

POLICY RECOMMENDATIONS FROM EMPLOYERS FOR ENHANCING SKILLS THROUGH ODL

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ABSTRACT

This paper aims at seeking recommendations for the Open and Distance Learning (ODL) policy from the industry to ensure learners graduating from ODL system are employable and are at par with those who have graduated from conventional system. Survey from total 97 employers spread over 7 industry sectors indicated that policy intervention is required to enhance skill development through ODL. This will enable ODL system and its learners to overcome major challenges related to credibility and recognition. These recommendations stressed on enhancing the quality of ODL education and skill development through collaboration between academia and industry and use of technology.

It is highly advocated that government agencies should ensure that quality parameters like recognition, accreditation, industry relevant curricula, be implemented and fulfilled by ODL institutions as well. Apart from the core subject knowledge, employers also stressed upon the need to foster employability skills such as problem solving, critical thinking etc. in the curriculum. Both the quality of ODL programmes and its linking with skill development will enable ODL system to bridge the gap between demand and supply of skilled manpower.

The herculean task of skilling millions of people in India can be achieved through collaboration and use of technology. Collaboration is the key factor to bring about synergy between academia and industry. It will enable the learners' job ready and give productive output at their work places, there by contributing to the economic development of the country. Alliance will also provide learners a smooth transition from learning to earning.

Keywords: ODL, skill development, industry, employment, policy.

INTRODUCTION

India is a country with significant knowledge economy and availability of human resource at all the levels. However, India still lacks skilled human resource despite having huge work force (Mohapatra and Mahapatra, 2016). It is therefore important that policy makers must focus on imparting the relevant and quality skills as they provide better employment opportunities (Aggarwal, 2016). It will improve the capability of the present system and will enable to meet the demand supply gap in the emerging globalized economy.

In recent years the Indian policy makers are aiming towards making India as a biggest skilled human resource supplier to the global economy (FICCI, 2015). National Policy on Skill Development was formulated to address different challenges in skill development. The government has also listed skill development as one of its priorities which aims to enhance participation of youth, seek greater inclusion of women, disabled and other disadvantaged sections into the workforce.

The National Skill Development Mission, titled as 'Skill India', under the Ministry of Skill Development and Entrepreneurship (MSDE) is supported by three other institutions: National Skill Development Agency (NSDA), National Skill Development Corporation (NSDC), and Directorate General of Training (DGT). The Mission has been developed to create convergence across sectors and States in terms of skill training activities. Seven sub-missions have been proposed initially to act as building blocks for achieving overall objectives of the Mission. They are: (i) Institutional Training, (ii) Infrastructure, (iii) Convergence, (iv) Trainers, (v) Overseas Employment, (vi) Sustainable Livelihoods, (vii) Leveraging Public Infrastructure. (http://www.skilldevelopment.gov.in/national_skillmission.html)

Skill Development in India has its own set of challenges. Since, skill development in India does not show the inherent linking with academia and industry, there is a gap between skills required by the industry and those imparted through the educational and training institute due to lack of collaboration and interaction. Moreover, vocational institutes in India focus mainly to impart technical skills only. This leads to unemployable graduates. Dissatisfied with the current educational deliverable, many companies have made their own Training, Research and Development centers through which they develop human resource. Though the Skill Development also focuses on the Public Private Partnership (PPP) Model there is lack of synergy among Indian formal education system, skill development environment and industry requirement (Sharma and Nagendra, 2016).

With changing global economic environment, there is intense need to incorporate dynamic changes in the skill development system of India. This may be done by making skill development an integral part of the educational curriculum and life long learning. This can be achieved most effectively only by the active involvement of the industry in the curriculum development and apprenticeship training.

Moreover, formal education system has the limited capacity to bridge the demand supply gap in skill development for large population of India due to inadequate infrastructure constraint in comparison to huge demand of labour. The problem of insufficient infrastructure is same in big cities as well as small towns and villages. There aren't many trained and highly skilled trainers available either, which further make skill development a big challenge.

In such scenario, Open and Distance learning (ODL) has the potential to impart training and skill development in India as it has the capability to reach to the masses. ODL can contribute towards Technical and Vocational Education and Training (TVET) to the large section of the society especially those, who in the normal course is beyond the umbrella of higher education. Skill development through ODL is also the need of time due to requirement of on-job learning to keep pace with changing technologies. Therefore, there

is a need for collaboration with industry/ employer to establish a robust system for skill development through ODL.

There have been several case studies in which collaboration with industry especially technical courses have yielded significant results. Indira Gandhi National Open University (IGNOU), the largest Open University in the world launched Bachelors of Science (B.Sc.) degree programme in collaboration with Director General of Shipping (DGS) in 2004 in order to develop human resource for the career in Merchant Navy. Total 3147 learners were enrolled in this programme between 2007-10 (IGNOU, 2017). The employability of the learners after the course completion was found to be hundred percent.

On similar lines, the Advanced Certificate in Power Distribution Management (ACPDM) programme was developed by IGNOU in collaboration with the Ministry of Power for professionals employed in electrical power utilities or electricity sector to upgrade their skills. More than 3500 learners were trained under this programme between 2006-2015 (IGNOU, 2017).

Such experiments of collaborative initiative clearly demonstrate the viable model for skill development which not only assures employability to learners but also a rewarding manpower to the industry. However, TVET through ODL is going through its own challenges like credibility and recognition issues due to various reasons (Mishra & Bartram, 2002). In case of India education, skill development and employment are no where whether it is imparted through ODL mode or conventional Face to Face mode. In such a scenario, a policy intervention is needed to build the collaboration between institutions (be it ODL or conventional system) providing skill development and employer. This could be only possible if a national qualification framework be developed which comprises of the stakeholders from the academia, employers and skill development. Such a framework will ensure parity and recognition among the two education system. This paper aims to seek recommendations in the ODL policy from the industry to ensure learners graduating from ODL system are employable and are at par with those who have graduated from conventional system.

METHOD

The purpose of this study was to seek recommendations in the ODL policy from the industry to ensure learners graduating from ODL system are employable and are at par with those who have graduated from conventional system. This study was survey research under quantitative research method which falls under category of descriptive research. The deliberate of the descriptive research studies are to acquire information related to present status of a given event. The descriptive research is to explore "what exists" with respect to variables or conditions in a situation. While conducting descriptive research there is a need to identify the type of data obtained and exact nature of its population (IGNOU, 2001).

The survey was developed to collect inputs from employers. It was reviewed for content validity by experts in the domain of ODL. After incorporating the comments and suggestions from the reviewers the questionnaire was tested for its reliability through test-retest method. The final questionnaire consisted of five items to evaluate the recommendations given by the employers. The survey questionnaire was administered online to collect the data.

RESULT AND DISCUSSION

Ninety-seven (97) employers in total responded to the survey. The data was analyzed under the following two main heads:

- Employers' profile and
- Recommendations from the employers.

Employers' Profile

Employers' profile was analysed based on their business domain and the employee size of the business/ organisation/ company.

Business Domain

The business domain of the employers who responded is given in Table 1.

Table 1. Business Domain of the Employers

S. No.	Business Domain	No. of responses	Response %
1	Education, Training and R&D	33	34.02
2	Information Technology	14	14.43
3	Defense	8	8.25
4	Manufacturing	7	7.22
5	Services	4	4.12
6	Engineering	2	2.06
7	Government	2	2.06
8	Others	10	10.31
9	Unanswered	17	17.53
Total		97	100

According to the survey, as presented in Table 1, 34% of employers belong to academic domain such as Education, Training and Research and Development. 14% of employers were from Information Technology domain. 34% employers belong to various sectors comprised of Defense, Manufacturing, Services, Engineering and Government. While 18% employers did not respond to it.

Size of the Business/Organisation/Companies

The size of various organisation/ companies from which employees responded could be estimated from the number of employees which is provided in Table 2. According to the table, 34% of the employers had small size of business with less than equal to 25 employees. While, 26% of employers had large business size with more than one thousand employees on the roll. Remaining 40% had medium size business whose employees varied between 26 to 1000 in numbers.

Table 2. Number of Employees on roll

S. No.	No. of Employees	No. of responses	Response %
1	<=25	33	34.02
2	26-100	20	20.62
3	101-1000	19	19.59
4	>1000	25	25.77
Total		97	100.00

Recommendations from Employers

Recommendations from Employers were received in the areas of Skill Development and its driving forces, areas for collaboration and overall improvement of quality of ODL.

Skill Development

Employers strongly seek academic credentials and subject knowledge for all type work profile. It is also important for employers that employee should be equipped with professional skills such as oral and written communication, collaboration and teamwork, and critical thinking and problem-solving, along with innovative and entrepreneurial thinking and the ability to contribute to multidisciplinary teams which are very critical to work in the corporate sector (Council of Graduate Schools and Educational Testing Service, 2012).

According to the survey, most important recommendation of the employers was to stress upon the Skill Development reforms. Life skills required in employable graduates by employers are given in Table 3. 86.75% of employers were of the opinion that it is important for ODL graduates to be competent in life skills like communication, critical thinking skills, problem solving skills and many more.

All these skills are termed as soft or professional skills. In this competitive job market, recruitment criteria do not end at qualification or technical level. Presence of soft skills in the prospective employee gives an edge of others candidates. Recruiters are also interested in people who have the personality that reflect leadership, team work spirit, good communication etc. Soft skills are also important while dealing with clients as well as interacting with colleagues. Soft skills are valued as they enable people to work in teams while maintaining a productive and healthy work environment in organisations as a whole (Robles, 2012).

By developing these skills, their prospects of getting employment and further rise in the career path may be augmented in their respective job domains. Communication skill (95.88%) was ranked as the most important skills which is required among job seekers. Apart from communication, other important skills were creative thinking (92.78%), problem solving (92.78%) and planning skills (91.75%).

Literature suggests that ODL has the inherent potential to inculcate communication skills (like listening, reading, writing and oral skills), intellectual skills (reasoning abilities) and specialized skills (scientific and technological abilities as well as management skills). The distance learning institutions does not offer classroom-based instructions as in conventional education system. Distance learning involves geographic separation of teachers and students., however, there is constant academic interaction through the use of various technologies to facilitate student-teacher and student-student communication. These days however, various means of electronic communications, such as e-mail, mobile phones are used, over traditional forms of communication, such as the postal system. This leads learners to keep working up their reading, listening as well as writing skills in order to communicate effectively. Learners also need to go through their study material materials independently apart from their responsibilities at home or at office which makes good at multi-tasking and managing their commitments. There is no better way to impart management skills than the real life challenges and targets in front of learners. The requirements of these skills for the job seekers have also been highlighted by Gauvreau *et al.*, 2016. Besides imparting the skills ODL also empowers its learners with decision making, taking responsibilities and ability to make informed choices (IGNOU, 2013). It was further demonstrated that these skills can effectively be imparted through technological intervention. Therefore, we can say that ODL can develop these skills as effectively as any formal system.

Table 3. Skills required for employability

S. No.	Responses	No. of responses	Response %
1	Communication skills	93	95.88
2	Problem solving skills	90	92.78
3	Creative thinking	90	92.78
4	Planning skills	89	91.75
5	Teamwork	87	89.69
6	Decision making skills	84	86.60
7	Multitasking	83	85.57
8	IT Skills	81	83.51
9	Ability to apply knowledge to real world settings	81	83.51
10	Leadership skills	80	82.47
11	Analytical thinking Skills	80	82.47
12	Global perspective	80	82.47
13	Critical thinking Skills	76	78.35

** Respondents may select more than one option, so percentages may add up to more than 100%.*

Driving Forces for Skill Development

Having discussed about skill development to improve employability among ODL graduates, it is also important to learn and understand its driving forces from the perspective of employers. According to the survey, employers feel that the key to effective skill development among learners is the collaboration. As per Table 4, 93.8% employers have the opinion that collaboration between industry and academia is the key factor to bring about synergy between academia and industry. Academia need to understand the skill set which is required in the coming time. It is very important for the academia to develop a course curriculum which is relevant to the changing industry need or else it can create gap resulting in unemployable youth. Collaboration also enhances the quality of education which can be gauged through the employability quotient of the institute. Industry led training will make the learners' job-ready and give productive output at their work places, thereby reducing the cost of training after recruitment. It will therefore contribute to the economic development of the country. Alliance will also provide learners a smooth transition from learning to earning. Thus pro-active involvement of industry with academia is a profitable proposition for both stakeholders. Various areas in which collaboration can take place has been listed in Table 5.

Apart from collaboration, another important force which leads to skill development is the use of technology. Technology has been credited by 75.3% of employers for bringing momentum which can skill millions of people in the country. As technology is advancing, its costs are dropping. It has become cheaper and thus more affordable to low-level income group. This has increased its penetration in the society. According to the study conducted

by Author, 2014, ICT infrastructure is not a constraint at learner level as most of them are equipped with one or more ICT based devices.

Social networking using technology has redefined collaboration like never before. Social media such as blogs, wikis, Skype or Google Hangout, Facebook; WhatsApp have become a global platform for learners discuss, learn and enrich their learning experience through shared interaction. Interactivity of these media has made tremendous contribution in bridging the gap between teachers and learners (Mnkandla and Minnaar, 2017). Hence, there is a need to generate ICT based tutorials complemented with social networking tools for learning and teaching process in order to achieve skill development goals.

Mobile learning (m-learning) is further revolutionizing the education by providing 'Just in time' learning that will provide ready access to knowledge. m-learning has the potential to engage the learner to a greater extent. It enhances the collaboration and didactic conversation, thereby reducing the feeling of isolation for learners in an ODL system (Author, 2017). However, m-learning is still at its nascent phase and hence facing several challenges like lack of support for instructional design for m-learning; lack of institutional policy for m-learning, lack of infrastructure/technological support. It is therefore important for institutions to adopt policy to implement m-learning in order to provide a guiding framework to develop implement it successfully (Author, 2016).

Another education technology, Massive Open Online Courses (MOOCs) has opened educational avenues by providing learning experience to those who cannot afford to attend universities, resulting in large number of enrolments across the globe. With the development of MOOCs, it has becoming much easier, affordable and flexible way to provide access to the quality learning resources cutting across geographical barriers (Gamage, *et al.*, 2016).

The project, 'Study Webs of Active Learning for Young Aspiring Minds' (SWAYAM) has been initiated by Ministry of Human Resource Development (MHRD), Government of India. SWAYAM aims at bridging 'Digital Divide' providing an integrated portal for online courses, from High School till all higher education and skill sector courses to ensure that students get access to quality learning material through ICT and opportunities for a life-long learning. (<https://swayam.gov.in/About>)

However, the success of MOOCs is still questionable. Despite large number of enrollments, MOOCs is facing immense dropouts during the course delivery.

Table 4. Driving Forces for Skill Development

S. No.	Responses	No. of responses	Response %
1	Collaboration between industry and academia	91	93.8%
2	Use of technology	73	75.3%

** Respondents may select more than one option, so percentages may add up to more than 100%.*

Areas for Collaboration

Employers have recommended various areas where collaboration can be carried out between industry and academia. These areas are listed in Table 5. According to the table, the most important area of collaboration is to provide employment to the learners after the completion of the course (77%), followed by collaboration while initiating a new programme as per industry needs (74.3%) and hands-on experience and training (74.3%).

While, it is important for employers to seek fresh graduates, it is extremely important that employers too have a say in the initiation of new programmes and designing of the curriculum. This shall enable development of industry relevant programmes. Such type of

collaboration will reduce the gap between what is taught and what is used in the real life scenario. Hands on training, in consultation or in collaboration with industry at the time of education will make learners' job ready and enable them to give productive output at their work places, there by contributing to the economic development of the country. Such type of alliance will also facilitate learners in providing learners a smooth transition from learning to earning.

Table 5. Areas for Collaboration

S. No.	Areas of collaboration	No. of Responses	Response %*
1	Providing employment to learners after course completion	57	77.0%
2	Initiating a new programme	55	74.3%
3	Providing hands-on experience and training	55	74.3%
4	Framing the curriculum	48	64.9%
5	Providing internship and income	47	63.5%
6	Developing the delivery mechanism	43	58.1%
7	Designing the instruction	42	56.8%

** Respondents may select more than one option, so percentages may add up to more than 100%.*

Recommendations from Employers for Improvement of Quality of ODL

Employers strongly feel that ODL has got immense potential to reach the masses across location, culture, perception, age, gender and time in a cost effective way. It is the answer to the challenges which convention higher education is facing today. It is therefore important to regularize and introduce reforms to preserve and revitalize ODL through policy interventions. Recommendations from employers stressed upon the quality of ODL education.

The quality can be regulated with the support of the government through (a) regulatory collaboration between various regulatory agencies like University Grant Commission (UGC), All India Council for Technical Education (AICTE) etc., to support and strengthen ODL (b) accreditation of ODL institutes to maintain quality and (c) recognition of degrees. Collaboration will bring together leaders in the field of Open and Distance Education for a comprehensive overview of this rapidly expanding system of Education, Training and Research & Development.

With advancing globalization, accreditation and standards have become an integral part of Higher Education. For this purpose, there is a need to develop a system of accreditation for ODL institutes and programmes offered by them. It is important to deliberate on the strategy to identify broad parameters for quality assurance of various systems and sub-systems of ODL for the purpose of accreditation. Accreditation can meaningfully bring quality in ODL and enable ODL system to address the challenge of recognition of degrees. It will be a great step towards bringing ODL at par with the mainstream Higher Education System and contribute to the national agenda. It will foster democratization of Higher Education due to which ODL was primarily conceived.

CONCLUSION

This research study has highlighted the major aspects to be looked upon for improving the skill development through ODL system. Employers, being an important stakeholder needs to be taken into consideration for introducing and implementation of reforms. In developing countries like India there is a stigma in the industry with the Technical and

Vocational Education Training obtained through ODL. There is a need to change the mindset of the industry which is so used to age's old formal education system. However, this apprehension of the industry can be changed through

- Policy intervention from the policy makers
- Seeking the employers view in policy forming
- Introducing industry relevant programmes
- Involving the employers during curriculum planning and development. This will also help them to understand the ODL system.
- Incorporating appropriate technologies
- Incorporating hands-on and apprenticeship
- Inbuilt quality control and quality assurance

It is suggested that government agencies should implement recognition, accreditation, and industry relevant curricula. Professional skills should be made an integral part of academic programmes to make the learners job ready. Both the quality of ODL programmes and its linking with skill development will enable ODL system to bridge the gap between demand and supply of skilled manpower. Employers were also positive about the use of technology for imparting skills.

Cooperation and collaboration are known for facilitating and implementing ideas in a meaningful way however it is one of the most challenging aspects in an organizational functioning. Policy intervention at government level is much needed call of the time for ODL system. While it is important for the system to work towards the quality of education, it is also important to rope in hands-on experience and training within the curriculum so that life skills required in the jobs can be developed. ODL institutions need to collaborate and use technology for the skill development of ODL graduates and raising their employability quotient.

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REFERENCES

Aggarwal, S. (2016). Central pillar of employability: Skill development. *Imperial Journal of Interdisciplinary Research*, 2(3).

Awadhiya, A. K., Miglani, A., Gowthaman, K. (2014). ICT Usage by Distance Learners in India. *Turkish Online Journal of Distance Education*, 15(3), 242-253.

Awadhiya, A. K., Miglani, A. (2016). Mobile Learning: Challenges for Teachers of Indian Open Universities. *Journal of Learning for Development-JL4D*, 3(2), 35-46.

- Council of Graduate Schools and Educational Testing Service. (2012). Pathways through graduate school and into careers. Report from the Commission on Pathways Through Graduate School and into Careers. Princeton, NJ: Educational Testing Service. Retrieved from http://www.pathwaysreport.org/rsc/pdf/19089_PathwaysRept_Links.pdf**
- FICCI, 2015. Skill Development in India 2015. http://www.kas.de/wf/doc/kas_42848-1522-2-30.pdf?151016072126**
- Gamage, D., Perera, I., & Fernando, S. (2016). Improving effectiveness of MOOCs. Asia-Pacific Society for Computers in Education All rights reserved. Asia-Pacific Society for Computers in Education. ISBN 9789868473584, 5.**
- Gauvreau, S. A., Hurst, D., Cleveland-Innes, M., & Hawranik, P. (2016). Online professional skills workshops: Perspectives from distance education graduate students. *The International Review of Research in Open and Distributed Learning*, 17(5).**
- Government of India- Ministry of Human Resource Development <https://swayam.gov.in/About>. (accessed on 19 Jul 2017)**
- Government of India- Ministry of Skill Development & Entrepreneurship. <http://www.skilldevelopment.gov.in/nationalskillmission.html> (accessed on 11 Feb 2017)**
- IGNOU, 2017. Three Decades of Distance Education. Planning & Development Division, IGNOU, New Delhi, ISBN 978-93-86100-71-9, 70pp.**
- IGNOU, 2013. Social Credibility and Justice, MDE-411, Basic Issues of Open and Distance Education, New Delhi: STRIDE, IGNOU, 35.**
- IGNOU, (2001). Research Methods for Distance Education. ES-315 Research for Distance Education, New Delhi: STRIDE, IGNOU, 70-96.**
- Miglani, A., Awadhiya, A. K. (2017). Mobile learning: readiness and perceptions of teachers of Open Universities of Commonwealth Asia. *Journal of Learning for Development-JL4D*, 4(1), 58-71.**
- Mishra, A. K., & Bartram, J. (2002). Skills development through distance education. Commonwealth of Learning, Vancouver.**
- Mnkandla, E., & Minnaar, A. (2017). The Use of Social Media in E-Learning: A Metasynthesis. *The International Review of Research in Open and Distributed Learning*, August, 18(5), <http://www.irrodl.org/index.php/irrodl/article/view/3014/4273> (accessed on 2nd Jan 2018).**
- Mohapatra, B., & Mahapatra, S. K. (2016). Gender, Skill Development and Employability: The Context of Open and Distance Learning Perspective in India.**
- Robles, M. M. (2012). Executive perceptions of the top 10 soft skills needed in today's workplace. *Business Communication Quarterly*, 75(4), 453-465.**
- Sharma, L. & Nagendra, A. (2016). Skill Development in India: Challenges and Opportunities. *Indian Journal of Science and Technology*, Vol 9(48), 1-8.**