Digitalization and Perception of Employee Satisfaction during Pandemic with Special Reference to Selected Academic Institutions in Higher Education

Dr. M. Dhanabhakyam¹ & Emil Joseph²*

¹Professor and Dean, Department of Commerce, Bharathiar University, Coimbatore, India.  
²Ph.D Research Scholar, Department of Commerce, Bharathiar University, Coimbatore, India.  
Corresponding Author Email: emiljoseph333@gmail.com

DOI: http://doi.org/10.46382/MJBAS.2022.6106

Copyright: © 2022 Dr. M. Dhanabhakyam & Emil Joseph. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Article Received: 21 November 2021  
Article Accepted: 26 February 2022  
Article Published: 30 March 2022

ABSTRACT

A satisfied employee is an asset for any organization to produce good results. Further, some of the research studies have shown that the productivity of organizations improves if the satisfaction level is high. Employee Satisfaction happens through a host variety of factors, one of the proven factors for employee satisfaction is "Salary". There were many motivation theories and research conducted on employee satisfaction. Almost all research is always novel due to their contribution and identification of a new phenomenon to Satisfaction. The present research work is also intended to study employee satisfaction taking the variables from previous studies. The current work is majorly focused on academic fraternity, whose contribution is highly essential in producing the next generation in any educational set-up. Unfortunately, not much research happened in this direction.

Primary and Secondary data were used for data collection. A simple percentage method was used and considered 120 faculty members, specifically from the arts and science colleges, collected through a well-structured questionnaire. Methods used are Simple percentage analysis, Weighted mean, Cronbach’s alpha (Reliability), Chi-square test, Standard deviation, and Ranking.

Therefore, the present research work is intended to fill that gap. The study aims to find the Factors influencing the Satisfaction of faculty members working in fine Arts and Science colleges in Palakkad District, Kerala.

The research paper initially focused on employee satisfaction on various parameters and then studied the phenomenon during the Covid-19 Pandemic.

The pandemic has devastating effects on academic fraternity satisfaction levels, especially in India. A host variety of reasons captured in this study, and finally, the paper ends with some of the suggestions to make a healthy work environment for a happy and satisfied work-life to provide to the community good academic pursuits.

Keywords: Work environment, Motivation, Employee performance, Work-life balance, Employee engagement, Employee productivity.

Introduction

Employee satisfaction is the wording used to portray whether employees are glad, fought and satisfied with their wants and needs grinding away Abbad (2009). Many estimates support that representative fulfillment is a factor in worker inspiration, worker objective accomplishment and positive worker assurance in the working environment. A good workplace causes employees to have a decent outlook on coming to work, which inspires them to support them for the day. Considering the present Covid-19 Pandemic situation, the study aims to examine the working environment and Satisfaction of faculties in Palakkad District.

Around the globe, the short–term responses to Covid-19 are already yielding long-term effects on higher Education around the globe. Creating new paths and leading teams in the absence of clear roadmaps has been the biggest challenge for business education leads in the crisis.

During the coronavirus crises, numerous nations utilized computerized academic instruments and virtual trades among students and their teachers to convey the instruction as schools closed. Covid-19 has changed the face of business education, impacting everything from admissions to post-graduation hiring. Weak students may have little admittance to devices and require further attention and support.
To react to the challenges they face, nations have created explicit and, at times, innovative policy drives and admittance to additional administrations for weak and vulnerable students and guaranteeing support by and to teachers. A practically general reaction to school terminations has been web-based learning stages to help educators, students and their families. Employees looking to unskilled appear to have a different mindset. Their preference for online Education gives them the flexibility to earn and learn.

As per Moyes, Shao and Newsome (2008), representative fulfillment might be portrayed as how satisfied workers are with their business situation. Spector (1997) characterized work fulfillment as every one of the sentiments that a given individual has about his/her work and its different viewpoints.

Pilot Study

(a) The present study aimed to investigate the influence of work environment and employee satisfaction during the COVID-19 situation among faculties of Arts and Science College among a sample of 120 faculty members in the Palakkad district.

(b) It is assumed that working from home does not give much pleasure compared to working at the office. The virtual space, however, creates a direct impact on the performance.

(c) There are more job demands with work from home strategy as it requires fewer resources. As per the research, in work from home mode, people tend to work even if they are ill.

(d) The sampling technique used is simple random sampling. The sample size is large, and thus, for easy calculations, the sample size is restricted to 120 members.

Work Environment

A hostile work environment is a poisonous feeling in the workplace made by the employees, the work, or the organization’s way of life and upsides. A hostile environment can create and spread in even the most representative organizations and can be genuinely hard to oversee. A positive work environment causes employees to have a decent outlook on coming to work, and this gives the inspiration to support them for the day. In such a manner, this examination predicts the effect of work environment and employee fulfillment during the Covid-19 situation among resources of select Expressions and Science Universities in Palakkad.

Statement of the Problem

In our lives of a significantly interconnected world, many elements in the work environment affect the level of representative commitment among labour forces. Each employer and manager needs to distinguish and address these regions. A little bit of exertion in the correct way can prompt more joyful, more practical, and loyal employees. Though many instances were observed, according to a recent citing from The Economic Times (2019), it revealed that 8 in 10 employees are dissatisfied with their jobs. The Coronavirus pandemic is, most importantly, a human misfortune that has worked out across the globe. In this pandemic circumstance, the vast majority of the associations offer the office to their labourers to Work from Home. Work from home is trying for labour forces as they do not feel the hierarchical culture.
Furthermore, the environment at home, as the absence of consideration on account of regular interruption of relatives, work-life struggle, and irregularity of work-life looked at by the faculty. Representatives do not have appropriate hardware and devices (Personal Computer, mouse, printers, scanners, web association, earphones, webcam, and a tranquil work environment), the vast majority of the workers feel anxious and disappointed with their work. Employees do not know about their professional stability and their compensation considering the present Covid-19 Pandemic situation. There is a need to assess the Employee Satisfaction, which is done through survey method among faculties of fine arts and science colleges which may help to understand how far the work environment influenced their working condition in achieving their Satisfaction. School terminations identified with the current Coronavirus pandemic imply that understudies from assorted foundations who are more in danger of expanded weakness are less inclined to get the help and additional administrations they need, and the hole between understudies that experience extra hindrances and that do not might enlarge.

**Objective of the Study**

To evaluate the post-Covid-19 work environment on employee satisfaction perceived by faculties of the fine arts and science college in Palakkad.

**Research Methodology**

Research is a cautious and crucial examination of a particular problem, concern or issue utilizing the scientific method. Research methodology is a method of deliberately tackling the research problem. The research is descriptive as the present study has attempted to describe the characteristics of a population, such as demographic factors and employee satisfaction among faculties working in fine arts and science colleges in Palakkad District.

In the south-eastern piece of the past Malabar region, Palakkad Region is one of the 14 spaces of the South Indian Territory of Kerala. It is found right at the focal piece of the state [Joseph, E2022].

Likewise, it has been the most prominent locale in Kerala since 2006. Palakkad is skirted on the northwest by the Malappuram District, on the southwest by the Thrissur Region, on the upper east by The Nilgiris Locale, and on the east by the Coimbatore area of Tamil Nadu [Monish, P 2021].

Palakkad region has an excellent scope of expressions, science and designing universities viz. state schools, subsidized schools by the public authority, independent universities just as considered colleges. The education pace of the Palakkad area is 89.49%, which is the least in Kerala. Instructive organizations dependent on Expressions, Science and Designing streams recognized are recorded in the Index [Dhanabhakyam 2021].

Palakkad region has 63 universities, out of which 44 expressions and science schools, 16 Designing Schools and three other concentrated course directing universities were considered for overview.

**Sampling Design**

In this regard, both primary and secondary data are used for the study. The field survey method was used to collect the primary data among faculties working in fine arts and science colleges, viz., distributing the structured questionnaire. In contrast, the secondary data from different sources include the publications and reports, various
other unpublished reports, dissertations, doctoral thesis from various institutions, books, journal, periodicals, etc.

**Sampling Technique**

Arts and science colleges are purposively selected for the study from Palakkad district. Simple random sampling strategy was utilized for the investigation. Researcher identified 120 faculties who were randomly selected from the selected arts and science colleges.

**Reliability**

To measure the internal reliability of the items, Cronbach's Alpha was utilized. The result of the Cronbach's Alpha suggested the overall reliability of the test's co-efficient. It will be evident from the study that the respondents' opinion is highly reliable (greater than recommended level of 0.9, and achieved the internal reliability).

**Framework of Analysis**

The statistical tools applied for the present study are the Basic Percentage Method, Weighted mean and Chi-square test.

**Analysis and Results**

Demographics of the faculties are classified based on their age, gender, educational qualification, experience and annual income. Results are computed and presented using simple percentage analysis.

**Table 1. Demographic variables of the faculties**

| Sl. No. | Demography       | Frequency (120 Nos.) | Percentage (100%) |
|---------|------------------|----------------------|-------------------|
| 1.      | Age              |                      |                   |
|         | Up to 30 years   | 68                   | 56.7              |
|         | 31 to 40 years   | 14                   | 11.7              |
|         | 41 to 50 years   | 25                   | 20.8              |
|         | More than 50 years| 13                   | 10.8              |
| 2.      | Gender           |                      |                   |
|         | Male             | 29                   | 24.2              |
|         | Female           | 91                   | 75.8              |
| 3.      | Educational Qualification | |                   |
|         | Master of Philosophy | 43              | 35.8              |
|         | M.Phil. (Pursuing Research) | 29              | 24.2              |
|         | Doctor of Philosophy | 48              | 40.0              |
Majority of the faculties working in the select private colleges are in the age up to 30 years, 20.8% are in the age somewhere in the range of 41 and 50 years, 11.7% are in the age gathering of 31 to 40 years what's more, the excess 10.8% are in the age over 50 years. It is seen that greater part (75.8%) of the female are female and 24.2% are male. Most (40%) of the faculties pursued Doctor of Philosophy (PhD) while, 35.8% are M.Phil. Scholars and the remaining 24.2% are pursuing research (Research Scholars after Post Graduation or Master of Philosophy.). Most (60%) of the faculties have less than 5 years of work experience, while 25.8% of the faculties have 5 to 10 years’ experience in their job and the remaining 14.2% of the faculties have more than 10 years’ experience. It is observed that nearly one third (32.5%) of the faculties indicated that their salary is from Rs.30001 to Rs.40000, 29.2% of the faculties opined between Rs.20001 and Rs.30000, 28.3% of the faculties stated up to Rs.20000 per month, and the remaining 10% of the faculties opined more than Rs.40000 per month.

**Work Environment (Frequency)**

Descriptive statistics shows the mean, standard deviation, rank and reliability of the constructs, which combination is revealing the post working environment and overall Satisfaction among faculties of the fine arts and science colleges in Palakkad District. The results are presented hereunder:

**Table 2. Opinion on Post COVID-19 Working Environment**

| Work Environment                                      | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|-------------------------------------------------------|----------------|-------|---------|----------|-------------------|
| Work from home or virtual environment creates much discomfort disturbing work privacy | 25             | 45    | 32      | 13       | 5                 |
|                                                       | 20.83%         | 37.50%| 26.67%  | 10.83%   | 4.17%             |
Virtual work engagement can directly or indirectly influence work performance

|                | 1    | 28   | 53   | 21   | 17   |
|----------------|------|------|------|------|------|
| .83%           | 23.33% | 44.17% | 17.50% | 14.17% |

Job demand increases with reduced resources leading to greater stress and burnout levels among faculties.

|                | 4    | 26   | 63   | 19   | 8    |
|----------------|------|------|------|------|------|
| 3.33%          | 21.67% | 52.50% | 15.83% | 6.67% |

Conclusion: there is more likely to be present in the classroom if the faculty is ill.

|                | 3    | 42   | 54   | 20   | 1    |
|----------------|------|------|------|------|------|
| 2.50%          | 35.00% | 45.00% | 16.67% | .83% |

Discomfort disturbing work privacy

Out of the one hundred and twenty faculties, forty-five (37.5%) agree and twenty five (20.83%) strongly agree that work from home or virtual work environment creates much discomfort and disturbing their work privacy, while thirty two (26.67%) faculties felt neutral whereas, thirteen (10.83%) and five (4.17%) faculties disagree and strongly disagree towards personal and work privacy discomfort in the post Covid-19 working environment.

Influence on Work Performance

Fifty-three (44.17%) opined neutral while, twenty-eight (23.33%) agree and one (0.83%) strongly agree that the virtual work engagement have direct or indirect influence on their work performance whereas, twenty one (17.5%) and seventeen (14.17%) faculties disagree and strongly disagree respectively towards direct or indirect effect of virtual work engagement on their work performance.

Job Demand increases Stress and Burnout

Sixty-three (52.5%) opined neutral while, twenty six (21.67%) agree and four (3.33%) strongly agree that the job demand increases with reduced resources leading to high level of stress and burnout levels among faculties, whereas, nineteen (15.83%) and eight (6.67%) faculties disagree and strongly disagree respectively towards high job demand and reduced resources leading to job stress and burnout in the post Covid-19 working environment.

Presenteeism

Fifty-four (45%) opined neutral while, forty two (35%) agree and three (2.5%) strongly agree that though the faculties feel ill they are likely to be present for the teaching session in the virtual classroom, whereas, twenty (16.67%) and one (0.83%) faculties disagree and strongly disagree respectively towards their virtual presence though they feel ill to conduct themselves in their job.

Work Environment (Weighted Mean)

Since there is a difference in level of agreement among faculties, the exact position of the statements representing work environment Post Covid-19 situation perceived by faculties working of the select Arts and Science colleges. In the five-point Likert type scales, all statements representing the Work Environment Construct are negative,
therefore, the rating for strong agreement level carries 1 point and strong disagreement level carries 5 points. In this regard, the results of weighted average computed and presented in the Table 3. Based on the rating of the respondents it is observed that the first rank (Mean=2.400) for the statement “Work from home or virtual environment creates much discomfort disturbing work privacy”; followed by second rank (Mean=2.783) for the statement “There is more likely to be present in the classroom through the faculty is ill”; third rank (Mean=3.008) towards “Job demand increases with reduced resources leading to greater stress and burnout levels among faculties” finally, the fourth and last rank (Mean=3.208) towards “Virtual work engagement can directly or indirectly influence work performance”.

**Table 3. Opinion on Post COVID-19 Working Environment (Weighted Mean)**

| Work Environment | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | Weighted Mean |
|------------------|----------------|-------|---------|----------|-------------------|---------------|
| Work from home or virtual environment creates much discomfort disturbing work privacy | 25 | 45 | 32 | 13 | 5 | 2.400 (I) |
| Virtual work engagement can directly or indirectly influence work performance | 1 | 28 | 53 | 21 | 17 | 3.208 (IV) |
| Job demand increases with reduced resources leading to greater stress and burnout levels among faculties. | 4 | 26 | 63 | 19 | 8 | 3.008 (III) |
| Conclusion: there is more likely to be present in the classroom if the faculty is ill. | 3 | 42 | 54 | 20 | 1 | 2.783 (II) |

**Table 4. Opinion on Working Environment**

| Work Environment | Mean | SD  | Rank | Cronbach’s Alpha |
|------------------|------|-----|------|------------------|
| Work from home or virtual environment creates much discomfort disturbing work privacy | 2.400 | 14.05 | 1 | 0.9154 |
Virtual work engagement can directly or indirectly influence work performance achieved 4th position (M=3.208, SD=0.883), followed by job demand increases with reduced resources leading to greater stress and burnout levels among faculties achieved 3rd position (M=3.008, SD=0.883) followed by virtual work engagement can directly or indirectly influence work performance achieved 4th position (M=3.208, SD=0.883). Reliability (α=0.9154) of the Work environment construct achieved more than the threshold (0.9) found Excellent.

Chi-Square Test

To predict the association between gender and work environment, male and female faculties are considered based on their perception of the Post Covid-19 work environment using a chi-square test.

Table 5. Gender and Discomfort disturbing work privacy

| Gender  | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | Total |
|---------|----------------|-------|---------|----------|-------------------|-------|
| Male    | 10             | 10    | 2       | 4        | 3                 | 29    |
|         | 6.0            | 10.9  | 7.7     | 3.1      | 1.2               | 29.0  |
| Female  | 15             | 35    | 30      | 9        | 2                 | 91    |
|         | 19.0           | 34.1  | 24.3    | 9.9      | 3.8               | 91.0  |
| Total   | 25             | 45    | 32      | 13       | 5                 | 120   |
|         | 25.0           | 45.0  | 32.0    | 13.0     | 5.0               | 120.0 |
Hypothesis: $H_0 = \text{There is no significant association between gender and discomfort / disturbance in work privacy}$

The calculated value of chi-square is 12.930 with four degree of freedom reveals that the table value=9.488 (@ 5% level) signifies that the calculated chi-square value is exceeds the table value, thus, confirming significant association between gender and discomfort or disturbance in work privacy in the post Covid-19 work environment, thus, rejecting $H_0$.

**Table 6. Gender and Virtual Environment Influence on Work Performance**

| Gender | Influence on Work Performance | Total |
|--------|-------------------------------|-------|
|        | Strongly Agree    | Agree | Neutral | Disagree | Strongly Disagree |
| Male   | 1                 | 7     | 11      | 5        | 5                 | 29     |
|        | .2                | 6.8   | 12.8    | 5.1      | 4.1               | 29.0   |
| Female | 0                 | 21    | 42      | 16       | 12                | 91     |
|        | .8                | 21.2  | 40.2    | 15.9     | 12.9              | 91.0   |
| Total  | 1                 | 28    | 53      | 21       | 17                | 120    |
|        | 1.0               | 28.0  | 53.0    | 21.0     | 17.0              | 120.0  |

Hypothesis: $H_0 = \text{There is no significant association between gender and Virtual Work Environment on Work Performance}$

The calculated value of chi-square is 3.742 with four degree of freedom reveals that the table value=9.488 (@ 5% level) signifies that the calculated chi-square value is did not exceed the table value, thus, confirming there is no
significant association between gender and Virtual Work Environment have no impact on Work Performance, thus, accepting H0.

**Table 7. Gender and Job Demand increases Stress and Burnout**

| Gender | Job Demand increases Stress and Burnout | Total |
|--------|----------------------------------------|-------|
|        | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
| Male   | 1             | 6     | 15      | 5        | 2                  | 29    |
| Female | 3             | 20    | 48      | 14       | 6                  | 91    |
| Total  | 4             | 26    | 63      | 19       | 8                  | 120   |

Result

Computed $\chi^2$ value (df)

$\chi^2$: 0.074 (df=4; TV=9.488 (@ 5% level)

Significance (Result)

Sig.: 0.999 (Not Associated)

Hypothesis: $H_0 =$ There is no significant association between gender and Job Demand increases Stress and Burnout

The calculated value of chi-square is 0.074 with four degree of freedom reveals that the table value=9.488 (@ 5% level) signifies that the calculated chi-square value did not exceed the table value, thus, confirming here is no critical relationship among gender and Job Demand builds Stress and Burnout, in this manner, accepting $H_0$.

**Table 8. Gender and Presenteeism**

| Gender | Presenteeism | Total |
|--------|--------------|-------|
|        | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
| Male   | 1             | 12    | 10      | 5        | 1                  | 29    |
|        | .7            | 10.2  | 13.0    | 4.8      | .2                 | 29.0  |
| Female | 2             | 30    | 44      | 15       | 0                  | 91    |
|        | 2.3           | 31.8  | 41.0    | 15.2     | .8                 | 91.0  |
RESULT

| Total | 3    | 42  | 54  | 20  | 1   | 120 |
|-------|------|-----|-----|-----|-----|-----|
|       | 3.0  | 42.0| 54.0| 20.0| 1.0 | 120.0|

\[ \chi^2: 4.668 \ (df=4; \ TV=9.488 \ (@ \ 5\% \ level) \]

Significance (Result) \[ \text{Sig: 0.323 (Not Associated)} \]

Hypothesis: \( H_0 = \) There is no significant association between gender and Presenteeism

The calculated value of chi-square is 4.668 with four degrees of freedom reveals that the table value=9.488 (@ 5% level) signifies that the calculated chi-square value did not exceed the table value, thus, confirming there is no significant association between gender and Presenteeism, thus, accepting \( H_0 \).

**Findings of the Study**

(i) It is observed that 20.8% are in the age 41 to 50 years, 11.7% in the age of 31 to 40 years and 10.8% are in the age over 50 years. 75.8% of the faculties are female and 24.2% are male. 40% of the faculties pursued Doctor of Philosophy (PhD) while, 35.8% are M.Phil. Scholars and 24.2% are pursuing research (Research Scholars after PG or M.Phil.). 60% faculties have less than 5 year’s work experience, 25.8% faculties have 5 to 10 years’ experience and 14.2% faculties have more than 10 years’ experience. 32.5% faculties indicated salary of Rs.30001-Rs.40000, 29.2% faculties opined between Rs.20001 and Rs.30000, 28.3% of the faculties stated up to Rs.20000 per month, and 10% faculties stated more than Rs.40000 per month.

(ii) It is evident that though the faculties engaged in virtual classroom teaching, only marginal impact observed with respect to their job performance and also the increased job demand with limited resources have moderate effect increasing their job stress and burnout. On the other hand, compulsion exists among faculties to be present for teaching even though they feel ill and faculty feel discomfort in their work from home or virtual environment which interferes in their work privacy.

(iii) Based on the results of association between gender and discomfort or disturbance in work privacy perceived by the male and female faculties in which female faculties have strong level agreement than male faculties. Result indicates that, faculties felt that work from home environment leads to discomfort and discomfort in their work privacy in spite of their house hold chores.

**Suggestions**

Work environment plays a significant role in influencing employee satisfaction. In this regard, faculties reveal though they must adapt to the new work environment either from home or college virtual environment, their job
performance is at all-time high; however, their privacy got significantly affected. In this regard, it is recommended that the management shall contribute reasonable compensation to the faculties to balance their work and life therefore, help them achieve the Satisfaction in their job in this crisis (Covid-19) situation. The support provided by the institutions shall make the faculties feel that they are vital resources for the institution which can also significantly enhance their trust and loyalty towards the institution. Further, it is recommended that the faculties may be provided with necessary virtual classroom equipments both hardware and software (laptops, tablets, teaching board, etc.) is the need of the hour which may come in handy to influence their perception based on enhancement in workplace ambience also, encourages the faculties feel they are working in a healthy work environment which is indispensable to motivate them to achieve the expected performance.

Conclusion

It is observed there are numerous studies conducted to find out the influence of work environment on employees satisfaction, however, this study stands unique in all respect considering the place, survey respondents, and the present COVID-19 situation, where the studies are very limited. Though there are four works environment factors such as Discomfort disturbing work privacy, Influence on Work Performance, Job Demand increases Stress and Burnout and finally, Presenteeism in which discomfort and disturbance in privacy is felt among maximum faculties irrespective of their demography (age, gender, etc.). Therefore, it is concluded that the management of the institutions shall provide necessary equipments and support to reduce inconvenience and provide ‘undisturbed virtual classroom atmosphere’ to maintain their performance and productivity.

Declarations

Source of Funding

This research did not receive any grant from funding agencies in the public, commercial, or not-for-profit sectors.

Competing Interests Statement

The authors declare no competing financial, professional and personal interests.

Consent for publication

Authors declare that they consented for the publication of this research work.

References

Abbad, M. M., Morris, D., & de Nahlik, C. (2009). Looking under the Bonnet: Factors Affecting Student Adoption of E-Learning Systems in Jordan. The International Review of Research in Open and Distance Learning.

Abbit, J. T., & Klett, M. D. (2007). Identifying influences on attitudes and self-efficacy beliefs towards technology integration among pre-service educators: Electronic J. for the integration of tech. in Edu., 6: 28-42.

Adams, D. A; Nelson, R. R.; Todd, P. A. (1992), "Perceived u, ease of use, and usage of information technology: A replication", MIS Quarterly, 16: 227-247.
Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl, & J. Beckmann (Eds.), Springer series in social psychology (pp. 11-39). Berlin: Springer.

Akkoyuklu, B. & Soylu, M. Y. (2006). A study on students’ views on blended learning environment. Turkish Online Journal of Distance Education 7(3).

Al-adwan, A., & Smedly, J. (2012). Implementing E-Learning in the Jordanian Higher Education System: Factors Affecting Impact. International Journal of Education and Development using Information and Communication Technology, 8(1): 121-135.

Joseph, E., & Dhanabhakyam, M. M. (2022). Role of Digitalization Post-Pandemic for Development of SMEs. In Research Anthology on Business Continuity and Navigating Times of Crisis (pp. 727-747). IGI Global.

Dhanabhakyam, M., & Joseph, E. Conceptualizing Digitalization in SMEs of Kerala.

Dhanabhakyam, M., & Monish, P. (2021). Impact of Employee Grievance Identification Strategies on Job Performance with Special Reference to Info Park and Techno Park, Kerala. Asian Journal of Managerial Science, 10(1): 33-35.

Hemsley, C. (2002). Jones International University’s focus on quality eLearning opens doors for students worldwide. Business Media, 39(9): 26-29.

Holmes, B. & Gardner, J. (2006). E-Learning: Concepts and Practice, London: SAGE Publications.

Hunsinger, J. (2005). “How to determine your readiness for mobile e-learning. Information policy”. http://ipolicy.typepad.com/informationpolicy/2005/04/how_to_determin.html.

Monish, P., & Dhanabhakyam, M. (2021). Sustainability Strategies for Developing SMEs and Entrepreneurship. In Handbook of Research on Sustaining SMEs and Entrepreneurial Innovation in the Post-Covid-19 Era (pp. 527-547). IGI Global.

Tagoe M. (2012). Students' perceptions on incorporating e-learning into teaching and learning at the University of Ghana Int. J. of Education and Development using Information and Communication Technology, 8(1): 91-103.

Tao, Y. H., Yeh, C. R., & Sun, S. I. (2006). Improving training needs assessment processes via the Internet: system design and qualitative study. Internet Research, 16(4): 427-449.

Twigg C. (2002). Quality, cost and access: the case for redesign. In The Wired Tower. Pittinsky MS (ed.). Prentice-Hall: New Jersey. pp. 111-143.

Ur T.A. & Weggen C.C. (2000). Corporate E-Learning: Exploring a New Frontier, San Francisco, CA: WR Hambrecht and Co. Available from: http://www.spectrainteractive.com