

Psychological Climate and Workplace Gamification: Key predictors of Employee Engagement

SMS Journal of Entrepreneurship & Innovation

5 (1) 28-39

<https://doi.org/10.21844/smsjei.v5i1.15147>

Shruti Singh*, Rekha Prasad**

Abstract

This paper investigates the role of psychological climate and workplace gamification as determinants in predicting employee engagement. An empirical research was conducted with 320 respondents from private banking sector in India. The data was collected through self administered Google doc form and was analyzed through structural modeling(SEM) which is a measurable procedure for evaluating and testing relation among variables by a blend of measurable statistical data and subjective causal presumptions. SEM is an extremely common, linear, principally cross-sectional measurable displaying technique. The findings of the results confirmed that psychological climate and workplace gamification positively and significantly predict employee engagement. Psychological climate and workplace gamification explain 40% of the variance concerning employee engagement. The practical significance of the study is of most extreme significance for private banking sector confronting high pressure workload and disengagement. This study explored the relationship among employee engagement, psychological climate and workplace gamification which hasn't done on a theoretical and empirical basis in the Indian context.

Keywords: *Employee engagement, psychological climate and workplace gamification*

Introduction

Banks have constantly played a vital position in the nation's economy. They assume a conclusive job in the improvement of the business and trade. They are acting not just as the custodian of the abundance of the nation yet in addition as assets of the nation, which are important for the monetary improvement of a country. The general job of commercial banks is to give budgetary administrations to general public and entrepreneurs, guaranteeing monetary and social steadiness and sustainable development of the economy. There is no precluding that exercises from securing banks mirror their special job as the kick-starter of development in any economy. Banks dependably assume an imperative job in the development and advancement of enterprise. Aside from giving monetary help, banks

likewise give profitable contributions to help and advance their endeavor. Banks will give security to the client's cash and in the meantime allowing entrepreneurs the chance to utilize their stores to obtain more reserve so as to run their undertakings with no problem. Since banks have proficient and particular status, they are in a solid position to inform entrepreneurs on investment lines by analyzing the pros and cons of every venture and also maintaining the investment of customers. This is one of the key jobs of banks in the advancement of entrepreneurs as the same number of endeavors/organizations neglects to succeed in light of flawed venture choices, mishandling of assets, wasteful capital and lack of foresight. Banks will dependably stay urgent to the development and progression, in addition to their tasks offer a rock hard sponsorship which is fit for

* Research Scholar, Institute of Management Studies, Banaras Hindu University, shruti_singhvar@yahoo.co.in

** Professor, Institute of Management Studies, Banaras Hindu University

entrepreneurs in gainful and feasible endeavors. Banks contribute fundamentally and decidedly in prompting and giving credits to the advancement of business visionary in India. They are basic for the survival and development of business enterprise in the nation. In this light today, bank should be equipped with motivated and talented staff that should remain committed and engaged in order to perform their duties. It has been as of now demonstrated that employee engagement is significant in motivating employees and helps to make a sound organizational culture and at last prompts better work execution. It is a dynamic build with regards to the decision of the people relating to his endeavors and responsibilities towards the association he is working for. Engaged employees work harder, as well as work more astute and can deliver better outcomes. Employee engagement is about employee's association and involvement with their organization. It is about employees' dedication and association at work—what is spurring workers to work harder, who is persuading them to work harder and what conditions are rousing them to work harder. Employee Engagement is tied in with contributing oneself, being bona fide in the activity, and conveying one's work execution with enthusiasm, tirelessness and vitality. Reinforcing engagement in the association can likewise hold ability. Engaged employees are happy with their occupations, make the most of their work and the association, trust that their activity is vital, take pride in the organization, and trust that their manager esteems their commitments. Employees who encounter great job fit determine a level of mental weightiness deriving from work (Kahn, 1990) bringing about employees who are enthusiastic and have resources to finish their task (Harter et al., 2003). Along these lines, employees who find their jobs fit are fully occupied in their job. They show enthusiasm and zeal to perform their work. The extensive investigation uncovers that employee engagement is one of the

indispensable part of human resource management. On further investigation it was additionally settled that drivers of employee engagement has an association with employee commitment and rouse the employees to be more drawn in bringing about expected business results. Psychological climate includes an adaptable and steady administration, job clearness and opportunity of self-articulation, a feeling of commitment toward authoritative objectives, sufficient acknowledgment, and testing work (Brown and Leigh, 1996). The factors that influence an employee's affair of work, for example, job lucidity, challenging job, a steady manager have been reliably connected with employee engagement (Buckingham and Coffman, 1999; Czarnowsky, 2008; Fleming and Asplund, 2007; Another important predictor of employee engagement is Workplace Gamification which is incorporation of game mechanics into non gaming situation for attaining positive outcomes related to employee's behavior. It is related to all the motivational affordances like badges, leader boards, points which an employee receives on achieving a target. It helps employees to connect, collaborate and motivate in a fun and exciting manner. It enriches the total working experience. In the domain of banking sector specifically of India which is witnessing a progressive economy is facing lot of tough competition, workload and disengagement. As branch traffic declines and digital banking rises, employees may begin to feel shaky about the fate of their occupations. Banks need representatives who are enthusiastic about their work and endeavor to take their association to more noteworthy statures as examples of overcoming adversity of prospering business associations have been scripted on commitments made by connected workers. This study is made to estimate the role of psychological climate and workplace gamification in predicting employee engagement.

Literature Review

Employee Engagement

Harter and Schmidt (2008) had defined employee engagement in different ways (Macey and Schneider, 2008). The underlying notion of employee engagement is considered as psychological, enthusiastic, and physical assets (Kahn, 1990) put forth in work by the employees was extended to depict three features of commitment, to be specific individual characteristic (perspectives of life), state (sentiments of vitality), and conduct (additional job), shown by them at working environment (Macey and Schneider, 2008). In numerous associations, Gallup survey is applied to measure employee engagement. that checks whether there is adequate tools and career advancement paths accessible to help employee engagement (Buckingham and Coffman, 1999). As per Kahn (1990) engagement is involvement of employees in job. Rothbard (2001) additionally characterizes engagement in two ways firstly consideration and the second one is ingestion. Consideration is the "intellectual accessibility and the measure of time one spends considering about a job" and ingestion "implies being immersed in a job and alludes to the power of one's attention on a job." Schaufeli et al. (2002) characterize engagement "as a positive, satisfying, business related perspective that is described by vigour, dedication, and absorption." Engagement is certifiably not a fleeting as well as explicit state, but instead, it is "a more diligent and unavoidable full of feeling subjective express that isn't centered around a specific question, occasion, individual, or conduct"

Employee Engagement and Psychological Climate

Shuck et al. (2010) ascertained that a job which is appropriate i.e fit, emotional responsibility, and

psychological climate are fundamentally identified with employee engagement and employee commitment was altogether identified with both optional exertion and intent to quit. Shuck, Twyford, Reio and Shuck (2014) research findings supported that psychological climate influences an employee productivity and intention to leave and offer a connection on an individual level. According to Lee (2012) Employee engagement was observed to be essentially related with center self evaluation. Prior looks into on JD-R demonstrate was bolstered from the investigation as employee psychological climate turned out to be a huge indicator of employee engagement. Jose and Mampilly, (2014) examined the positive connection between employee engagement and psychological empowerment. Psychological Climate is characterized as employee impression about their workplace. Climate is a unique idea that may happen at different dimensions, at personal and organizational dimensions (Field and Abelson, 1982). Psychological climate has been characterized as employee's depictions of firm's practices and strategies which identify with hierarchical effects on individual execution, fulfillment, and inspiration (Baltes, 2001). In an ongoing meta-systematic investigation, it was characterized as 'a person's mentally important portrayals of proximal hierarchical structures, procedures, and occasions' (Parker et al., 2003). The most famous and acknowledged idea of psychological climate is suggested by James and associates (e.g. James and McIntyre, 1996; James and Sells, 1981). They have used an assortment of work tests to create the progressive concept of psychological climate. Because of the observational endeavors, they exhibited that psychological climate factors are bunched inside four elements: job clarity, job challenge and self-sufficiency, leader support and team participation. The discourse made it obvious that psychological climate predicts employee engagement.

Hence, we hypothesize: **H1 Psychological Climate positively and significantly predicts employee engagement.**

Employee Engagement and Workplace Gamification

Digitizing employee engagement via Gamification is one of the recent trends followed by companies. On successful incorporation game mechanics are unbelievably powerful at propelling workforce and this inspiration prompts more noteworthy fulfillment, which drives higher productivity and work execution, and this drives, customer loyalty and business outcomes which is fantastically viable in administering dynamic interest and connections that movement to quantifiable business esteem," says Rajat Paharia, Founder and CPO at Bunchball. As indicated by Flatla et al,(2011) Gamification's principle objective is engaging employees by embracing diversion like procedures similarly as scoreboards and realized quick feedback so that employees feel progressively esteemed and convey some possession and goal while drawing in with their assignments (Pavlus, 2010). Kahn (1990) delineated that in engagement, individuals utilize and communicate physically, intellectually, and candidly amid job exhibitions. Gamification is a mix of evaluation, points, autonomy and challenge, which makes it perfect for the working environment. Gamification in the working environment is a case of utilizing human PC interface to persuade, and draw in individuals in their work. The term gamification was first utilized in 2008 in a Blog Post by Brett Terrill (2008), who portrayed gamification as the way toward adding amusement mechanics to other web properties to expand engagement. In the event that it is utilized successfully, it absolutely supports joint effort and input inside the organization. Gaming is an approach to engage and motivate employees in an intelligent manner that bolsters utilization of more

gaming or internet based life encounters than conventional. Digital employee engagement onsets by vanquishing key paradigm of the talent lifecycle, i.e from hiring to separating. At each progression, ability data is recorded in organization s frameworks, from where it very well may be examined and utilized for decision making. At the point when employees can collaborate and associate easily with one another, it improves employee engagement and cooperation, toughens coordination on tasks and adds exceptionally to working environment fitness, execution, correspondences and employee satisfaction. Gamification can be incorporated in HR for hiring, training, engaging and holding employees. Accenture's test based "Way to Success" Facebook application assessed the inclination of the clients while keeping them occupied with a fascinating game play. Members needed to just roll the shakers so it can arrive on a tile and they were made a minor inquiry and was compensated for each precise answer while they climbed the professional bureaucracy. This urged the organization to draw in their representatives and thus develop a pipeline of brilliance with the help of the information had through this amusement. Saha (2017) stated that Gamification may help in retaining employees through engagement in action that the employees perceive to be important. As indicated by Burke (2014) the major to supportable gamification is to create conduct change fundamentally with elemental prizes contrasted with extraneous prizes - that are able to protect workforce by guaranteeing that, as employee gets occupied with a game, the test coordinates the ability level and it enables to furnish employee with significant motivations.

The discourse above makes workplace gamification capable in predicting employee engagement. Hence, we hypothesize: **H2 Workplace Gamification positively and significantly predicts employee engagement.**

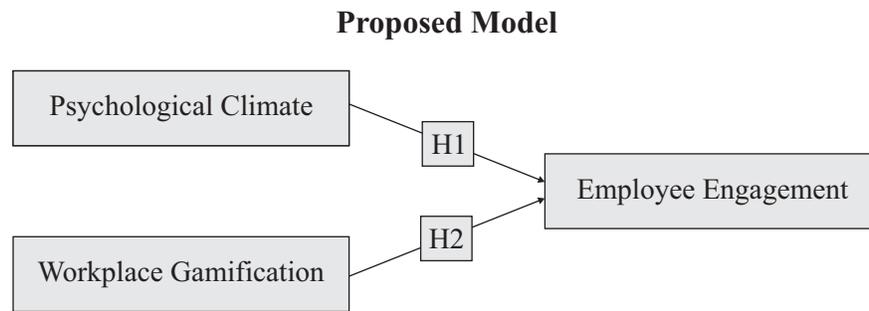


Figure 1

Research Methodology

A survey was employed on middle level employees drawn from Private sector banks, positioned in four distinct cities of Uttar Pradesh using purposive sampling. As the scope of the study needed respondents drawn from Private Sector banks employees from the middle level management were selected from the following Banks HDFC, ICICI, AXIS, KOTAK MAHINDRA and INDUSIND. The study has been confined to four cities of Uttar Pradesh i.e. Lucknow, Kanpur, Allahabad and Varanasi. 400 questionnaires were sent, using a Google Docsurvey. From 350 questionnaires, 320 fully completed were used. Rests 30 were uncompleted. Gallup Q12 survey questions (Mann and Ryan, 2014) was utilized to assess employee engagement. Questions could be envisioned as a mental leap that employees make from the minute they expect another job to the minute they get completely occupied with that job. Scale for measurement of Psychological climate was adapted from Psychological Climate Measure (PCM) developed by (Brown & Leigh, 1996). The scale consisted of six dimensions of Contribution, Self Expression, Supportive Management, Role clarity and Challenge. Workplace gamification scale consisted items of game mechanics. A likert scale of 5 points, from 1 (strongly disagree) to 5 (strongly agree) was used. Data was reliable as was checked through cronbach alpha ($<.7$)

Statistical Analysis Technique

Exploratory factor investigation is utilized to evaluate the validity of different estimates fused in the review asset instrument and to in this way recalibrating the measuring tool with the considerable indicators. Through this technique the determination of the few underlying dimensions of a larger set of inter correlated variables could be achieved. The investigation utilizes principal component analysis and concentrates factors with eigen value more prominent than one with Varimax rotation. Affirmation that the data are correlated is assessed utilizing Bartlett's test for sphericity, receiving a significance level of five percent. Goodness of fit is accounted for and assessed utilizing communalities, and aggregate variance is explained. CFA is a method for testing how the estimated factors represent a fewer constructs. Validity was established by running the CFA model before testing the hypothesis and data was imputed in Amos 24. To test the proposed relationship among the variables, structural equation modeling (SEM) was run utilizing Amos 24. A total SEM comprises of estimation and structural models. A structural model includes determining basic connections between the constructs which can be identified with measured variables with a dependence relationship. It gives the ability to the researcher to model as well as examine the interrelationship between the multiple endogenous and exogenous variables.

Results :Demographic Characteristics

Sample Profile		
A	Gender Distribution	Sample Share %
1	Male	72%
2	Female	28%
B	Age distribution	
1	25 to 35	50%
2	36 to 45	34%
3	Above 45	16%
C	Work Experience	
2	2-5 years	53%
3	More than 5 years	47%
D	Qualifications	
1	Graduate	34%
2	Post Graduate	47%
3	Others	19%

Table 1

EFA and CFA results

Factor analysis was done on the responses received. A PCA choosing varimax rotation was done. The factors whose eigen value were greater than unity were obtained for psychological climate, employee engagement, workplace gamification. Reduction of the items were based on the condition that the factor loadings should be above .4. In EFA, KMO was greater than 0.60, Bartlett's test was significant at p value ($<.05$), communalities value was greater than 0.50 which is fulfilled by each construct. Cronbach –alpha calculated the reliability of data which was found to be ($<.7$) for every construct which was sufficient to conduct EFA based on the component matrix. After EFA, CFA was performed to confirm the factors.

In Employee Engagement scale, the Kaiser Meyer Olkin Measure value was .759 and Bartlett's test is highly significant. Three factors were obtained in EFA. (All 12 items retained) The loading of respective factors and communalities

norm were met at 0.7 and 0.5. On the basis of EFA and CFA results employed on Employee Engagement scale, no item was removed. The explained variance for the scale was 72%. In CFA, results were significant. It laid out an admissible level of good fit ($\chi^2 / df = .020$, RMSEA = 0.000, CFI = 0.957, GFI = 1.0). Reliability, construct validity met all the established criteria.

In Psychological scale the Kaiser Meyer Olkin Measure value was .632 and Bartlett's test is highly significant. 8 items didn't load so 12 were left out of 20 items. Four factors were obtained in EFA. The loading of respective factors and communalities norm were met at 0.7 and 0.5. The explained variance for the scale was 88%. In CFA, results were significant. It laid out an admissible level of good fit ($\chi^2 / df = .503$, RMSEA = 0.000, CFI = 1.00, GFI = 0.99) Reliability, construct validity met all the established criteria.

In Workplace Gamification scale, the Kaiser Meyer Olkin Measure value was .757 and Bartlett's

test is highly significant. Out of 14 items 9 were used revealing three factors. The loading of respective factors and communalities norm were met at 0.7 and 0.5. The explained variance for the scale was 67%. In CFA, results were significant. It laid out an admissible level of good fit ($\chi^2 / df = 0.96$, RMSEA = 0.000, CFI = 1.00, GFI = 0.99). Reliability, construct validity met all the established criteria.

Validity and Reliability Table

Validity is the measuring ability of an instrument to

	CR	AVE	MSV
Employee_Engagement	0.860	0.530	0.354
Psychological_Climate	0.806	0.512	0.152
Work_Gamification	0.685	0.528	0.304

Table 2

As $CR > .7$ for all factors, Reliability established. As $AVE > .5$ for all factors and $CR > AVE$ for each, Convergent validity established. As $AVE > MSV$ for all factors, Discriminant validity established. Finally Data was imputed in Amos 24 for other analysis. SEM (figure 1) showed that psychological climate and workplace gamification explained 40% of the variance in bank employee's work engagement. The value .25 is the correlation between Psychological climate and workplace gamification. The values .41 and .38 are standardized regression weights. The value .40 is the square multiple correlation of employee engagement with psychological climate and workplace gamification. The predictive coefficient of independent variables psychological climate

measure what it is meant to measure.

Construct Validity was established in this study. Convergent Validity was established as composite reliability was more than 0.70, composite reliability was greater than average variance extracted (AVE) and lastly average variance extracted was greater than 0.50. Discriminant validity was established as AVE was greater than maximum shared squared variance (MSV).

and workplace gamification are displayed in the table below. The standardized path coefficients in the table below confirmed that predictive variable for employee engagement is workplace gamification ($\beta = 0.38, p < .001$) and Psychological climate ($\beta = 0.41, p < .001$) they both explain 40% of the variance concerning employee engagement. Thus, based on these, Hypothesis H1 and H2 is accepted. i.e

H1 Psychological Climate positively and significantly predicts employee engagement.

H2 Workplace Gamification positively and significantly predicts employee engagement.

By testing the influence of psychological climate on employee engagement by SEM it was reported that psychological climate shares a significantly positive relationship with employee engagement ($\beta = 0.41, p < .001$). It also reported that workplace gamification shares a significantly positive relationship with employee engagement ($\beta = 0.38, p < .001$). Psychological climate and workplace gamification explain 40% of the variance concerning employee engagement as the value of coefficient of determination (R^2) was .40 which indicates that 40% variation in employee engagement was explained by psychological climate and workplace gamification..

Discussion

The present investigation has made an endeavor to clarify the impact of Psychological Climate and Workplace Gamification on employee engagement in private banking sector. The value of coefficient of determination (R^2) was .40 which indicates that 40% variation in employee engagement was explained by psychological climate and workplace gamification. The investigation likewise showed noteworthy and positive effect of psychological climate on employee engagement. The dimensions like recognition, manager support, self expressions, and role clarity and contribution measurements assume critical job in anticipating employee engagement so it ends up one of the essential worry for banking industry and additionally academicians and professionals. The finding of the examination bolsters the past research finding of Shuck (2010) who had revealed that psychological climate of working environment was emphatically and essentially related with employee engagement. In this manner it turns into an order for banking industry to concentrate on components adding to psychological climate. The current investigation additionally discovered that workplace gamification was emphatically associated with employee engagement. It

additionally detailed that there exist a huge and positive impact of gamification on employee engagement. Gamification has been considered for tremendous development in accomplishing different social business drives in the organizations and conveying inventive state of mind by planning amusement goals with the coveted result in the organization. It has helped in strengthening positive practices and overhauled the aptitudes in Millennial and achieved destinations and focuses in a significantly more imagining and occupying conditions. We should take a stab at rehearsing gamification – either the straightforward utilization of pioneer sheets and rewards or more citified gamification application – in our business to upgrade workers' commitment and inspiration.

Practical Implications

HR experts had understood that simply being "fulfilled" wasn't sufficient for individuals to truly open their potential worth to an organization. Managers require an approach to get to the core of how individuals were feeling about their organization and, how much exertion they were set up to put in thus. This proportion of association and exertion was named "employee engagement". In this context the private bank sector faces much workload and disengagement and hence it should apprehend high level of employee engagement so that to make employees feel happy and satisfied with their jobs. Bank's psychological climate should conducive in order to make the employees feel valued and satisfied. Proper feedback, managerial support, and recognition should be extended. Employee Engagement could only be predicted on the psychological climate of any organization. The private banking domain must concentrate on psychological climate and workplace gamification so that employees become engaged with the organization. As baby boomers and conventionalists move out of workforce we have new genus of employees who are knowledge

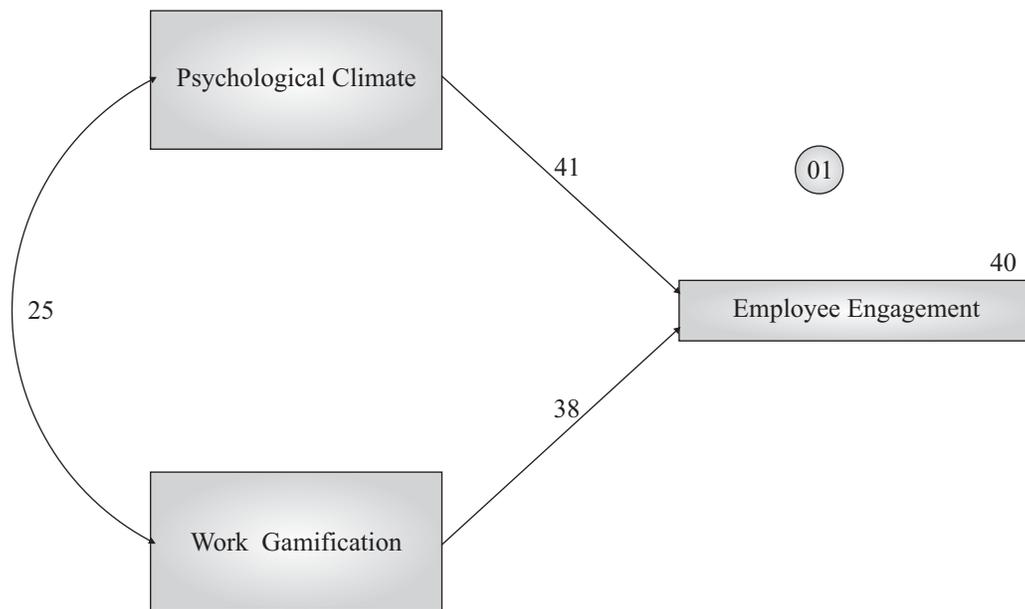


Figure2

The following results were obtained-

Predictive Powers of Predictor Variable on Employee Engagement

Criterion Variable	Predictor Variable	Standardized Prediction (Estimate)	Standard Error (SE)	Critical Ratio (CR)	Significance Value (p)
Employee Engagement	Psychological Climate	.41	.01	6.04	***
	Workplace Gamification	.38	.04	13.13	***

***p>001

Table 3

Correlations: (Group number 1 - Default model)

	Estimate
Psycho_Climate<-->Work_Gamification	.248

Table 4

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
Emp_Engagement<---Psycho_Climate	.412
Emp_Engagement<---Work_Gamification	.375

Table 5

workers and tech savvy. And as branch traffic is declining and digitalization is on the peak employees should be provided a digital medium for getting engaged and gamification is very capable of engaging the employees in the best possible manner. Through it the employees could connect, socialize and collaborate. They could easily track their performance directly and there is no scope of boss's favoritism and biasness. So whenever they achieve their target they get some points and thus rewarded. In Banking CRM process is very tedious but through this gamification it has become very exciting and rewarding as employees achieve points on updating their CRM profiles. Not only in engagement, gamification is used in all HR processes.

Conclusions:

The comprehensive study uncovers that employee engagement is one of the essential part human resource perceives in the present situation. It has been as of now demonstrated that employee engagement is essential to support loyalty and retention of employees in the banks which makes a conducive culture and eventually prompts better work execution. Employee engagement is a dynamic build with regards to the decision of the people relating to his endeavors and responsibilities towards the association he is working for. Engaged employees work harder, as well as work more brilliant and can create better outcomes. Psychological Climate of a work environment is a critical aspect that impacts the employee's earnestness and their dimension of commitment. For a great psychological climate, there ought to be administrative and hierarchical support, self expression and two route communications among the workers inside the association. The present examination has exactly revealed that psychological climate of a work environment has solid and positive association with employee engagement and there was critical

effect of psychological climate on employee engagement in an association. In this manner the good working environment impacts worker's earnestness towards the association by propelling and improving their ability towards their work. Along these lines the managers ought to create good psychological climate at working environment for commitment of the employees and smooth working of the association. Gamification is another approach to connect with as well as speak with employees in a collaborative manner that bolsters use of more gaming or online networking encounters than customary email or paper interchanges. Along these lines, the gamification is imagined as a method for connecting with employees in the way that best suits them. By building support into the connection procedure, banks can enhance commitment and responsibility, the results of employee engagement is employee commitment and it is utilized by business specialist to enrich their insight and knowledge. Employee engagement is essential for HR policy in an association and is valuable to beat unverifiable situation. In building up the business, SMEs proprietors could find out about their employee conduct so as to make policy identified with their conduct so the business execution will expand (Muafi, 2017).

Future Scope of Research

Only two factors were considered in this study by the researcher which impacts employee engagement, future researchers might consider other determinants like compensation, training and development, job satisfaction and managerial support and leadership for enhancing employee engagement. The study covers only two outcomes of employee engagement reduced attrition and organizational commitment. Future researchers can select organizational citizenship behavior and performance. There could be a scope of comparison between the public and private sector

bank on the basis of technological advancement or workplace gamification which is not been done till date as per the researchers best of knowledge.

Limitations:

1. This research study has been undertaken exclusively for the banking Sector; therefore generalization across financial services, insurance and other service sectors cannot not be done.
2. Research has been undertaken only in Private Sector Banks in four cities of Uttar Pradesh so the result could not be generalized for Public sector bank and for other geographical location.
3. This research study has been undertaken exclusively for middle level management employees; however the researcher intends to study the responses of junior and senior level employees to get the scenario of banking sector.

Note: The authors are grateful to the anonymous referees of the journal for their suggestions to improve the overall quality of the paper. Usual disclaimers are applicable.

References:

- Baltes, P. B., & Mayer, K. U. (Eds.). (2001). *The Berlin aging study: Aging from 70 to 100*. Cambridge University Press.
- Buckingham, M., & Coffman, C. (1999). (2001). *Now, Discover your strengths*.
- Brown, S. P., & Leigh, T. W. (1996). A new look at psychological climate and its relationship to job involvement, effort, and performance. *Journal of applied psychology*, 81(4), 358.
- Coffman, C., & Gonzalez-Molina, G. (2002). Follow this path. How the world's greatest Organizations drive growth by unleashing human potential. Warner Books.
- Czarnowsky, M. (2008). Learning's role in employee engagement: An ASTD research study. *Alexandria, VA: American Society for Training and Development*.
- Flatla, D. R., Gutwin, C., Nacke, L. E., Bateman, S., & Mandryk, R. L. (2011, October). Calibration games: making calibration tasks enjoyable by adding motivating game elements. In *Proceedings of the 24th annual ACM symposium on User interface software and technology* (pp. 403-412). ACM.
- Field, R. G., & Abelson, M. A. (1982). Climate: A reconceptualization and proposed model. *Human Relations*, 35(3), 181-201.
- Fleming, J. H., & Asplund, J. (2007). *Human sigma: Managing the employee-customer encounter*. Simon and Schuster.
- Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: Ameta-analysis. *Journal of Applied Psychology*, 87(2), 268-279.
- Harter, J. K., Schmidt, F. L., & Keyes, C. L. (2003). Well-being in the workplace and its relationship to business outcomes: A review of the Gallup studies. *Flourishing: Positive psychology and the life well-lived*, 2, 205-224.
- James, L. R., & Sells, S. B. (1981). Psychological climate: Theoretical perspectives and empirical research. *Toward a psychology of situations: An interactional perspective*, 275-295.
- Jose, G., & Mampilly, S. R. (2014). Psychological empowerment as a predictor of employee engagement: An empirical attestation. *Global*

Business Review, 15(1), 93-104.

Kahn, W.A. (1990). "Psychological conditions of personal engagement and disengagement at work", *Academy of Management Journal*, 33, 692-724.

Li, K. Z., Lindenberger, U., Freund, A. M., & Baltes, P. B. (2001). Walking while memorizing: Age-related differences in compensatory behavior. *Psychological science*, 12(3), 230-237.

Lee, M. M., Teuscher, J., Miyasaka, T., Murakami, T. N., & Snaith, H. J. (2012). Efficient hybrid solar cells based on meso-superstructured organometal halide perovskites. *Science*, 1228604.

Macey, W.H. & Schneider, B. (2008). The meaning of employee engagement. *Industrial and Organizational Psychology*, 1, 3-30.

McIntyre, J. J., Bull, A. T., & Bunch, A. W. (1996). Vancomycin production in batch and continuous culture. *Biotechnology and bioengineering*, 49(4), 412-420.

Muafi. (2015). Antecedent counterproductive behaviour: SMEs cases. *Polish Journal of Management Studies*, 12(2), 114-121.

Pavlus, J. (2010). Sixty-Two Reasons Why "Gamification" is Played Out. *Fast Company Design*. Retrieved from <http://fastcodesign.com/1662656/sixty-two-reasons-why-gamification-is-played-out>.

Rothbard, N.P. (2001). Enriching or depleting? The dynamics of engagement in work and family roles. *Administrative Science Quarterly*, 46, 655-684.

Resick, P. A., Monson, C. M., & Chard, K. M. (2007). Cognitive processing therapy: Veteran/military version. *Washington, DC: Department of Veterans' Affairs*

Saha, M. D., & Pandita, D. (2017). Digitalizing Human Resources Through Gamification For Employee Engagement. *ELK Asia Pacific Journals*.

Schaufeli, W.B. and Bakker, A.B. (2004), "Job demands, job resources, and their relationship with burnout and engagement: a multi-sample study", *Journal of Organizational Behaviour*, 25, 293-315.
Schenker, N., & Parker, J. D. (2003). From single race reporting to multiple race reporting: using imputation methods to bridge the transition. *Statistics in medicine*, 22(9), 1571-1587.

Shuck, B., & Wollard, K. (2010). Employee engagement and HRD: A seminal review of the foundations. *Human resource development review*, 9(1), 89-110.

Shuck, B., Twyford, D., Reio Jr, T. G., & Shuck, A. (2014). Human resource development practices and employee engagement: Examining the connection with employee turnover intentions. *Human Resource Development Quarterly*, 25(2), 239-270.

Shatters, D., Mann, R., Pozzie, S., McCurdy, S., Wiley, C., & Wala, M. K. B. G. (2014). *U.S. Patent No. 8,919,469*. Washington, DC: U.S. Patent and Trademark Office.