differently.

A Tukey post-hoc test revealed that the age groups 25- less than 50 years and 51 above are not statistically significantly different but different from the age group of 18 to less than 25 years.

Table 8: Tukey HSD for FNavigation and Age Group

		Subset for alpha = 0.05	
Age	**N**	**1**	**2**
18- less than 25 years	67	1.7948	
25- less than 50 years	50		2.0300
50 and above	33		2.0379
Sig.		.092	
Means for groups in homogeneous subsets are displayed.			
a. Uses Harmonic Mean Sample Size = 45.992.			
b. The group sizes are unequal. The harmonic mean of the group sizes is used.			
Type I error levels are not guaranteed.			

For Occupation (p=0.015) there was a statistically significant difference between the groups and null hypothesis H02 was not accepted. Tukey post-hoc test revealed that self-employed users perceive Navigation as a more influential factor than Students and Service class users.

Table 9: Tukey HSD for FNavigation and Occupation

		Subset for alpha = 0.05	
Occupation	**N**	**1**	**2**
Service	69	1.8370	
Student	57	1.9123	
Self-employed	24		2.2188
Sig.		.811	1.000
Means for groups in homogeneous subsets are displayed.			
a. Uses Harmonic Mean Sample Size = 40.704.			
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.			

In the case of Gender (p = 0.083), the null hypothesis H03 is accepted indicating that Navigation aspects of a website are not gender specific.

Interpretation for Content: the above table reveals that the demographics Age (p= 0.176) and Gender (p=0.997) are not significantly different from each other and the null hypothesis H04 and H06 are accepted for these two cases. This implies that users of different age groups and different gender perceive the Content aspects of the bank's websites leading to its usefulness in the same way.

In the case of Occupation (p = 0.000) there was a statistically significant difference between groups. So the null hypothesis H05 is not accepted. Further the Tukey post-hoc test revealed that service class group perceives Content as a lesser influential factor than Students and Self- employed users.

Interpretation for Response: the above table reveals that the

Table 10: Tukey HSD for FContent and Occupation

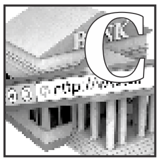
		Subset for alpha = 0.05	
Occupation	**N**	**1**	**2**
Service	69	2.0217	
Student	57		2.4518
Self-employed	24		2.6458
Sig.		1.000	.433
Means for groups in homogeneous subsets are displayed.			
a. Uses Harmonic Mean Sample Size = 40.704.			
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.			

demographics Age (p = 0.073) and Gender (p = 0.155) are not significantly different from each other and the null hypothesis H07 and H09 are accepted for these two cases. This implies that users of different age groups and different gender perceive the Response aspects of the bank's websites leading to its usefulness in the same way.

In the case of Occupation (p = 0.001) there was a statistically significant difference between groups. So the null hypothesis H08 is not accepted. Further the Tukey post-hoc test revealed that service class group perceives Response as a lesser influential factor than Students and Self-employed users.

Table 11: Tukey HSD for FResponse and Occupation

		Subset for alpha = 0.05	
Occupation	**N**	**1**	**2**
Service	69	1.7536	
Student	24	2.0000	2.0000
Self-employed	57		2.3246
Sig.		.347	.162
Means for groups in homogeneous subsets are displayed.			
a. Uses Harmonic Mean Sample Size = 40.704.			
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.			



ONCLUSION

The growth and penetration of internet has increased manifolds over the last decade. The banks have taken a lot of steps to cater to the tech savvy customers by offering them with banking services via internet through the development and use of their websites. To gain a competitive advantage over other banks they need to focus their attention towards development of such a website which is perceived as very useful by its users. This will encourage the users to perform more functions through website like Financial Transactions (used for funds transfer, NEFT payments, online payments, tax payment, Filing of Income Tax Return etc.), Account related activities (balance enquiry, check interest earnings, order cheque books, change pin or passwords etc.), to seek information regarding bank products and services (interest rates, charges, fees, offers, Notices released by RBI etc.) and other activities (loan EMI calculators, Annual Reports, Policies and Procedures of the Bank etc.). The frequency of visits to website of the bank will increase resulting into lesser visits to the retail branches of the bank. This in turn will enable lower transactional costs for the bank, more productivity and higher customer services.

The study was done to identify the factors on the basis of which a user will perceive a banks' website to be useful. If the website is both Functional and Usable to meet the expectations and requirements of the users, they will be more comfortable in accessing that website resulting in higher customer satisfaction. The three main factors identified in the study were 'Navigation', 'Content' and 'Response'. Navigation factor groups attributes of home page, search options, site map and ease of finding information on website. The bank's website must have an effective home page having all the important information in front of the customer and proper navigational structure that links to all the important pages on the website. Content factor groups attributes of different tools available on the website for users, Online 'Help', regular updating of Content and Information on the website and 'Safe Banking' guidelines. The bank's websites must provide useful tools, online help and safe banking guidelines to the users. Moreover, the banks must offer updated content on their websites. This keeps customers coming back to the website to see what's new and search engines also favor sites with new content. Response factor groups attributes of Results of Search are displayed in an organized manner and Web pages load quickly. The banks should work on their website's speed as it improves customer experience and reduces overall operating costs. By using One-way ANOVA and Levene's t- test the significance of association between the demographic determinants like age, occupation and gender with the perception that the identified factors impacts the bank's website usefulness was also determined. It was found that Gender has no significant influence on the Usefulness of the banks' website; both males and females perceive it similarly. The age of the users has no impact on the Content and Response factors but 18-25 years age group perceive Navigation factor differently from 26-50 and 51 above age groups. However, Occupation has an influence on all the three factors. Self employed users perceive Navigation differently from students and service class. Response and Content are perceived similarly by service class compared to students and self-employed.

Banks can use the findings of the research to develop their websites according to the needs of different groups of users by targeting special efforts on their target market segment. The identified factors can be incorporated on their websites to achieve high levels of customer satisfaction.

REFERENCES

- *Afrouz F. (2006)," Banks Employees' Perception Toward Implementation of E-Banking in Iran: A Comparative Study Among Governmental and Private Banks", Ph.D Thesis, Lulea University of Technology*
- *Akrimi Y., Khemakhem R. P. (2014), "An Analysis of Perceived Usability, Perceived Interactivity and Website Personality and their effects on Consumer Satisfaction", International Journal of Management Excellence, February, Vol. 2, No.3, pp. 227-236*
- *Alagheband P. (2006), "Adoption of Electronic Banking Services by Iranian Customers", Master's Thesis, Lulea University of Technology*
- *Anand N. (2014), "Mobile Banking Zooms as India gets Smarter", Business Standard, 13 August, http://www.business-standard.com/article/finance/mobile-banking-zooms-as-india-gets-smarter-114081100826_1.html*
- *Bauer H. H. (2005), "Measuring the Quality of E-Banking Portals", International Journal of Bank Marketing, Vol. 23, No. 2, pp. 153-175*
- *BSaiKrishna(2014), "The Smartphone Boom in India", http://brandalyzer.wordpress.com/2014/02/08/the-smartphone-boom-in-india/*
- *Calisir F., Gumussoy C.A., Bayraktaroglu A. E., Saygivar E. (2011), "Usability and Functionality: A Comparison of Key Project Personnel's and Potential Users' Evaluations, World Academy of Science, Engineering and Technology, pp. 204-207*
- *Charif L., Aronsohn M., Charif H. (2006), "E-Banking and Service Quality Online", Phd Thesis, Lunds Universitet, Campus Helsingborg*
- *Davis F. (1989)," Perceived Usefulness, Perceived Ease of Use and User Acceptance of Information Technology", MIS Quartely, Vol. 13, No. 3, pp. 475-487*
- *Fozia (2013), "A Comparative Study of Customer Perception toward E-Banking Services Provided by Selected Private & Public Sector Bank in India", International Journal of Scientific and Research Publications, September, Vol. 3, Issue 9*
- *Jain D., Dashora D. (2013), "Customer Perception about the Efficiency of E-Banking Services offered by Commercial Banks: An Empirical Study", Prajnan, Vol. XLII, No. 1, pp. 65-81*
- *Kalakota R., Whinston A. B. (1997)," Electronic Commerce: A Manager's Guide", Addison Wesley*
- *Lu M. T., Yeung L. W. (1998), "A Framework for Effective Commercial Web Application Development", Internet Research: Electronic Networking Applications and Policy, Vol. 8, No. 2, pp. 166-173*
- *Malhotra K. Naresh (2007), "Marketing Research", Sixth edition, SAGE Publications Ltd.*
- *RBI Publication (2013), "Mobile Banking Transactions in India - Operative Guidelines for Banks", http://www.rbi.org.in/Scripts/bs_viewcontent.aspx?Id=1660*
- *RBI Publication(2014), "Report of the Technical Committee on Mobile Banking", http://rbi.org.in/scripts/PublicationReportDetails.aspx?UrlPage=&ID=760*
- *Safeena R., Abdullah, Date H. (2010), "Customer Perspectives on E-Business Value: Case Study on Internet Banking", Journal of Internet Banking and Commerce, April, Vol. 15, No. 1*
- *Schiffman, L.G., & Kanuk, L.I. (2004). 'Consumer Behavior', Ninth Edition, New Jersey: Prentice-Hall Inc.*
- *Shah M., Clark S. (2009)," E-Banking Management: Issues, Solutions and Strategies, Information Science Reference, Hershey, New York*
- *Sreelatha T., Chandra Sekhar C. (2012), Role of Technology in Indian Banking Sector", International Journal of Management & Business Studies, October-December, Vol. 2, Issue 4*
- *Wandaogou A. M. M., Jalulah S.P. (2011)," Evaluation of Customer Satisfaction with Internet Banking Service Quality in the Banking Industry in Ghana: A Case Study of Ghana Commercial Bank Ltd and Merchant Bank of Ghana Ltd", Master's Thesis, Lulea University of Technology*

Measurement and Determinants of Financial Awareness of Microfinance Clients

Dr. Vinita Kalra

ABSTRACT

The promotion of financial education for poor people in developing countries calls for work on several fronts; one of which is to develop a measure to evaluate the outcome of financial education in relation to broader development goals. This paper uses Microfinance Clients' Awareness Index (MCAI) to determine the level of financial awareness of microfinance clients. This index is a comprehensive measure that incorporates information on several aspects of financial awareness in one single number lying between 1 and 2, where 1 denotes complete ignorance and 2 indicates complete financial awareness of the microfinance product. Also, the factors that were associated with some degree of significance to MCAI were attempted to be identified Among different socio-economic variables, age group and highest education found to be t associated with the MCAI scores.

Keywords : *Microfinance, Financial Awareness, Financial Literacy, MFIs*

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INTRODUCTION

Microfinance has emerged as an important sector in many countries for providing financial services such as savings, credit and insurance to the poor. In India, a range of institutions in the public sector as well as the private sector, offers microfinance services. These can be broadly placed into two categories namely, formal institutions and semi-formal institutions. The former category comprises of apex development financial institutions, commercial banks, regional rural banks and cooperative banks that provide microfinance services in addition to their general banking activities and on the other hand, semi-formal institutions that provide microfinance services exclusively are referred to as microfinance institutions (MFIs). While both private and public ownership are found in the case of formal financial institutions offering microfinance services, the MFIs are mainly in the private sector.

The voluntary code of conduct developed by MFIN and Sa-Dhan[1] recommends that MFIs be fully transparent in the communication of loan details, interest rates and the calculation thereof, and lays special emphasis on client protection and good governance.

Further, regarding Financial Education of clients, Code of Conduct specifies that

1. MFIs must have a dedicated process to raise clients' awareness of the options, choices and responsibilities vis-à-vis financial products and services available.
2. New clients must be informed about the organization's policies and procedures to help them understand their rights as borrowers.
3. MFIs must ensure regular checks on client awareness and understanding of the key terms and conditions of the products/services offered/availed. (As part of internal audit systems or through some other regular monitoring)

This calls for perspicacious evaluation of policies formulated by MFIs regarding client education with respect to its utility for its clients and close examination of practices of MFIs so as to assess its level of compliance with the concerned policies.

LITERATURE REVIEW AND RESEARCH OBJECTIVES

The term 'financial literacy' can encompass concepts ranging from financial awareness and knowledge, including of financial products, institutions, and concepts; financial skills, such as the ability to calculate compound interest payments; and financial capability more generally, in terms of money management and financial planning. In practice, however, these notions frequently overlap.

Definitions for this term vary by source and context. Most originate in developed countries where financial literacy has received far more attention than in the developing world. However, the common foundation is the importance of having the skills and knowledge to make informed financial decisions (Cohen and Nelson, 2011). Hung et al. (2009) defines Financial literacy as "the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being." The Canadian Foundation for Advancement of Investor Rights (FAIR) defines (2009) financial literacy as "having the knowledge, skills and confidence to successfully carry out the financial transactions encountered in everyday life". Indian School of Microfinance for Women (ISMW, 2011) defines Financial Literacy as "Awareness, knowledge and skills to make decisions about savings, investments, borrowings and expenditure in an informed manner." Tustin (2010) defines "Financial literacy is the ability to understand financial terms and concepts and to translate that knowledge and skill fully into behavior." According to Task force on Financial Literacy –Canada (2011) "Financial literacy means having the knowledge, skills and confidence to make responsible financial decisions."

Reserve Bank of India (2008) has defined it as "capacity to have familiarity with and understanding of financial market products, especially rewards and risks, in order to make informed choices. Viewed from this stand point, financial education primarily relates to personal finance to enable individuals to take effective action to improve overall well being and avoid distress in matter that are financial" (RBI Report, 2008).

Organization for Economic Co-operation and Development (OECD) has defined financial education as "the process by which financial consumers/investors improve their understanding of financial products, concepts and risks, and through information, instructions and/or objective advise, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well being (OECD, 2005).

Thus it can be said that financial literacy is the ability to know, monitor and effectively use financial resources to enhance the well being and economic security of oneself, one's family and business, and also for improving the understanding of the financial service providers.

One of the big obstacles in designing research which evaluates financial literacy programmes is determining how to measure success. Most of these programmes aim to improve the overall ability of participants to make financial decisions that will positively impact their economic well-being. For the programmes which have specific outcomes, success can be defined by metrics such as lower rates of default on loans or changes in confidence levels on financial matters.

Gray et al.(2009) listed various indicators of financial well-being used in different research studies such as reduction in financial stress, reduced amount of time spent managing financial matters, motivation to plan ahead and set a financial goal, independent financial decision, reduced debt, reduced debt-service ratio, increased savings, successful financial or business negotiation, greater satisfaction with bank products or services etc.

While many organizations have provided documentary evidence suggesting that financial literacy education is effective, there is surprisingly little rigorous, academic evidence. Indeed, we are aware of no completed study in emerging markets testing the value of financial literacy. Clients unable to correctly evaluate loan offers will also not understand how much is to be gained by choosing the optimal loan. However, in India, many recent discussions within microfinance policy and regulatory circles have centred on the extent to which small borrowers understand their loans and the financial liability implicated therein (Tiwari et. al., 2008).

Although arguably MFIs had been providing continuous group training (CGT)[2] to their clients for years—to help clients understand how to calculate interest owed, repayments, or basic terms of their loans or savings products—there had been no systematic efforts or curricula based on a behaviour-change approach to promoting financial literacy for microfinance clients.

Besides, while the importance of financial education has been widely recognized, the literature on financial education lacks a comprehensive measure that can be used to measure the extent of financial awareness of microfinance clients.

Against this backdrop, the objective of this study is to develop a comprehensive indicator for measuring the extent and dimensions of financial awareness of the microfinance clients and examining socio economic factors affecting the level of financial awareness level. In order to fulfill the above objective empirically, an indicator, being named as Microfinance Client Awareness Index (MCAI) is developed. It takes value between one and two, 1 indicating complete ignorance of the product and 2 indicating complete financial awareness.

Further, this index is used to fulfill the following objectives:

- To measure dimensions and the overall financial awareness level of MFI clients.
- To examine the socio economic factors affecting the level of financial awareness of MFI clients.

The factors that are associated with some degree of significance to the level of financial awareness are attempted to be identified. For this purpose, following hypotheses are formulated.

- H_1: Age has significant impact on the financial awareness level of microfinance clients.
- H_2: The level of education has significant impact on the financial awareness level of microfinance clients.
- H_3: The annual household income has significant impact on the financial awareness level of microfinance clients.

RESEARCH METHODOLOGY

This study is conducted in the rural area of Varanasi district of Uttar Pradesh, India on account of the fact that most of the microfinance activities in India currently take place in rural area. The MFI clients' population in the Varanasi district is considered as universe for the proposed study.

Further the scope if this study is limited only to microfinance institutions that follow Grameen Group Model and are working in the private sector for offering services to its clients in the rural area of Varanasi district.

The data for the present study is collected in respect of four MFIs operating in Varanasi district. There were eight MFIs namely, working in the research area at the time of survey. Out of them four were NBFCs i.e. SKS Microfinance Ltd., Share Microfin Ltd., Utkarsh Microfinance Pvt. Ltd. and Bandhan Financial Services Pvt. Ltd. and four were working as Section 25 company namely Cashpor Microcredit, Nirmaan Bharti, Kashi Microcredit and Bhartiya Microcredit. Four out of eight private sector MFIs working in the research area are selected for this study on the basis of selecting top two MFIs belong to each category i.e. Section 25 Company(Non-Profit) and NBFCs (for-profit).

The sampling frame is chosen as clients having outstanding loan from MFI/MFIs in the rural area. The estimated number of total MFI clients in the selected villages were 6384 at the time of data collection. Four out of eight development blocks and fifteen villages per block were randomly selected and finally MFI clients were selected as described below. The sample size of MFI clients is determined by using the following formula:

$$n = N/(1+Ne^2)$$

In selecting client households, it was not possible to randomly select seven households from each village, because list of all the MFIs' clients in selected villages was not available. However, in order to ensure that the sample did not suffer from selection bias and enjoyed a level of randomization, the survey was conducted in a minimum of four hamlets per village. Additionally, no two respondents lived next door to each other; in other words, every other house was skipped. Besides, only those clients were surveyed who belong to at least one of the four MFIs selected for the study. After preliminary examination, 320 out of 420 were found completed and valid that constituted 76.2% response rate for the study. The data from MFI clients is collected through pre-tested, well structured questionnaire on the demographic profile, borrowing details and understanding of the different aspects of the loan they borrowed.

Qualitative information is collected through semi-structured interviews of the MFI officials (16 Field Officers, 12 Branch Managers and 12 other officials related to the area of Human Resource, Finance and Internal Audit departments of selected MFIs) operating in the area to analyze the policies and practices adopted by MFIs with respect to client education to understand the kind of training they provide to their clients.

To construct the composite indicator, 'MCAI', the sequence of the steps followed is based on the OECD-JRC handbook on constructing composite indicators (OECD-JRC,2008). The steps taken are developing a theoretical framework based on the literature review; selecting data on the basis of analytical soundness, measurability, relevance to the phenomenon being measured and relationship to each other; and conducting *univariate* and *multivariate analysis*.

The various statistical tools that were used in the study are: percentage analysis, mean, standard deviation, correlation analysis, principal component analysis, t-test and one way ANOVA. Weights based on principal components analysis are used in the present study.

For determining the influence of socio economic factors on the financial awareness level of MFI clients , t-test and one way ANOVA tests are used. The t-test is a parametric test that compares the means of two paired groups. If the P value of the test is smaller than a threshold (usually 0.05), one can reject the idea that the difference in the two samples is a coincidence, and conclude instead that the populations have different means. To confirm the results concluded by t-test regarding comparison of MFIs, one-way ANOVA is conducted. Analysis of variance is a procedure used for comparing mean values of different samples to see if there is sufficient evidence to infer that the mean of the corresponding population distributions also differ significantly.

MICROFINANCE CLIENTS' AWARENESS INDEX

The Microfinance Clients Awareness Index (MCAI) is a composite measure constructed from a set of 320 individual data of microfinance clients who belong to four different MFIs operating in the rural areas of Varanasi. A total of 13 indicators were analyzed and grouped into 2 main dimensions of financial awareness: (1) Knowledge of Loan Basics and Insurance Basics and (2) Basic Computing Skill and Financial Skill of microfinance clients.

The index has a pyramid structure: the Index is the weighted average of two pillars (***Awareness*** and ***Client Skills***). Each pillar is the weighted average of a variable number of sub-pillars and finally each sub-pillar is made by various indicators constructed from the survey questions.

The first pillar measuring ***Awareness*** uses 8 questions divided into 2 sub-pillars: *Loan Basics* (5 indicators) and *Insurance Basics* (3 indicators). This pillar aims at measuring the basic knowledge deemed necessary for microfinance clients to make informed borrowing decisions. It includes conceptual understanding of the joint liability[3] and insurance and the capacity to identify the interest rate of loan they borrow.

The pillar ***Client Skills*** gathers together 5 indicators grouped in 3 sub-pillars: *Basic Computing Skill* (2 indicators) that reflects their ability to calculate the total interest amount they pay on loan and the balance number of installments they are required to pay. The second sub-pillar, *Financial skill* (2 indicators) tests their ability to segregate principal and interest amount in the total installment amount and the third sub-pillar, *Comparing Products* (1 indicator) tests the ability to choose cheaper product out of the available products offered by different MFIs in their region.

More than 90% of the observations in the sample gave correct answers of the questions on their awareness of amount of loan, duration of loan, instalment amount that they pay every week and basic concept of joint-liability. The questions within second sub-pillar *Insurance Basics* assess their knowledge about the insurance product offered to them. Almost 60% of the respondents understand the basic idea of insurance and its benefits. They (63%) were also found aware of the amount of insurance premium they pay along with the weekly instalment of their loan. However, 79 % of them were not aware of the payouts and procedure of insurance claim if calamity occurred. Clients (58%) did not seem to know what their interest rates were. However, more than 75% of them were able to calculate actual total interest amount by applying basic computing skills rather than using the interest rates. For more complex questions related to segregation of principal and interest amount in each of the instalment they paid, more than one third of respondents chose not to attempt the questions. The values of indicators princi_repaid and int_paid are found equal to 1 in above 95% of cases.

Finally, only 18% of our respondents were able to choose the cheaper loan out of given options of loan products given their poor educational backgrounds. (Refer Appendix-I)

The principal component analysis on the data reveals the presence of 5 relevant factors explaining 65.21% of the variance of the dataset. Correlation matrix of the 13 variables have led to the extraction of 5 latent dimensions whereas MCAI counts 2 pillars and 5 sub- pillars. The first factor alone accounts for 18.1% of the total variance while the fifth one explain only 8.5% of the total variance. The rotation method used is 'Varimax Rotation Method'.

Table 1: Whole dataset: loadings of the principal components

Rotated Component Matrix[a]

	Component				
Variables	1	2	3	4	5
joint_lia	**.827**	.042	–.008	–.100	–.070
amt_loan	**.807**	–.063	.007	.021	.112
dur_loan	**.780**	.140	.003	–.222	–.204
inst_amt	**.584**	–.074	.042	.339	.213
ins_concept	–.107	**.792**	–.009	.022	.070
ins_prem	–.081	**.745**	–.134	.274	–.040
ins_claim	.099	**.723**	–.065	.083	.284
int_rate	.183	**.595**	.278	–.071	–.103
int_paid	–.012	.010	**.832**	–.135	.053
princi_repaid	.018	–.018	**.798**	.123	–.121
bal_inst	–.041	.072	–.216	**.747**	–.286
tot_int	–.060	.188	.177	**.706**	.217
cheap_loan	.000	.132	–.078	–.021	**.875**

Extraction Method: Principal Component Analysis. a. Rotation converged in 5 iterations.

The idea under PCA is to account for the highest possible variation in the indicator set using the smallest possible number of factors. With the MCAI data set there are five intermediate composites and they are aggregated by assigning a weight to each one of them equal to the proportion of the explained variance in the data set (Table 2). Looking at the nature of data linear aggregation method is used to construct the composite4.

OVERVIEW OF THE INDEX: SCORES AND RANKS

Table 3 presents the scores and ranks for the Microfinance

Table 2: Weights for the MCAI indicators based on principal components (PC) method for the extraction of the common factors

Pillar	Sub Pillar	Indicators	Weights
Awareness (0.53)	Loan Basics (0.28)	joint_lia	0.084
		amt_loan	0.080
		dur_loan	0.075
		inst_amt	0.042
	Insurance Basics and Interest Rate (0.25)	ins_concept	0.076
		ins_prem	0.067
		ins_claim	0.063
		int_rate	0.043
Skills (0.47)	Financial Skill (0.18)	int_paid	0.094
		princi_repaid	0.086
	Computing Skill (0.16)	bal_inst	0.085
		tot_int	0.075
	Comparing Products (0.13)	cheap_loan	0.13

Client Awareness Index. MFI 4 leads the group of surveyed MFIs, followed by MFI 3 and MFI 2. At the opposite end, MFI 1 scores 3.2% lower than average score.

MFI 4 has the best score in the pillars ***Awareness** as well as in the pillar **Skills.*** MFI 1 is on rank 2 in the pillar **Skills** but occupy the last position overall due to its poor performance in the pillar **Awareness.**

Probably the best way to compare Microfinance Clients' Awareness is making 100 the overall average and calculating the distance of each MFI from this average. Microfinance Client Awareness Index, distance from the overall average presents the results (figures given in the brackets in Table 3). The best performers have a score up to 5% higher than the regional average, while the low performers have up to 3% less. Awareness is the pillar where this gap is higher (reporting up to 5% higher and 7% lower) followed by Skills where gap among MFIs scores is lower.

SOCIO-ECONOMIC ASPECTS OF CLIENT AWARENESS

The questionnaire on microfinance clients' awareness contained a number of questions related to the socioeconomic status of the respondents: age, education, income level, etc.

It would be interesting to explore the relationship between client awareness and these socio-economic variables in order to identify the most vulnerable clients and their characteristics. Such an analysis would require the specification and estimation of an econometric model. Leaving this model for future analysis a faster way to relate microfinance client awareness (as measured by the MCAI) and the socio economic characteristics of the sample is to extract sub-samples, each of them possessing the desired socio-economic feature and calculate the Index value (including pillars and sub-pillars values). With this comparison we would like to offer a first hint of the most vulnerable MFI in the research area. We check the statistical difference between the full sample and the sample of respondents possessing a given socio-economic characteristic using the unpaired t-test and one way ANOVA. Below, for each socio-economic characteristic we present the results as differences with respect to the regional MCAI average of the full sample. The results of t-tests are reported at the end of the this section (Table 4). Mean, Standard Deviation and ANOVA results for socio-economic variables is shown in Table 5. This table reveals F-value that represents ANOVA value and p-value indicates significance at 95% confidence level.

Age

The age of respondents does not play very important role in their awareness: however, comparatively younger generations seem to be more skilled and aware than older generations. As is evident from the bar chart given below, the age group 21 to 30, seem to be more aware about microfinance and also more skilled. The highest difference between age groups is found in MFI 1 where respondents aged over-40 are up to 11% less aware than the youngest respondents (Table A2.1 in Appendix-II).

This is further confirmed by t-test conducted between means of full sample and the sub-sample of the respondents aged between 21-30 years. The difference is statistically significant at 5 %

Table 3. Microfinance Clients' Awareness Index Scores and Ranks of the Index and its pillars

	AWARENESS		SKILLS		MCAI	
	Scores	Ranks	Scores	Ranks	Scores	Ranks
Overall Average	**0.923 (100)**		**0.622 (100)**		**1.545 (100)**	
MFI 1	0.861 (93.3)	4	0.634 (101.9)	2	1.495 (96.8)	4
MFI 2	0.925 (100.2)	3	0.588 (94.5)	4	1.513 (97.9)	3
MFI 3	0.934 (101.2)	2	0.625 (100.5)	3	1.56 (100.9)	2
MFI 4	0.973 (105.4)	1	0.640 (102.9)	1	1.613 (104.4)	1

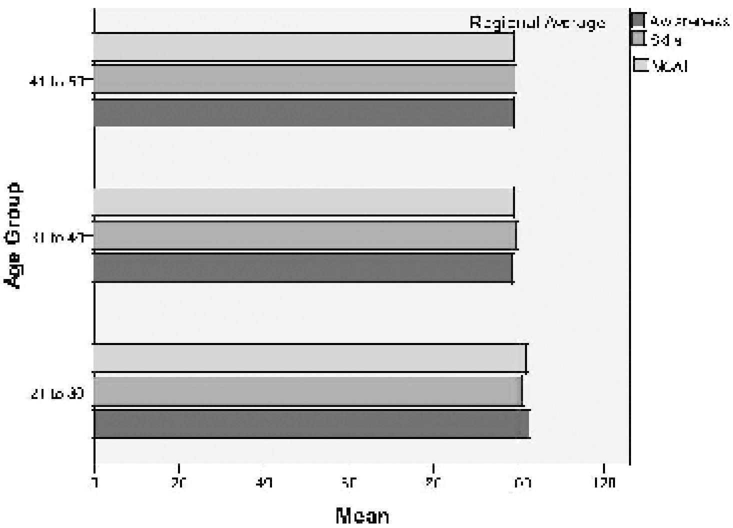


Figure 1. Regional average scores for the age group divided by the regional average

however, the difference between sub-samples of other age groups are not found statistically significant (Table 4).

Further, it is observed that there is significant difference between the awareness level of clients of different age groups with F value of 4.214 and p-value of 0.016 . The clients with the age group of 21-30 showed a mean score of 101.8 and clients with age group of 31-40 and 41-50 showed the mean score of 99.0 and 98.85 respectively. Thus we can say that clients of lower age group are quick to learn and retain about the product in compare to senior age group clients (Table 5) and hypothesis H1 that the age has significant impact on the financial awareness level of microfinance clients, is accepted.

Education

Education has probably an important role in explaining awareness. Lower levels of awareness are usually associated to low levels of education (no formal education). The same is true for both the pillars i.e. awareness of loan and skills of the microfinance clients. The highest gap is found for MFI 1 while the reverse is registered for MFI 4 where respondents with low education score 2% more than higher educated respondent (Table A2.2). The reason probably lies in the quality training programme that trains low-medium educated clients also to get acquainted with the basics of loan and insurance. Figure 2 below shows how distant is the Regional average of each sub-sample from the Regional average of the full sample. The higher gap between education cohorts is found in Awareness followed by Skills.

One way ANOVA test (Table 5) also reveals that there is significant difference between the financial awareness level of different level of formal education with F value 12.495 and p value as 0.000. The mean score of illiterate clients is 97.87which is far lower than clients educated upto higher secondary with mean 0f 103.05. Based on the results of both the tests, it can be concluded that lower formal education level leads to lesser awareness and understanding of the loan product. Thus the results suggest to accept the hypothesis H2 that the level of formal education has significant impact on the financial awareness level of MFI clients.

Annual household income

A household may have different sources of income and more than one household member may contribute to it. Hence the researcher tried to enquire about each and every source of income of the household and summed it up to calculate the annual household income.

Clients having their annual household income less than Rs. 50000 scored less than other income groups especially in the pillar Skills. Overall annual income of the household does not seemed to be decisive factor to explain the awareness level of the microfinance clients. T-test confirms this as we accept the null hypothesis (the difference between means of full sample and each sub-sample is not statistically significant at 5% significance level) in all the cases (Table 4). Similar results are observed while conducting ANOVA test. There is no significant difference between the responses of the respondents of various income levels with F value of 1.519 and p value of 0.209.

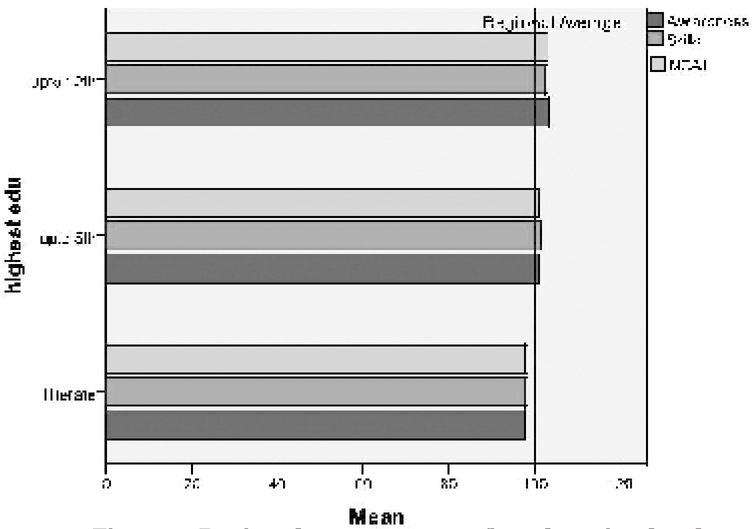


Figure 2. Regional average scores for education level divided by the Regional average scores for the full sample

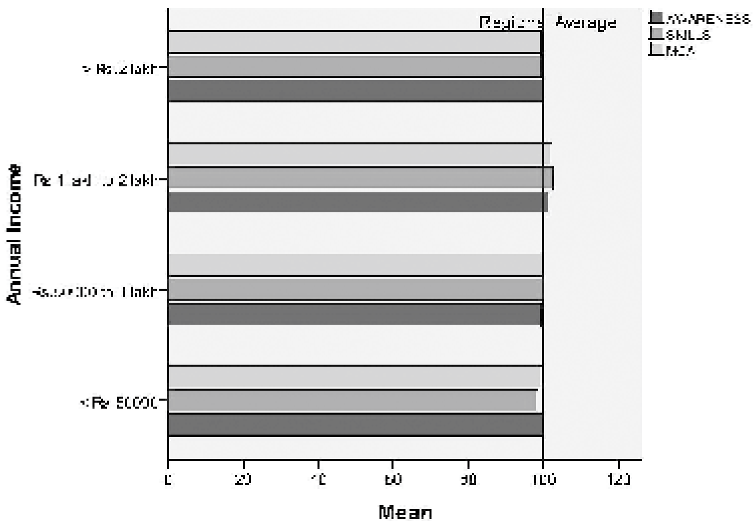


Figure 3. Regional average scores for income level divided by the Regional average scores for the full sample

No pattern has been observed between awareness level and annual income (Table 5). Hence it can be said that the annual household has no impact on the financial awareness level of microfinance clients and the hypothesis H_3 is rejected.

If we look at the data MFI wise , in MFI 4 income seems to have an inverse relationship with awareness: high income respondents (9% of the sample analyzed) result to be less aware than respondents experiencing income shortages. The reverse holds for the rest of MFIs. In MFI 1 there was no client belonging to the lowest income group of < Rs. 50000 per annum, whereas in MFI 3 there was not a single client belonging to the highest income group i.e. > Rs. 2 lakh annually explaining their policies regarding targeting efficiency(Table A2.3). A MFI said to be efficient if they reach the intended population i.e. poor strata of the society.

FINDINGS AND CONCLUSION

The findings of the study may be summarized as below:

Small borrowers are able to identify the size and duration of the loan as well as understand the concept of joint liability of their loan. They are able to understand the liability on their loan in terms of weekly repayments, rather than in terms of interest rates. In fact, they knew very little about the interest rate and are not able to segregate the principal and the interest amounts in the loan instalment. However, they are found aware of the total interest expense on the loan .

Majority of them are also found aware of basic concept of credit life insurance, which is offered along with credit on compulsory basis, and amount of insurance premium they are required to pay. However, they are not familiar with the amount and procedure of the insurance claim. Most of the microfinance clients are unable to pick cheaper loan among given borrowing alternatives from different sources.

The index (MCAI) developed can be used to compare the extent of financial awareness across different MFIs' clients and to monitor the progress of the MFIs with respect to clients' financial awareness over time. e.g. the finding of this study is that MFI 4 results to be the leading MFI followed by MFI 3, MFI 2 and MFI 1. However, pillar wise analysis of MFIs, give

Table 4: Unpaired t-tests for the equality of MCAI means between full sample and sub-samples based on a particular socio-economic characteristics

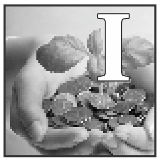
	Sub-sample	Full sample mean	Unpaired t-test-Difference significant (at 5%)	p-value
Mean MCAI for Age Groups				
21-30 years	101.80	100	Yes	0.0412
31-40 years	99.00	100	No	0.2217
41-50 years	98.85	100	No	0.4465
Mean MCAI for Highest Education				
Illiterate	97.87	100	Yes	0.0092
Primary Education	101.14	100	No	0.3143
Higher Secondary	103.05	100	Yes	0.0017
Mean MCAI for Annual Income Level				
< Rs. 50000	99.19	100	No	0.4100
Rs. 50000 to 1 lakh	99.65	100	No	0.7094
Rs. 1 to 2 lakh	101.84	100	No	0.0904
> Rs. 2 lakh	99.57	100	No	0.8381

Table 5: ANOVA Test for MCAI and socio economic indicators

Socio-economic Variables		Mean	SD	F Value	p-value
Age	21 -30 yrs	101.80	7.296	4.214	.016
	31 to 40 yrs	99.00	8.309		
	41 to 50 yrs	98.85	11.014		
Education	Illiterate	97.87	8.380	12.495	.000
	upto 5th	101.14	9.212		
	upto 12th	103.05	6.693		
Annual Income	< 50000	99.19	8.407	1.519	.209
	50000 to 1 lakh	99.65	8.621		
	1 lakh to 2 lakh	101.84	7.688		
	> 2 lakh	99.57	9.491		

different rankings. It is indicative of the weak area about which the clients of a particular MFI lack awareness.

We have also attempted to relate factors that are associated, with some degree of significance, to the Microfinance Client Awareness Index. Among different socio-economic variables, age and highest education found to be associated significantly with the MCAI scores.



IMPLICATIONS/RECOMMENDATIONS

The result of the analysis have important implications.

1) First, to enhance the financial awareness of rural women, financial education is very essential as it can increase the knowledge of rural women and makes them better understand the details of loan product and enables them to be aware of the opportunities and choose the cheaper loan out of the various options available to them. Therefore initiating a policy that is capable of advancing the financial literacy programme to the rural women should be a priority agenda of the Indian government.

2) This study argues for regulation that would require financial institutions to provide clients with information which they are able to understand and use. It is both unreasonable and unrealistic to expect small borrowers to have a deeper understanding of their loans than borrowers who have greater access to information and finance. Thus, top-down regulation which works under the assumption that borrowers should be able to calculate and understand their interest rates will not succeed in protecting small borrowers.

3) The policy making bodies (viz., RBI and NABARD in the Indian context) may use this feedback to measure the level of financial awareness among microfinance clients , analyse their policies and make suitable amendments to ensure the client protection. This study will be of great help to the government to know if MFIs are formally endorsing the principles of client education, educating the staff, translating the principles into policies and inclusion in the operating practices. This study also provides an empirical database about the level of financial awareness of microfinance clients in the research area.

4) MCAI has been conceived as an applied tool that should contribute to enhance rural women's understanding of the financial product as the results of the study have significant implications for industry as well as regulators. The scorecard can be served as the first step for MFIs to formulate training programmes for improved awareness as a means of protecting the vulnerable clients.

IMITATIONS OF THE STUDY

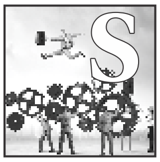
It has the following limitations.

1. Adequate, appropriate and comparable data for a large number of MFIs is the essence of a robust index. Many aspects of financial awareness in the present index, such as financial services related to savings and budgeting could not be incorporated as MFIs do not cover these aspects in their training programme.

2. This study , to develop an awareness index , is first of its kind and therefore, cannot be tested against any available benchmark.

3. Further, the scope of this study is limited to the clients of MFIs who follow Grameen Group methodology i.e. individual loans are lent to each member of the group by MFI official and group meetings are held only once in a week and that too in the presence of MFI field officer

4. The present study is confined only to rural area of Varanasi district and that too for four of the MFIs. The issue of generalizing the study is a matter of scope of future research and can be sorted out by collecting data for large number of MFIs of different regions across the country.



SCOPE FOR FUTURE STUDY

A summary of this study and copies of the instruments can be disseminated to networks of researchers, practitioners and policy makers interested in financial literacy of rural women, including the MFIs and SHG promoting agencies/NGOs.

In particular, there are several possibilities for building upon and expanding this work, including:

refinement of the client survey instrument in terms of translating it into regional languages, additional data collection and analysis to improve evidence for the validity of instrument, the collection of evidence to improve the reliability of instrument such as testing and retesting the survey and recruiting a larger more representative national sample, especially with clients from MFIs not extensively engaged in financial education and larger samples of clients from various racial and ethnic groups; and the development of curriculum materials for teaching financial education at the elementary level that is consistent with the conceptual framework described in this study.

NOTES

1. Sa-Dhan and MFIN are associations of microfinance institutions in India. The voluntary code of conduct is available at http://www.sa-dhan.net/corevalues.pdf

2. During continuous group training; punctuality, the necessity of paying weekly installments on time and joint liability are emphasized. Group members also learn the member's pledge'. By repeating this pledge, members promise to come to every meeting without fail, utilize the loan for the said purpose, pay in a timely manner, take group and centre responsibilities seriously (Tiwari et al., 2008).

3. Joint Liability refers to a kind of group lending mechanism in which the group ensures each of its members to get access to the loans directly from the MFI by providing joint liability (social collateral). Under joint liability each group member is made responsible for the loans of other group members. If one member defaults, the other group members are required to cover the loan from their own resources, and if they do not, they lose access to future loans. It is thus in each member's interest to ensure that the other members pay.

4. For detail process of construction of MCAI please refer to the research paper, 'Microfinance Clients Awareness Index' published in IIMB Management Review, Dec. 2015.

REFERENCES

- Cohen M. and Nelson C. (2011). 'Financial Literacy: A Step for Clients towards Financial Inclusion' Microfinance Opportunities, USA. Presented at Global Microcredit Summit Commissioned Workshop Paper November 14-17, 2011 – Valladolid, Spain.
- FAIR, (2009). Canadian Foundation for Advancement of Investor Rights (FAIR), Financial Literacy Matters, Sept. 2009. Extracted on 12th November, 2014 from http://www.caribooliteracy.com/financial-literacy
- Gray, Sebsted,Cohen & Stack , (2009) Can Financial Education Change Behavior? *Lessons from Bolivia and Sri Lanka:* Microfinance Opportunities, Washington DC.
- Hung et al. (2009) .From the working paper WR-708 dated September 2009 and titled "Defining and Measuring Financial Literacy" by Angela A Hung, Andrew M Parker and Joanne K. Yoong. Extracted on 11th November, 2014 From http://www.rand.org/pubs/working_papers/2009/RAND_WR708.pdf
- Indian School of micro Finance for Women (ISMW), Ahmedabad, India. Available at http://www.nabard.org/departments/pdf/seminar/Indian%20School%20of%20Microfinance%20for%20Women.pdf
- OECD (Organization for Economic Co-operation and Development) (2005) *Improving financial literacy:* Analysis of issues and policies. Paris: OECD Publications.
- OECD-JRC, (2008) : See http://composite-indicators.jrc.ec.europa.eu/
- RBI Report,(2008): Reserve Bank of India Report on Financial Literacy and Credit Counselling Centres, URL: http://www.rbi.org.in/scripts/publicationdraftreports.aspx?id=526.
- Task force on Financial Literacy –Canada, Canadians and Their Money: Building a brighter financial future, Available at http://www.financialliteracyincanada.com/pdf/canadians-and-their-money-1-report-eng.pdf
- Tiwari A., Khandelwal A. & Ramji M. (2008), "How Do Microfinance Clients Understand their Loans?", Centre for Micro Finance, CMF newsletter *Eye on Microfinance*, volume 8, URL: http://ifmr.ac.in/cmf/eomf8-Mullainathan.html
- Tustin, D.H. (2010), An impact assessment of a prototype financial literacy flagship programme in a rural South African setting, African Journal of Business Management Vol. 4(9), pp. 1894-1902, 4 August 2010.. Available online at http://www.academicjournals.org/AJBM

APPENDIX I: Sample Statistics

Table A1.1 : Demographic Profile of Microfinance Clients (N = 320)

Characteristics	Categories	MFI1	MFI2	MFI3	MFI4	Frequency	Percentage (%)
Gender							
	Male	-	-	-	-	-	-
	Female	80	80	80	80	320	100
Age							
	21-30 years	27	24	48	15	114	35.6
	31-40 years	49	41	28	49	167	52.2
	41-50 years	4	15	4	16	39	12.2
Education Level							
	Illiterates	32	52	39	42	165	51.6
	Primary	16	4	29	18	67	20.9
	Higher Secondary	32	24	12	20	88	27.5
Annual Household Income (Rs.)							
	< 50000	-	40	48	14	102	31.9
	Upto 1 lakh	56	24	20	29	129	40.3
	Upto 2 lakh	16	12	12	30	70	21.9
	> 2 lakh	8	4	-	7	19	5.9
Number of outstanding loans							
	Single	-	48	52	12	112	35
	Multiple	80	32	28	68	208	65
Number of subsequent loans taken from the same MFI							
	First time borrowers	60	76	5	54	195	60.9
	Older Clients	20	4	75	26	125	39.1

APPENDIX II: Scores and Ranks of MFIs

Table A2.1: Scores and Ranks of all the MFIs based on Age Group

Age: 21 TO 30 Yrs	Awareness		Skills		MCAI	
	Scores	Ranks	Scores	Ranks	Scores	Ranks
Regional Average	**0.945**		**0.627**		**1.573**	
MFI 1	0.939	3	0.654	1	1.593	1
MFI 2	0.971	1	0.597	4	1.567	3
MFI 3	0.932	4	0.631	2	1.563	4
MFI 4	0.957	2	0.617	3	1.575	2

Age: 31 TO 40 Yrs	Awareness		Skills		MCAI	
	Scores	Ranks	Scores	Ranks	Scores	Ranks
Regional Average	**0.91**		**0.619**		**1.529**	
MFI 1	0.819	4	0.628	2	1.447	4
MFI 2	0.917	3	0.606	3	1.522	3
MFI 3	0.946	2	0.596	4	1.542	2
MFI 4	0.976	1	0.634	1	1.611	1

Age: 41 TO 50 Yrs	Awareness		Skills		MCAI	
	Scores	Ranks	Scores	Ranks	Scores	Ranks
Regional Average	**0.911**		**0.616**		**1.527**	
MFI 1	0.845	4	0.573	3	1.418	3
MFI 2	0.874	2	0.525	4	1.399	4
MFI 3	0.852	3	0.76	1	1.612	2
MFI 4	0.976	1	0.677	2	1.653	1

Table A2.2: Scores and Ranks of all the MFIs based on Education

Illiterates	Awareness		Skills		MCAI	
	Scores	Ranks	Scores	Ranks	Scores	Ranks
Regional Average	**0.903**		**0.609**		**1.512**	
MFI 1	0.808	4	0.591	3	1.399	4
MFI 2	0.917	2	0.57	4	1.487	3
MFI 3	0.873	3	0.64	2	1.513	2
MFI 4	0.985	1	0.643	1	1.628	1

Primary Education	Awareness		Skills		MCAI	
	Scores	Ranks	Scores	Ranks	Scores	Ranks
Regional Average	**0.931**		**0.631**		**1.562**	
MFI 1	0.785	4	0.663	1	1.448	3
MFI 2	0.809	3	0.63	2	1.439	4
MFI 3	0.999	1	0.624	3	1.623	1
MFI 4	0.979	2	0.615	4	1.594	2

Upto 12th	Awareness		Skills		MCAI	
	Scores	Ranks	Scores	Ranks	Scores	Ranks
Regional Average	**0.954**		**0.638**		**1.592**	
MFI 1	0.952	3	0.663	1	1.615	1
MFI 2	0.962	2	0.618	3	1.58	3
MFI 3	0.968	1	0.579	4	1.548	4
MFI 4	0.941	4	0.656	2	1.597	2

Table A2.3: Scores and Ranks of all the MFIs based on Annual Income

Annual Income	Awareness		Skills		MCAI	
< Rs. 50 k	Scores	Ranks	Scores	Ranks	Scores	Ranks
Regional Average	**0.922**		**0.61**		**1.532**	
MFI 1	-		-		-	
MFI 2	0.925	2	0.565	3	1.49	3
MFI 3	0.895	3	0.63	2	1.525	2
MFI 4	1.011	1	0.669	1	1.68	1

Annual Income	Awareness		Skills		MCAI	
Rs. 50 k to 1 lakh	Scores	Ranks	Scores	Ranks	Scores	Ranks
Regional Average	**0.917**		**0.622**		**1.539**	
MFI 1	0.855	4	0.625	2	1.481	4
MFI 2	0.911	3	0.604	4	1.515	3
MFI 3	0.978	2	0.61	3	1.589	2
MFI 4	1	1	0.639	1	1.639	1

Annual Income	Awareness		Skills		MCAI	
Rs. 1 - 2 lakh	Scores	Ranks	Scores	Ranks	Scores	Ranks
Regional Average	**0.935**		**0.638**		**1.573**	
MFI 1	0.853	4	0.654	1	1.507	4
MFI 2	0.943	3	0.645	2	1.588	2
MFI 3	1.012	1	0.63	3	1.641	1
MFI 4	0.945	2	0.63	3	1.575	3

Annual Income	Awareness		Skills		MCAI	
> Rs. 2 lakh	Scores	Ranks	Scores	Ranks	Scores	Ranks
Regional Average	**0.92**		**0.619**		**1.538**	
MFI 1	0.916	2	0.653	1	1.569	1
MFI 2	0.952	1	0.545	3	1.497	3
MFI 3	-	-	-	-	-	-
MFI 4	0.945	2	0.63	3	1.575	3

APPENDIX III

Table A3.1: Communalities – 13 Indicators

Indicators	Initial	Extraction
amt_loan	1.000	.668
dur_loan	1.000	.718
tot_int	1.000	.615
bal_inst	1.000	.692
ins_prem	1.000	.657
ins_claim	1.000	.624
ins_concept	1.000	.645
joint_lia	1.000	.700
inst_amt	1.000	.509
princi_repaid	1.000	.667
int_repaid	1.000	.713
cheap_loan	1.000	.789
int_rate	1.000	.481

Extraction Method: Principal Component Analysis

DOCTORAL
ABSTRACT

A Study of Consumer Behaviour towards Permission based E-mail Marketing in Selected Indian Banks

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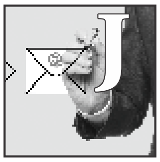
INTRODUCTION

Marketing communications will not provide desired results if they are not targeted to the right customers at the right time. Also it will enable the customer to blow whistle for the issue of privacy. Today everyone is concerned with privacy issues as they influence all human activities. There are several key stakeholders involved in the management of consumer privacy. The most important are the consumer, marketer and the government. Out of all, consumers are the most fundamental stakeholder. Government around the world plays useful and active role acting as a regulator, where government legally enforces the use of laws of privacy and restricts its misuse. The onus of making privacy viable for consumers is not only to be handled by the government alone but onus is also on professionals practicing in this field to inform marketers about the economic benefits that privacy practices can create for an organization. Many governments around the world have become so concerned about unsolicited commercial message activities that they have attempted to regulate them. For example, in the United States (US), The Privacy Act, 1974 regulates privacy of people. It is becoming mandatory under legislative framework that any marketer who performs advertising by emails must have the recipient's prior consent, so that the privacy of the consumer is not breached. This had led to the origination of terms like "Permission Marketing" and "Invitational Marketing"

Historically, in 1993, Milne and Gordon discussed the role of customer permission and its importance in marketing. This acted as a foundation point of evolution of permission marketing as a new mantra of ethical marketing. Godin (1999) coined the term "Permission Marketing" in his book. Permission Marketing is based on the premise of customer centricity, in which consumers gives their consent to receive marketing information of their choice. Permission marketing as name suggests offers the consumer an opportunity to volunteer to be marketed to. It is therefore anticipated, personal, and relevant. This early definition has three major components: (i) it is about building relationship with customers (ii) It focuses on establishing privacy rights rather than to enhance targeting and (iii)It examines both positive and negative activities involved in permission marketing. Permission Marketing gained attention

of media in early 2000. Various studies had been undertaken, since then. Sterne and Priore (2000) said that permission marketing consists of knowing customer interests and information needs. This definition incorporates much of the traditional components of marketing but focuses upon the privacy of an individual. Nath and Gupta (2006) defined permission marketing a strategy, which utilizes e-mail and mobile technology, for providing information to recipients who had given their permission to a marketer. Therefore Permission marketing is new and unconventional method of marketing. Further, Permission marketing is considered superior to interruption marketing and therefore permission marketing should look at minimizing harm of providing information, not necessarily eliminating it.

Permission marketing integrates broad range of activities, including product modification, changes to the production process, packaging changes, as well as modifying advertising. Nevertheless, defining permission marketing is not a simple task. The terminology used in this area has varied. It includes Permission Marketing, Co-Creation Marketing and Customer Centric Marketing. In fact, permission marketing is a kind of marketing focused on the condition of maintaining consumer privacy. So, it teaches us to manage the marketing process for satisfying the needs, wants and demands of customers and society in a both profitable and ethical manner.



USTIFICATION OF THE PRESENT STUDY

Telecom Regulatory Authority of India (TRAI) had issued Telecom Unsolicited Commercial Communications Regulations in 2007. The regulation was enacted in order to develop a mechanism for curbing the unsolicited telemarketing calls. The primary objective of the National Do Not Call Registry was to curb unsolicited commercial communication. This was considered as a major step taken to curb unsolicited commercial communication using mobile phone, however with reference to e-mail based unsolicited commercial communication there is no concrete regulation prevalent in Indian context. Marketers generally seek permission of consumers indirectly and thereby refer it as permitted communication. However on other side consumers cribs when they receive unsolicited commercial communication as they perceive. It is therefore the need of the hour especially in our country is to conduct in-depth studies to assess how far the ideas and concern for Permission Marketing exist both among organizations and the ultimate consumers of the products and services. Paradoxically, there exist dearth of research by the researchers and practice by the providers of the products and services. In the above backdrop, present study is a modest attempt to investigate the status of permission marketing in India and the extent to which it is being accepted by banking consumers of different types of banks and accepted and practiced by Indian banks

Statement of the problem

The study seeks to answer the following general questions:

1. What is the general awareness of Indian consumer about permission marketing and the acceptance of such practices especially involving e-mails?

2. What is the level of awareness of permission marketing among marketing officials in selected Indian Banks?

3. What are the major areas where permission marketing is being practiced by selected Indian banks under study?

4. How far the selected Indian banks are similar or dissimilar in terms of their permission marketing practices?

5. Have the selected Indian banks made any efforts in communicating the message of permission marketing practices to their consumers.

In the light of the problem stated above, the topic of the study can be justified as:

"A Study of Consumer Behavior towards Permission based E-Mail Marketing in Selected Indian Banks"

RESEARCH METHODOLOGY

Sample

It was neither feasible nor desirable to cover all banking consumers and banks for the purpose of study. For the present study, 200 consumers were selected out of 2334 colonies of Delhi through systematic sampling in order to assess whether their exist differences in opinion with respect to permission marketing being practiced by the banks under study. The respondents consisted of service class people, business class people, housewives and professionals like doctors, engineers and students. All age groups having competence to answer the questions related to study were included in the study.

Further, out of several types of banks, purposively three types of bank viz. Public, Private and foreign were chosen for the study. Further, in every bank group, there were large numbers of banks. For the present study, from each group, five banks were randomly selected. Accordingly, there were fifteen banks, which constituted the sample for the study. For collecting data from the industry, the respondents consistedof Assistant Vice President, Regional Head, Marketing Managers, Cluster Head, Assistant General Manager and Senior Manager.

Questionnaires / Schedules

Keeping in mind the objectives of the study, two Questionnaires / Schedules were developed by the researcher. While one set was for consumers of banking services the other set was for the bank officials.

Hypothesis

Taking care of the objectives of the study, appropriate hypotheses were formulated and tested using statistical techniques such as Chi Square test of independence, Kruskal Wallis H test, and other tests using SPSS version 19 on windows platform.

Findings

Following were the major findings of the study:

1. E-mail emerged as an important means of communication. This fact was well accepted by the respondents (65%) in which they considered it superior to other forms of communication.

2. The main source of awareness regarding permission marketing was media. Overall, general awareness of permission marketing was found to be good. The consumers who were unaware did not considered the concept of permission marketing significant.

3. Hypothesis testing revealed that there is a relation between demographic variables viz. gender and educational qualification with awareness of permission marketing.

4. The respondents viewed that getting updated information of choice is the most important reason for giving permission to the marketer for sending permission based e-mails. This was followed by choice of selecting marketer and expectation of availing discounts and offers from the marketer to whom permission had been granted.

5. Loss of privacy was a common concern among respondents of private organizations (banks in this case), while permitting the marketer.

6. Perceived benefit, trustworthiness and ease of differentiation were found to be important factors considered by customers while giving permission to marketers for sending permission based e-mails.

7. Acceptability of giving permission to banks for sending e-mails has been found to be good. People are ready to give permission because of the advantages associated with these permitted e-mails.

8. Consumers of the private banks and foreign banks receive more e-mails as compared to consumers of public banks on weekly basis. This shows that private banks and foreign banks actively practice permission marketing.

9. Bank customers agreed to the fact that they become more updated and informed by giving permission to banks for sending e-mails.

10. Bank customers had shown concern for the information given by banks through permitted e-mails provided they are relevant and useful.

11. Personalization of subject lines and/or of message was found to be an important stimulus for clicking permitted e-mails by banks.

12. Hassle free updations of information, trustworthiness and usefulness of information were considered important while permitting banks for sending e-mails.

13. Banks operating in India perform marketing function primarily with in-house marketing department. Some banks were found to be engaged in outsourcing specific marketing activities like e-mail marketing and tele marketing.

14. Advertisement in print media (newspapers, magazines) and e-mail marketing have emerged as the top ranking methods for marketing of banking products/services. The combination of two got wider

acceptance due to better brand visibility and reach when used together.

15. The selected banks agreed to the fact that they use e-mails in marketing of product/services because e-mails give flexibility in accessing information as and when required.

16. Majority of the banks studied were of the opinion that they seek permission from the consumer for sending e-mails in an indirect manner.

17. Generally banks send six to eight permitted e-mails to their customers every month; however the frequency increased in case of private banks.

18. Personalization of e-mails was considered vital for better accessibility by the selected banks. Catchy subject lines emerged to be the selective practice, being practiced by only few banks.

19. Targeting customers for banking products and services emerged to be the most important reason for using e-mail based permission marketing by the banks studied.

20. Information about bank accounts and various schemes/benefits was generally the content of permitted e-mails sent by selected banks under study.

21. Majority of the bank officials studied were of the opinion that they don't send spam e-mails but differed in opinion about ethicality in sending permitted e-mails.

On this basis of findings, the following model has been proposed as shown in figure 1

IMPLICATIONS OF THE STUDY

1. This study would provide an insight to those banks that believe in innovation and want to grab the opportunity by being the pioneers in e-mail marketing.

2. Practically the study will be of much importance to marketing officials who are planning /or have planned the activities related to permission marketing for seeking Customer's permission. The study will also be beneficial for consumers as they can realize the positive features of permission marketing.

3. The results of study will enable the managers of banks in particular and other industries in general to focus their concern on various internal and external factors influencing permission marketing.

4. It will help them to formulate a more realistic managerial policy regarding permission marketing by investing in permitted e-mails.

5. It will help banks to cut down their marketing expenses and expect better return on marketing investment.

6. It will lead to better and profitable management of the banking Customers.

7. It will promote research and development in the Indian banking industry to develop permission based e-marketing.

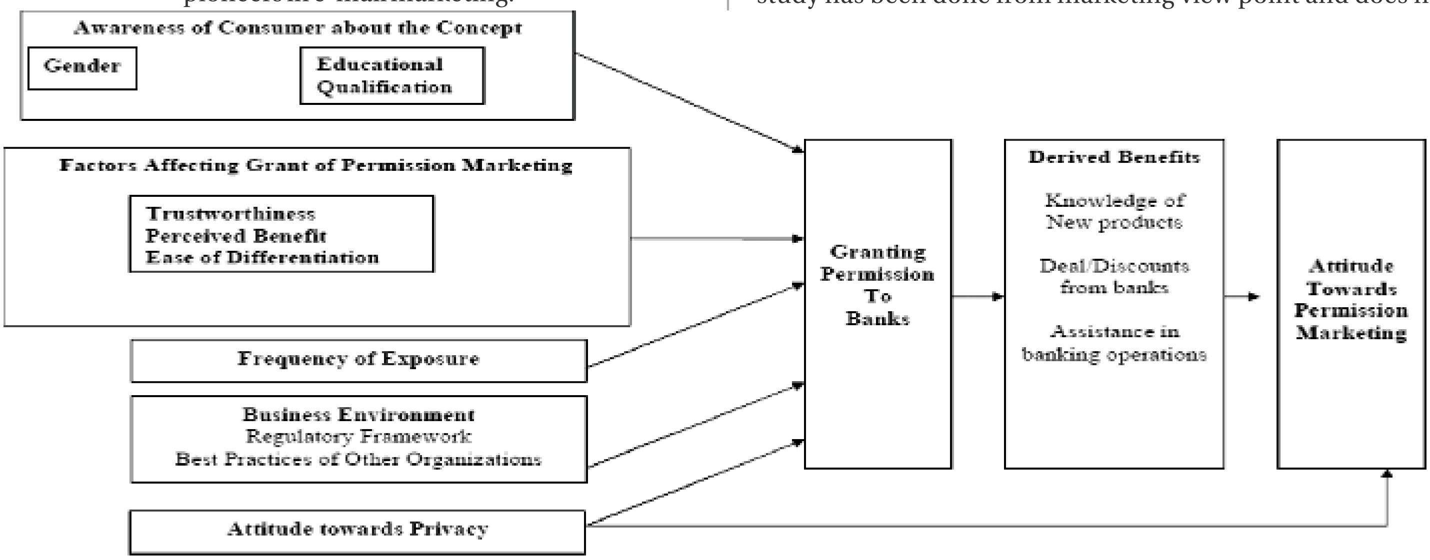
8. The study may provide relevant insight to the managers to develop procedures for systematic implementation of permission based e-marketing techniques.

LIMITATIONS

It will be plausible to note conditions of this study that limit the extent of legitimate generalizations. The shortcomings may be stated as follows:

The study is totally based on practices being followed by banks and has been viewed from marketing view point only

Notwithstanding its comprehensive coverage, the present study has been done from marketing view point and does not



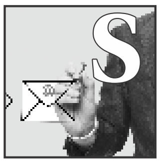
do analysis of the type the psychologists or anthropologists have often conducted. The study has not been analyzed by using any psychometric test or econometric test. Permission based e-mails take many aspects of information technology which have not been dealt in this study. The study is totally based on the practices being followed by the banks and has been viewed from marketing point of view only.

Permission Marketing is an Incessant Process

Permission Marketing has been described as a chase without any termination point of time. Because definitive answers to questions of permission are not always available and absolute permission led marketing is a difficult realistic goal to achieve, it is best to view permission marketing practices as a string of marginal steps on learning curve. This study too is a petite step in this course and should be treated as a modest contribution to the existing body of knowledge.

Accuracy and Dependability of Interpretative Material used as Plausible Reasons

Most of the interpretative material used as plausible reasons for research findings of the present study consisted of opinions of bank officials and general masses from different banks and localities. Explicitly, this study must be viewed with circumspection and appropriate regard for human frailties. Banks officials were hesitant in disclosing their privacy management policy. Banks pretend that they take care of the details of the consumers but fail to tell anything concrete.



SUGGESTIONS

1. Banks should encourage the use of e-mails for correspondence with customers and also motivates them to use e-mails in case of feedbacks, query or any suggestions. It will also be taken from the point of view of going green as a need of the day.

2. Banks should undertake a special drive from time to time to educate their customers regarding importance and relevance of e-mail marketing in general and e-mail based permission marketing in particular.

3. Banks should emphasize more on sending e-mails which have personalized and attractive subject lines as well as message content.

4. Banks should avoid sending the same message to all customers through bulk e-mail as it does not have better acceptability and is viewed as a junk e-mail.

5. Banks need to give training to their employees in order to make them conversant with latest marketing techniques and practices so that they can serve their customers better.

6. Banks are supposed to be very cautious while outsourcing their marketing activities as these utside parties generally indulges in unethical marketing practices which lead to bad image of bank in the mind of consumers.

7. While opening up of new accounts of the customers, separate form seeking permission for marketing of banking product and services should be provided by banks.

8. Banks must inform customers from time to time about how banks manage privacy of customer's details. This will create an environment of trust and will also bring in transparency.

9. Government and regulatory bodies can think of creating a code of conduct for implementing permission marketing successfully across banking and non banking institutions involving financial transactions

10. National Informatics Centre (NIC) can create a portal where people who intend to receive safe and secured e-mail communication can grant permission by submitting an online consent form.

11. Government and regulatory bodies must strive for making privacy laws stringent where in a separate clause for seeking permission can be created.

12. Government and regulatory bodies should encourage permission marketing and discourage interruptive marketing by regularizing promotional e-mail messages.

REFERENCES

- *Godin, S. (1999), "Permission Marketing: Turning Strangers Into Friends, and Friends into Customers", Simon and Schuster Publishing Company, New York.*
- *Goodwin, Cathy (1991),"Privacy: recognition of a consumer right", Journal of Public Policy and Marketing, 10(1), pp. 149-66.*
- *Milne, G.R., Gordon, M.E. (1993), "Direct mail privacy-efficiency tradeoffs within an implied social contract framework", Journal of Public Policy & Marketing, 12(1), pp. 206-15.*
- *Nath, V. and Gupta, N. (2006),"In the Realm of Permission Marketing", Review of Professional Management, 4(2), pp 62-66.*
- *Nath, V. and Gupta, N. (2006), "Permission Marketing- To Market with Prior Approval", Dias Times, 6(3), pp 23-25.*
- *Sterne, J. and A. Priore (2000), "Email Marketing: Using Email to Reach your Target Audience and Build Customer Relationship", John Wiley and Sons, Inc, New York, N.Y*
- *Wang, Y.S.; Wang, Y.M.; Lin, H.H.; and Tang, T.I. (2003), "Determinants of user acceptance of Internet banking: An empirical study", International Journal of Service Industry Management, 14(5), pp. 501-519.*
- *Waring, T. and Martinez, A. (2002), "Ethical customer relationships: A comparative analysis of US and France organizations using permission-based e-mail marketing", Journal of Database Marketing, 10(1), pp. 53-69.*
- *Yager, T. (2001), "Customer, may I? Getting the OK to sell", InfoWorld, 23(4), pp. 48.*
- *Yang, Z. and Fang, Z. (2004), "Online service quality dimensions and their relationships with satisfaction: a content analysis of customer reviews of securities brokerage services", The International Journal of Bank Marketing, 15(3), pp. 302-326*
- *Zineldin, M. (2000), "Beyond Relationship Marketing: Technological ship Marketing", Marketing Intelligence and Planning, 18 (1), pp. 9-23.*

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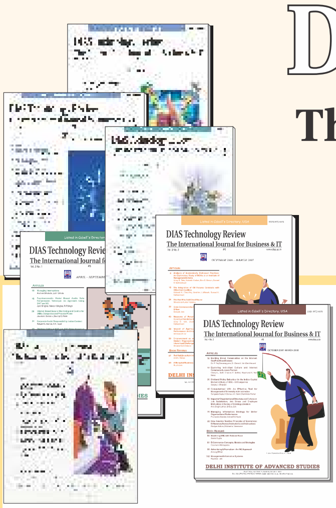

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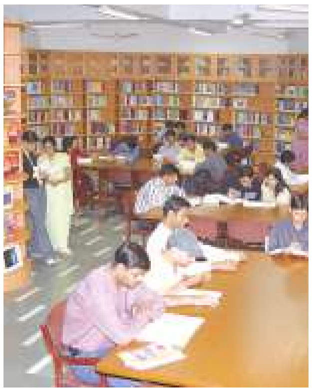

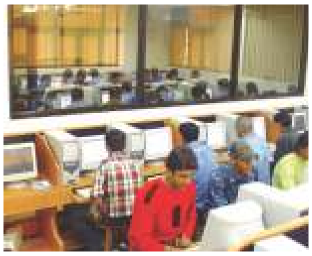

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