STUDY ON EMPLOYABILITY SKILL GAPS AMONG IT GRADUATES: EXPLORING EMPLOYERS' VIEWS

Ashish Kumar Awadhiya

Abstract

Employers are one of the major stakeholders of higher education and they expect that Higher Education Institutes (HEIs) should provide them with job ready graduates. However, this expectation is not being met and employers are continuously struggling to find suitable graduates with contemporary employability skills. Employers across the globe are facing difficulty in finding graduates with required employability. It is very much importance for the HEIs to regularly interact with employers so that they understand the contemporary demands of the industry and update their curricula and strategies to impart the relevant IT skills to their graduates, so as to make them employable and bridge the employability gaps. This paper aims to analyze views of the employers (N=82) on existence of skill gap between the available employability skills among graduates and the skills desired by the employers. The result of the survey reveals that employers are in the agreement about existence of employability skill gap. It is also observed that there is need of more collaboration between industry and academia to bridge this gap and the higher education system need to adopt alternative strategies to bride this skill gaps. The results also suggest that HEIs need to adopt the strategies suggested by employers as innovative practices in their learner support services.

Key Words: Employability Skills, Employers, Higher Education, Graduates

INTRODUCTION AND RATIONALE

Employers are one of the major stakeholders of higher education and they expect that Higher Education Institutes (HEIs) including Open and Distance Learning (ODL) institutes should provide them with job ready graduates with relevant employability skills. However, this expectation is not being met and employers are continuously struggling to find suitable graduates with contemporary employability skills (Blom & Saeki, 2011; Shah & Nair, 2011; Wye & Lim, 2009). Employers across the globe are facing difficulty in finding graduates with required employability skills and the situation is similar across the countries including India (Awadhiya, 2020a).

After a thorough review of literature on employability skills the author (Suleman, 2018) concludes that employability skills are group of various personal attributes that includes generic and cross functional skills which are required to successfully grab the job and sustain it. These skills are not specific to a particular sector of the industry and also known as transferable skills. Various researchers have studied the Employability Skills in different sectors in different countries.

It is impetus for the HEIs to work towards making their graduates employable and imbibe them with the skills required by the employers. This is also applicable to the ODL institutes, so as to survive in the global competitive world of education.

There is need of improved and continuous dialog exchange among stake holders (industry, academia and learners) regarding expected ES among graduates (Rosenberg et al., 2012). Besides this Indian Information Technology (IT) industry is in its peak and learners are taking IT courses due to availability of the more jobs as compare to other sectors. In case of IT sector, the employers have more emphasis on specific transferrable skills such as learning agility, interpersonal skills, integrity and values, result orientation, higher order thinking skills apart from generic skills (Blom & Saeki, 2011).

Considering the above a survey was conducted to identify the views of the employers on existence of skill gap between the available employability skills among IT graduates and the skills desired by the employers. The survey also collected the views of the employers on how to bridge this employability skill gap, if any.

The findings of this research will help the HEIs to adopt strategies to inculcate the Employability Skills among their IT graduates to bridge the employability skill gap by adopting innovative practices in their learner support practices.

LITERATURE REVIEW

There is a worldwide consensus that undergraduate programmes are unable to fortify the graduate with the skills need for attaining the employment and succeeding in it. There is a great disparity between employability skills among the graduates and what is expected by the industry and employers are dissatisfied with this situation (Patwardhan 2019; Wheebox 2020). HEIs need to prepare their curriculum in such a way that learners are prepared for the future jobs (Calonge & Shah, 2016; Mourshed et al., 2014; Rosenberg et al., 2012)..

There is continuous supply of literature suggesting that HEIs are under immense pressure to supply the work ready graduates. However, graduate's employability skills, economic and social conditions and labour market also contribute for mismatch in demand supply of the work ready graduates (Suleman, 2018).

The incapability of HEIs to inculcate industry required employability skills among its graduates is an outcome of

many factors with include (but not limited to) lack of industry-academia collaboration, rigid academic norms/ hierarchy to embrace the industry requirements, lack of policy, old curricula and consistent change in the industry requirements. The major sufferers of this non-communication between industry and academia are the learners, who enroll in higher education with great aspirations to attain a desirable employment (Blom & Saeki, 2011), however, most of them end-up with not getting the job. It is the moral responsibility of HEIs to bridge the supply of skilled man power to the industry by assessing the industry needs and imparting relevant employability skills among its learners (Calonge & Shah, 2016; Rosenberg et al., 2012).

The very old education system with top-down pedagogical approach has been unable to the meet the demand of the employer. It is also to be noted that even employers have not precisely communicated about required employability skills and their magnitude among graduates to be employed (ibef.org, 2020). However, it is very critical for the HEIs to understand the employers' requirements and it should be a continuous process (Blom & Saeki, 2011).

It is very much importance for the HEIs to regularly interact with employers so that they understand the contemporary demands of the industry and update their curricula and strategies to impart the relevant IT skills to their graduates, so as to make them employable (Miglani et al., 2018). This becomes more critical for the graduates enrolled in the IT field because of its dynamic nature and frequently changing requirements of the employer (Blom & Saeki, 2011; Misra & Khurana, 2017).

Therefore, this above literature suggests that there is need for the institutes of higher education to exchange ideas and indulge in continuous dialogs with the employers to understand their needs. However, this important phenomenon is not taking place in Indian scenario. Indian HEIs need to know the views of the employer's about relevant employability skills and the ways to foster these skills among graduates so as to make their graduates job ready. This study makes an attempt to establish the didactic discourse between employers and academia and add the employers' views to the existing literature.

METHODOLOGY

This research is a part of an integrated study which aims to identify the relevant employability skills for graduates of information technology followed by views of the employers on employability skills among IT graduates. This paper basically discusses a component of later part of the study (views of the employers on employability skills among IT graduates) which explores employers views on strategies to impart various employability skills (relevant for IT graduates).

The study followed the descriptive approach and used survey instrument to collect the data from the employers. The survey instrument was developed and it undergone through the process of content validity which was established by the experts from industry, education, human resources management and psychology followed by reliability. This paper examined the

views of the employers on following two questions:
• Whether skill gap exists between employers' expectations and present level of Employability Skills among IT Graduates?
• What are the strategies to bridge the skill gaps among IT Graduates?

RESULTS AND DISCUSSION

Data received from total 82 respondents was processed for analysis. Results of the analysis of the data received from employers is discussed below.

A. Sector of the Organization

The respondents were asked to provide the sector of their organization. The following table (Table 1) provides categorized information about sector of the organization.

Table 1: Sector of the Organization

Sr. No	Sector of the Organization	Total	Percentage
1.	IT/Software	46	56.1
2.	Education and Training/ online exams	14	17.1
3.	Manufacturing, Retail, E-Commerce, Export	5	6.1
4.	Pharmaceutical/ Chemicals/ Biotechnology/ Health	5	6.1
5.	Electronics and Telecommunication	3	3.7
6.	Power/electrical	3	3.7
7.	Others	6	7.3
	Total	**82**	**100**

The above table indicates that maximum 56.1% respondents were from the IT/ Software sector followed by 17.1% from the sector belonging to Education and Training/ online exams. The table further indicates that total 6.1% respondents were from Manufacturing, Retail, E-Commerce, Export and Pharmaceutical/ Chemicals/ Biotechnology/ Health sector each. Total 3.7% respondents were from Electronics and Telecommunication sector and Power/ electrical sector each. There were 7.3% respondents who were from other sectors such as health, airline, banking and finance, cooperative, solar energy and men-power supply.

It is important to mention that now a days IT is an indispensable field and each sector deploy IT services in their processes and workflow. Responses from diversified sector also indicates that IT graduates are being employed in almost all the sectors of the industry. A good number of respondents from Education and Training/ online exams is an indicator of increasing use of IT services in the field of education. This number might be significantly increased during COVID-19 and expected increase exponentially. Increased use if IT enabled services across the industry sectors can also be validated by significant demand of IT graduates post COVID-19.

B. Whether skill gap exists between employers' expectations and present level of Employability Skills among IT Graduates?

In this question the employers were asked to provide their views on existence of employability skill gaps among fresh IT Graduates on five-point Likert scale. The Likert scale criterion were under five categories: 1= 'Strongly Agree', 2= 'Agree', 3= 'Not Sure', 4= 'Dis-agree' and 5= 'Strongly Dis-agree'.

The following table (Table 2) provides employers views on existence of employability skill gaps among fresh IT Graduates.

Table 2: Existence of Employability skill Gaps

		Strongly Agree	Agree	Not Sure	Dis-agree	Strongly Dis-agree	Total	Mean	SD
Existence of Employability Skill Gaps	N	25	45	8	4	0.0	82	4.1	0.8
	%	30.5	54.9	9.8	4.9	0.0	100		

The above table indicates that's total 54.9% employers were agree on existence of employability skill gaps among fresh IT Graduates. This trend is followed by around 30.5% employers who were strongly agree on this statement. There were 9.8% employers who were not sure about existence of employability skill gap. Total 4.9% employers were dis-agreed about this statement. None of the employers were strongly disagreed on existence of employability skill gaps among fresh IT Graduates.

Accordingly, it can be stated that total 85.4% employers strongly agree and agree that there is employability skill gap among fresh IT Graduates. However, 9.8% and 4.9% employers were not sure and disagree on this respectively. The mean value of existence of employability skill gaps among fresh IT Graduates was found to be 4.1. This value clearly discloses employers' perceptions towards existence of employability skill gaps.

Very significant percentage of employers are on consensus that there is an employability skill gap among fresh IT graduates and employers are unable to find the quantity and quality of employability skills among them. This result validates that fact that IT graduates coming from the colleges do not meet the employer's expectations. Very less proportion of employers indicated that they there is no employability skill gap and graduates are fit-for the job in terms of employability skills.

The results of this question are aligned with the global trends (Awadhiya, 2020b; Hamori, 2017; Savino, 2014) that employers are facing difficulty in finding graduates with required employability skills and there is a big disparity between employability skills among the graduates and the skills desirable by the employers. This situation is leading towards making the employers unsatisfied with the HEIs and the fresh graduates.

On other hand the employers who are 'Not Sure', 'Disagree' and 'Strongly Disagree' about the existence of skill gaps among the graduates they had recruited; needs to be investigated in more details about their recruitment process, type of the HEIs from where they are hiring the graduates and the level of the skills they expected from the fresh graduates. These employers can provide significant insight on how they are looking at the employability skills and they are successful in finding job ready graduates. HEIs needs to make insightful dialogs with such employers so as to make their graduates job ready.

Overall, there is a need to establish continuous dialogue and collaboration between industry and academia to meet the dynamic demands of the employers.

C. What are the strategies to bridge the skill gaps among IT Graduates?

The respondents were asked to identify the strategies to bridge the employability skill gaps among fresh IT graduates. The following table (Table 3) depicts strategies to bridge the employability skill gaps identified by the employers.

Table 3: Strategies to bridge Employability skill Gaps

Sr. No.	Strategies to bridge Skill gaps	Responses	Responses %
1.	Through incorporating soft skills in the curriculum	53	64.63
2.	Through on job Training	66	80.49
3.	Through Online Trainings	33	40.24
4.	Through Online courses	24	29.27
5.	Through specific training as per the need	43	52.44
6.	Through Internship	46	56.10

Note: Total Value of N is more than 82, because respondents have selected more than one options.

Data from the above table is described below:

Maximum 80.49% employers indicated that employability skill gap among fresh IT graduates can be bridged through 'on-job training'. Total 64.63% employers suggested that this can be done through 'incorporating soft skills in the curriculum'. Total 56.10% employers preferred 'internship' followed by 52.44% employers preferring the strategy 'specific training as per

the need' to bridge the employability skill gaps. Technology enabled strategies to bridge the employability skill gap like 'online training' and 'online courses' was advised by 40.24% and 29.27% employers respectively.

The data indicates that most of the employers are preferring 'on-job training as best method to train the employees to make them job ready instead of the fact that this involves a cost and incubation time. This also indicate that they do not have full confidence on existing curriculum and educational institutes about their capacity to impart the desired skills among their graduate. That is why employers still believe that the employability skills should be taught through embedding them into the graduate curriculum.

The data also reveals that industry is looking at HEIs and policy makers for significant reforms in their traditional ways of imparting skills among the learners. They are also willing to share these responsibilities by providing skill training through 'On job' mode and through 'internship". However, this needs more and more collaboration between industry and academia and require policy level interventions since on-job-training and internship is not very easy in Indian industry. Employers should come out from the cost cutting mindset and they should help the leaners in fostering employability skills. Employers should consider their employees as 'Human Asset' rather than 'Human Resource'. With this considerations employer will trust their employees and help them in their continuous learning and career development opportunities.

Interestingly, technology-enabled training and teaching methods like online trainings and online courses were not popular among the employers. It may be possible that these methods are not yet fully explored in India.

Employers have also suggested use of Massive Open Online Courses (MOOCs), industry-academia joint venture, industry exposure of the graduates during the course, curriculum reforms, initiation of skill-based course by the colleges to impart employability skills among the graduates.

Apart from above following specific statements were provided by the employers.

- "There is a big need to bridge the gap between the industries requirement and the curriculum."
- "Govt. need to intervene and develop institutes for proper training of the graduates."
- "This is very important at this time. Employability skills needs to be developed"
- "Need to be trained on latest skills."
- "It is very difficult to get these skills in the graduates. Needs lots of improvements"
- "Universities are unable to fill this gap. Need a govt intervention."

These statements indicate that employers are finding it difficult to find the relevant employability skills among the graduates and they seek towards HEIs and Govt. to fulfil this.

Strategies suggested by the employers to bridge the employability skill gap in this study are similar with the other research reports. All these empirical researches (Bhatnagar,

2020; Noll & Wilkins, 2002; Verma et al., 2018; Wye et al., 2009) have reported similar views of the employers for bridging the employability skill including employers from the developing countries like India and Bangladesh. However; in context to India MOOCs are very suitable (Awadhiya, 2020b; Radford et al., 2014; Savino, 2014) and the model for integrating skill development (Awadhiya & Kanjilal, 2019) through MOOCs can be adopted for better outcome.

CONCLUSION

The above discussion concluded that employers or not satisfied with the available employment skills among the graduates and they expect from higher education institute to inculcate the desired employability skills among their graduates. There is an immediate need of continuous dialogue and collaboration between industry and academia to understand what industry wants from the them. Employers also indicated that traditional approaches of skill development will not meet the required demand of the industry. Employees are emphasizing that higher education Institute should adopt in innovative ways of skill development so as to make their graduates job ready.

Employers question the academic curriculum and programme delivery mechanism for the employability skill gap and they convey that higher education system is supply dominated rather than demand driven. Higher education system is unanimously blamed for this gap and it is expected that the HE institutes need to work rigorously to bridge this mismatch. They need to know the programme specific employability skill and develop these skills among their graduates so as to bridge this mismatch. HEIs and Employers need to adopt innovative and technology driven such as MOOCs to imbibe employability skills among learners.

However, HE system alone (due to its own limitations) is not responsible for bridging the employability skill gap and it is the collective responsibility of employers, learners, society and the policy makers and implementers.

Online trainings and online courses are need the hour and employers (although comparatively less in numbers) are considering them as one of the important modes for imparting skills to the learners. Again, it needs reforms in the approaches of the academic world and policy makers to provide the relevant trainings and courses for skill development. Employees are emphasizing that higher education Institute should adopt in innovative ways of skill development so as to make their graduates job ready.

Traditional methods of skill development are incapable to bridge this demand supply gap due to limited of infrastructure, human resource, diversified regional needs, huge number of learners and enormous cost involved in it. At the same time India is a country with huge diversity in terms of language, geography and socio-economic conditions which makes conventional methods of skill developments to be unfeasible. Learners of each state need specific skills as per the industries in their region. All these factors (most common in developing countries like India) stipulate to explore innovative solutions to impart customized skills on 'just in time' manner to the masses (Awadhiya & Kanjilal, 2019).

Limitations of the Research: This study was limited to Employers from Delhi-NCR Region.

REFERENCES

1. Awadhiya, & Kanjilal, U. (2019). Skill Development through MOOCs: An Indian Initiative. International Conference on Open and Innovative Education (ICOIE), 525–534.

2. Awadhiya, A. K. (2020a). Identifying Graduate Employability Skills: A Case of IT Graduates in India. Global Journal of Enterprise Information System, 12(3), 48–55. https://doi.org/10.18311/gjeis/2020

3. Awadhiya, A. K. (2020b). Addressing Employability Skills Gaps: Study of Indian MOOCs. EduTech-EJournal of Education and Technology, 2020. http://www.edutech.net.in/EduTechViewArticle.htm?Issue=2020&Article=ART00007

4. Bhatnagar, N. (2020). Employability and skill gap among MBA graduates in India: a literature review. In Industrial and Commercial Training, 53(1), 92–104. Emerald Group Holdings Ltd. https://doi.org/10.1108/ICT-10-2019-0098

5. Blom, A., & Saeki, H. (2011). Employability and Skill Set of Newly Graduated Engineers in India. World Bank Policy Research Working Paper 5640 http://econ.worldbank.org.

6. Calonge, D. S., & Shah, M. A. (2016). MOOCs, graduate skills gaps, and employability: A qualitative systematic review of the literature. International Review of Research in Open and Distance Learning, 17(5), 67–90. https://doi.org/10.19173/irrodl.v17i5.2675

7. Hamori, M. (2017). The drivers of employer support for professional skill development in MOOCs. Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 10254 LNCS, 203–209. https://doi.org/10.1007/978-3-319-59044-8_24

8. ibef.org. (2020). IT & BPM Industry in India: Market Size, Opportunities, Growth, Report. IBEF. https://doi.org/https://www.ibef.org/download/IT--BPM-June-2020_3.pdf

9. Miglani, A., Awadhiya, A. K., Singh, N., Gowthaman, K., & Kansal, G. (2018). Policy Recommendations from Employers for Enhancing Skills through ODL. Turkish Online Journal of Distance Education, 19(4), 64–75.

10. Misra, R. K., & Khurana, K. (2017). Employability Skills among Information Technology Professionals: A Literature Review. Procedia Computer Science, 122, 63–70. https://doi.org/10.1016/j.procs.2017.11.342

11. Mourshed, M., Patel, J., & Suder, K. (2014). Education to employment: Getting Europe's youth into work. McKinsey & Company. https://www.partners4value.lt/wp-content/uploads/2015/10/Education-to-employment-Getting-Europes-youth-into-work.pdf

12. Noll, C. L., & Wilkins, M. (2002). Critical Skills of IS Professionals: A Model for Curriculum Development. In Journal of Information Technology Education, 1(3), 143–154. https://jite.org/documents/Vol1/v1n3p143-154.pdf

13. Patwardhan, B. (2019). Indian Universities and Industry 4.0: Challenges and Opportunities. University News, 57(45), 25–29.

14. Radford, A. W., Robles, J., Cataylo, S., Horn, L., Thornton, J., & Whitfield, K. (2014). The employer potential of MOOCs: A mixed-methods study of human resource professionals' thinking on MOOCs. International Review of Research in Open and Distance Learning, 15(5), 1–25. https://doi.org/10.19173/irrodl.v15i5.1842

15. Rosenberg, S., Heimler, R., & Morote, E. (2012). Basic employability skills: A triangular design approach. Education + Training, 54(1), 7–20. https://doi.org/10.1108/00400911211198869

16. Savino, D. M. (2014). The Impact of MOOCs on Human Resource Training and Development. Journal of Higher Education Theory and Practice, 14(3), 59–64. http://digitalcommons.www.na-businesspress.com/JHETP/SavinoDM_Web14_3_.pdf

17. Shah, M., & Sid Nair, C. (2011). Employer satisfaction of university graduates: Key capabilities in early career graduates Category: Research. Teaching and Learning Forum 2011. Perth: Edith Cowan University. http://otl.curtin.edu.au/tlf/tlf2011/refereed/shah.html

18. Suleman, F. (2018). The employability skills of higher education graduates: insights into conceptual frameworks and methodological options. Higher Education, 76(2), 263–278. https://doi.org/10.1007/s10734-017-0207-0

19. Verma, P., Nankervis, A., Priyono, S., Moh'D Saleh, N., Connell, J., & Burgess, J. (2018). Graduate work-readiness challenges in the Asia-Pacific region and the role of HRM. Equality, Diversity and Inclusion, 37(2), 121–137. https://doi.org/10.1108/EDI-01-2017-0015

20. Wheebox. (2020). India Skills Report 2020. https://wheebox.com/assets/pdf/ISR_Report_2020.pdf

21. Wye, C.-K., Tunku, U., Rahman, A., & Lim, Y.-M. (2009). Perception Differential between Employers and Undergraduates on the Importance of Employability Skills. International education studies, 2(1), 95-105. https://files.eric.ed.gov/fulltext/EJ1065483.pdf

AUTHOR

Ashish Kumar Awadhiya, Asst. Director, Training and Development, Centre for Online Education, (COE), Block-17, R. No. 6 Indira Gandhi National Open University (IGNOU), Maidan Garhi, New Delhi – 110 068
Email: akawadhiya@ignou.ac.in