Role of Government and Academia in the Promotion of **Open Online Course for Skill Development for Rural** Youth of India

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Abstract - India is the second largest populated country in the world essentially with a demographic profile of 550 million below the age of 25. Despite the huge population the necessity of a huge skilled & strong work force for the economical development of the country is mandatory. As declared by NSDC (National Skill Development Corporation, Government of India) 10 % of the workforce receives some kind of skill training out of which 2% is formal and 8% is informal which is far behind than US & UK where the same is 53% & 68% respectively. The government of India has been deriving strategies, policies and implementing them successfully from time to time to tackle the issue. The report card of NSDC (National Skill Development Corporation, Government of India) has revealed that out of 20, 67,899 trained candidates in various sectors, 4, 51,845 have been placed. At the current pace of the population growth, India will attain 1.3 billion by 2020 out of which 60% will be in working age group. Many organizations have been formulated to promote and monitor different skill sectors across the country with some functioning central wise and the others state wise. These organizations prepare the curriculum, syllabi and frame a system to organize and carry out the skill development courses, monitor the functioning and evaluate the outcome of the system. Candidates attending the training program are provided with incentives by the government and later on certified after successful completion and assessment of the skill training. Despite the actions, the development and availability of skilled man power is yet to grow by leaps and bounds This paper encapsulates the issues prevailing in the conduct and organization of skill development training programs and the recommendations that address the issues to overcome the difficulties faced by the organizers and participants. A detailed case study of the issues of a training program and its outcome were carried out at Olirum Erode skill academy, Erode District, Tamil Nadu. This organization is an NGO started in the year 2014 to organize and conduct skill development training programs for the rural youth of the district. The district is a textile hub now in shortage of skilled youth necessary for working in sectors such as tailoring, two wheeler and four wheeler service, textile sizing machines, sales, machine operation for small scale industries, baking and so on. This Organization has taken initiatives to train the people in various fields. The outcome of the study has been briefed and a recommendation to resolve the issues (confined only to the training program conducted by the district) through online mode has been emphasized and proposed, which would aid in the attainment of the training program objectives and outcomes. The role of government and academic institutions in promoting the online training course has been briefly discussed. This model can be a representative one and its

success can be extended to other training programs across the country.

I. INTRODUCTION

India is a country developing rapidly and ambitious to achieve excellence in all the sectors to march towards a rapid economic and social advancement. To be able to compete globally in this century, we have to harness our knowledge and human resources effectively. When India when under the rule of British had a literacy rate of 12% and post independence the country has taken a long stride in strategically developing the education sector. The current literacy rate is 74.4%. with male and female literacy over 80% and 65.56% respectively. In the year 2005, a National Knowledge Commission was constituted and a proposal to reform of our knowledge related institutions and infrastructure which will enable India to meet the challenges of the future was submitted. Despite a long stride taken in the education sector and the initiatives taken in developing the skill sets of people through skill development courses conducted across the country by various organizations, there still exists a demand for an efficient and effective work force. A case study was carried out at Olirum Erode, skill academy, Erode and the primary issues related to the training courses and participants and its causes have been documented. Recommendations to run the course through online mode has been made based on literature review of MOOC (Massive Open Online Courses) and OER (Open Educational Resource).

II. SKILL DEVELOPMENT ORGANIZATIONS IN

Many Skill development and vocational training programs are formulated, organized and monitored by various organizations, which work closely with the government of India. There are nearly 1852 qualification packs run by NSDC These organizations collaborate with industry bodies like CII (Confederation of Indian Industry) and FICCI (Federation of Indian Chambers of Commerce & Industry, a non-profit association) that take ownership of various Sector Skill Councils. There are various strategies and actions that are deliberated to ensure a scalable skilling with quality, particularly in the unorganized or informal sector which accounts for 83% of India's workforce. There are various missions, schemes and other organizations in skill development, training and employment, a few of which are listed below Deen Dayal Upadhyay Gram Kaushal Yojana -DDU-GKY: It is a skill development program for the rural youth. There are around 66 special projects and over 250 trades such as Retail, Hospitality, Health, Construction, Automotive, Leather, Electrical, Plumbing, Gems and Jewellery, etc., Deendayal Antyodaya Yojana - National Urban Livelihoods Mission – DAY-NULM: A major objective of the scheme is to

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help urban people earn a sustainable livelihood through skilling and upskilling. Director General of Training – Modular Employable Skills – DGT-MES: School dropouts and existing workers, specially, in the unorganized sector are to trained for improving their employability through various vocational training and apprenticeship programs. Ministry of Labor and Employment – MoLE: This Ministry is to protect the interests of workers in general and also the rural and urban poor and that section of people who are deprived and sections of the society Mahatma Gandhi National Rural Employment Guarantee Act – NREGA: This one guarantees right to work in rural areas by providing wage employment to unskilled manual workers. People are ensured of at least 100 days of employment in every household to a member who is willing to do unskilled work.

Ministry Of Skill Development and Entrepreneurship – MSDE: This ministry is responsible for the co-ordination of overall skill development efforts across the country, building the vocational and technical training framework, skill upgradation, building of new skills, and innovative thinking not only for existing jobs but also jobs that are to be created.National Skill Development Corporation - NSDC: It aims to promote skill development by initiating the creation of large and quality oriented training institutes all over the country. National Skill Development Agency - NSDA: It is an autonomous body of Ministry of Skill Development and Entrepreneurship, which aims to coordinate the skill development efforts of the Government and the private sector to achieve the skilling targets by 2022. National Rural Livelihood Mission – Ajeevika skills: Its aim is to understand the professional aspirations and interests of youth and to also increase their daily income. This mission provides young people from poor communities an opportunity to upgrade their skills and enter the skilled work force of the country Pradhan Mantri Kaushal Vikas Yojana - PMKVY: It is is a unique initiative by the Government of India that aims to train about 24 lakh Indian youth to be industry relevant, skill based and to prepare them for the global market. Under this scheme, the trainees will also be given financial support and a certificate on successful completion of training and assessment, which will help them in securing a job for a better future.

Despite the emergence of plenty of organizations to accelerate the skill development across the country, we still lag behind the developing countries in imparting formal skill training. Realization of our human resource potential and its effective utilization are key factors for the economic growth of the nation. In this work a case study has been carried out in a few vocational training centers and an insight of the issues along with recommendations has been recorded. This study has lined a path to shift the training paradigm to online mode.

III. CASE STUDY

Vocational trainings for the rural youth in different sectors are being provided by Olirum, Erode skill academy. This vocational training program is one among their activity. The training centre was approached to gather the details of availability of different training centers and their course details. The details of the trainings offered in four different sectors was collected and the pros and cons of the training were analyzed and documented

SL. No	Name of the training centre DMW CNC training, Perudura	Cours e offere d CNC Machi ne	Cours e Durati on 30 Days	Targete d No. of particip ants	Particip ants Complet ed course
2.	Sakthi Care Automob ile Training, Erod	operato r 4 wheele r service technic ian	60 Days	50	17
3.	AIMS Skills Academ y, Erode	NDT technic ian	45 Days	70	43
4.	OASIS Hotel Manage ment	Assista nt chef, baker, house keepin g	60 days	200	160

In the prevailing study three attributes were selected and the attainment of each attribute was assessed for each centre

- a. Students Mobilization
- b. Attendance
- c. Assessment

SL. No	Name of the training centre	Mobiliz ation of Urban Student s	Mobiliz ation of Rural Student s	Studen ts Attend ance	Attain ment of Trainin g outcom e
1.	DMW CNC training, Perudur ai	Very Difficult	Difficult	Not satisfact ory	Modera te
2.	Sakthi Care Automo bile Training , Erode	Very Difficult	Difficult	Not satisfact ory	Poor
3.	AIMS Skills Academ y, Erode	Very Difficult	Difficult	Not satisfact ory	Modera te
4.	OASIS Hotel Manage ment	Not Difficult	Difficult	Not satisfact ory	Good

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IV. FINDINGS

The details observed and recorded in the case study reveal that there is lot of issues prevailing in the execution of the training program

Mobilization of Students:

Enrolment of students in the training courses is found to be very tough task due to several factors.

- 1. Lack of awareness on the skill training program and its forecast benefits.
- Lack of confidence of urban students on the course conducted.
- Most of the rural students readily agree but find it difficult
 to attend the training during week days as they are
 engaged in some routine job activity which they deny to
 avoid
- 4. As most of the programs are organized in urban, rural youth have difficulty in spending for stay

Students Attendance:

The course duration specified for each course is found to be extremely large; say for example for construction DPT Tester - 400 Hrs, supervisor – structure – 1000 Hrs and so on). The time allotted is extremely high when compared to a semester duration specified by a technical university for polytechnic or engineering education. This long duration of the course is one of the major reason for frequent absentees and the poor enrolment to the courses by rural youth

Assessment:

Lack of attendance has led to poor performance during assessment. If a few classes are missed the lost theory and practical cannot be repeated. Involvement of the participants in the course is not high and due to poor self realization

V. RECOMMENDATIONS

The three attributes that have been studied have indicated that the enrolment of participants to the course is poor and the attainment of the course outcome is too not satisfactory. Thus in order to overcome the issues discussed earlier, a online training course has been suggested which would enable in solving the existing issues prevailing in the training program. The online course has been recommended based on the intensive literature review conducted on determination of the advantages and outcomes of the online education courses Research has been carried out in the need of open education resource for our country's development (Vijay kumar, M.S., 2009). Conduct of MOOC in country like Spain has gained popularity among 80% of the educators (Julieth Ospina-Delgado, 2016). In the study of the effect of language barrier in open course, it reveals that language of instruction isn't a barrier to undergo MOOC courses (Miri Barak et al., 2015). Those participants who do not self regulate their learnings and exhibit very poor self-efficacy, tools such as My Learning Mentor application could help in the learning understanding (Gutiérrez-Rojas et al., 2014).

As it is not necessary to rely on a tutor for learning the online courses (Colin Milligan et al., 2016), the skill development courses too could be designed and supported by a facilitator. In a work performed to assess the factors governing motivation factor in online learning, it is understood that technical

infrastructure, learning environment, competencies of instructor (Kymet Selvi, 2010) are quiet important to attain the outcome of online course. Technical students have been assessed for the attainment of skills such as generic, leadership and entrepreneurship skill, in a work carried out in Malaysia (Saemah Rahman, et al., 2011 and Khalim Zainal et al., 2012). Methodologies for assessing the quality of distance learning courses have been discussed too (Irina Vinogradova et al., 2015). Open course ware for nursing is available too (alerie Swiga et al., 2015). In a online course, Instruction design quality as observed to be low where as the organization and presentation of the course material was good (Anoush Margaryan et al., 2015). Virtual Labs are there for conducting laboratory classes (Veljko Potkonjak, et al, 2016)

VI. ROLE OF ACADEMIA AND GOVERNEMNT ACADEMIA

All the technical universities in the country can join together and prepare a common online training program with all the necessary features in the regional language. Thus this would ensure a common material for training throughout the country and the attainment of skill will be equally good. Availability of the training program through online mode can enable participants to take up the course in evenings too or can have a flexible mode of timing and attend the program as and when they can spare their time and thus this would not affect their regular schedule. Lack of attendance, travel and stay can be avoided provided they can attend the online training in their native town. Even participants doing regular job and those who wish to upgrade their skill sets can take up any course as per their time. Fatigue stress induced by attending vey long duration courses can be avoided through online program

VII.ROLE OF GOVERNMENT

Government can set up internet training hubs in each district especially in rural area. Each internet hub should be utilized for training based on the local skill requirement. In case of textile hub, all textiles related training through online can be provided. The internet hub should have systems connected to uninterrupted internet connectivity and all the necessary training kits to the participants. A facilitator can be appointed in each hub to facilitate and monitor the ongoing activities. Thus the money spent for the participant's enrolment and can be utilized in spending for the facilities. This facility would ensure that participants can take the course anywhere and at any place in the district.

VIII. CONCLUSION

The outcome of this case study has revealed certain major issues pertaining to the skill development trainings organized by various agencies and recommendations have been made based on the outcome of the study conducted at Olirum, Erodu skill academy. It is obvious that the role of government and academic institutions is mandatory to carry out the recommendations successfully. Based on the feedback and outcome of an online model practiced in any one district, it can be extended to the other skill development training centers available across the whole country

Reference

[1] Vijay kumar M.S (2009), Open Educational Resources in India's national development, Open Learning: The

ISSN: 2278-2389

- Journal of Open, Distance and e-Learning, 77-84, volume 24 –issue 1
- [2] Julieth Ospina-Delgado, María A. García-Benau, Ana Zorio-Grima (2015), Massive Open Online Courses for IFRS education: a point of view of Spanish Accounting Educators , Procedia - Social and Behavioral Sciences 199 - 627 - 633
- [3] Miri Barak, Abeer Watted, Hossam Haick (2015), Motivation to learn in massive open online courses: Examining aspects of language and social engagement, Computers & Education 94 (2016) 49 60
- [4] Gutiérrez-Rojas, I., Alario-Hoyos, C., Sanagustín, M. P., Leony, D., & Kloos, C. D. (2014), Scaffolding selflearning in MOOCs. In U., & C. D. (Eds.), EMOOCs 2014 – European MOOC stakeholder summit (pp. 43– 49). Switzerland: Lausanne.
- [5] Colin Milligan, Allison Littlejohn, (2016), How health professionals regulate their learning in massive open online courses, Internet and Higher Education 31 (2016) 113–121
- [6] Saemah Rahman, Seri Bunian Mokhtar, Ruhizan Mohd Yasin, Mohd Izham Mohd Hamzah, Generic Skills among Technical Students in Malaysia, Procedia Social and Behavioral Sciences 15 (2011) 3713–3717
- [7] Khalim Zainal, Wan Zulkifli Wan Hassan & Jamsari Alias, (2012), Generic skill level of UKM students after pursuing the compulsory general studies courses, Procedia - Social and Behavioral Sciences 59 (2012) 558 – 564
- [8] Irina Vinogradovaa, Romualdas Kliukas, (2015), Methodology for Evaluating the Quality of Distance Learning Courses in Consecutive Stages, Procedia - Social and Behavioral Sciences 191 (2015) 1583 – 1589
- [9] Loya, A., Gopal, A., Shukla, I., Jermann, P., Tormey, R., Conscientious Behaviour, Flexibility and Learning in Massive Open On-Line Courses, Procedia - Social and Behavioral Sciences 191 (2015) 519 – 525
- [10] Valerie Swigart, Zhan Liang, Digital resources for nursing education: Open course ware and massive open online courses ,International journal of nursing sciences 3(2016) 307-313
- [11] Anoush Margaryan, Manuela Bianco, Allison Little john, Instructional quality of Massive Open Online Courses (MOOCs)Computers & Education 80 (2015) 77-83
- [12] Veljko Potkonjak, Michael Gardner, Victor Callaghan, Pasi Mattila, Christian Guetl, Vladimir M. Petrović, Kosta Jovanović, Virtual Laboratories for Education in Science, Technology, and Engineering: a Review, Computers & Education (2016)
- [13] Chelsea Schelly, Gerald Anzalone, Bas Wijnen, Joshua M. Pearce, Open-source 3-D printing technologies for education: Bringing additive manufacturing to the classroom, Journal of Visual Languages and Computing (2015)
- [14] Tal Soffer, Tali Kahan, Eynat Livne, E-assessment of online academic courses via students' activities and perceptions, Studies in Educational Evaluation, (2016)
- [15] Polina Häfner, Victor Häfner, Jivka Ovtcharova, Teaching Methodology for Virtual Reality Practical Course in Engineering Education, Procedia Computer Science 25 (2013) 251 260