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## **21<sup>st</sup> Century Skills: An Analysis of MOOCs for College Students**

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### **Abstract**

In 2020, when we all were transforming our life systems while dealing with pandemic situation in the whole world, we experienced the uncertainty and change is a permanent catalyst for life. We have adopted many skills related with lifesaving habits to molding our learning and teaching at all levels with the help of online sources in the form of courses based on skill development related to 21<sup>st</sup> century skills.

As mentioned, the pandemic had prepared us to be adaptive to change and to develop necessary skills with respect to our personal, educational, professional, social, economic and most important psychological needs. In this regard, even National Education Policy 2020 also focused on skill development and formulated a document by UGC related to ‘Curriculum and guidelines for Life Skill 2.0’. In this document, the UGC had mentioned four types of two credit courses for each module viz. communication skills, Career skills, Leadership and management skills and universal values etc.

This paper aims to analyze the available MOOCs on SWAYAM and NPTEL platforms focused on the 21<sup>st</sup> century skills viz. critical thinking, creative thinking, digital literacy and other

skills etc. for college students. It is revealed through the online review of the available courses that there are courses available on soft skills and communication skills only which means there is a wide scope for development of MOOCs on redefined life skills viz. digital literacy and cyber security, financial planning, time management, mindfulness etc.

*Keywords:* 21<sup>st</sup> century skills, MOOC, college students, life Skills.

### **Introduction**

As we know that the aim of education is always related with the development of head, hand and heart, but in practice we always give importance to the cognitive development of the individual. In this regard, the skills related with the cognitive abilities have been focused more as compared to the psycho-social abilities and psycho-motor abilities. From last few decades it is reported that the graduates in India are lacking in employability skills and couldn't match with the industrial demands for the necessary skills required for different professions.

Apart from this, we can observe that every stage of our life requires different skills to deal with the situations faced by us and that is too different for every person. In last two-three years we all faced the pandemic situation which again made us to learn and adopt totally different skills from our life before the pandemic. Due to this, we have restructured our skill sets and groomed ourselves according to the challenges of 21<sup>st</sup> century. Thus, we can say that the knowledge, skills and attitude required to deal with the dynamic situations in 21<sup>st</sup> century and those are called as 21<sup>st</sup> century skills. It is interesting to study the concept of 21<sup>st</sup> century skills and its evolution.

#### **21<sup>st</sup> century skills: concept and evolution**

In the document '21<sup>st</sup> century skills Handbook' by CBSE, the concept of 21<sup>st</sup> century skills is stated as- "21<sup>st</sup> century skills are that skills that are required by an individual for his/her holistic development so that he/she can contribute to the progress and development of his/her society,

nation and world.” Whereas the Glossary of Education defines 21<sup>st</sup> century skills as “The term 21<sup>st</sup> century skills refer to a broad set of knowledge, skills, work habits, character traits- that are believed by educators, school reformers, college professors, employers and others- to be critically important to success in today’s world.” It means it is expected that the 21<sup>st</sup> century skills enable the individual to deal with all life situations and profoundly lead his personal and social life by assuring his holistic development which contributes to national development also.

Our education system has been evolved through ages and always gave importance to skill development, as a notion of it NEP-2020 has given major focus on the skill development among students from school level. We have adopted competency-based education, vocational education soft skills education and life skills education suggested by W.H.O. which were aligned with the Delor’s Report and UNESCO’s aims of Education. Firstly, the employability skills considered as important one but it is considered that communication, collaboration and upgradation also required in this fast pacing world therefore, W.H.O. has enlisted the ten life skills to inculcate through education system. As a result of these churning discussions on global platforms and policy makers particularly after facing pandemic situation, we now reached to the 21<sup>st</sup> century skills.

### **What are 21<sup>st</sup> century skills?**

According to the document namely- ‘21<sup>st</sup> century skills Handbook’ by CBSE, the 21<sup>st</sup> century skills divided into three major groups as 3Ls- Literacy skills, Learning skills and Life skills. The Literacy skills included Information literacy, Media literacy and Technology literacy. In the Learning Skills 4C’s which are - Critical thinking, Creative thinking, Communication and Collaboration whereas the Life skills included Flexibility & adoptability, Leadership & responsibility, Initiative & self-direction and Social and cross-cultural interaction. All these skills are meant to be achieved through core subjects and co-curricular activities as it is formulated for school level.

As per NEP 2020, the skill development courses should be part of every curriculum from early school education to graduation level. In this regard the UGC has developed 'Curriculum and guidelines for Life Skills 2.0' for college students. In this document, there are four courses with two credits each have been prescribed which are:

1. Communication Skills
2. Professional Skills
3. Leadership and Management Skills
4. Universal Human Values

By observing the sub skills in each category from this document, we can identify that the 21<sup>st</sup> century skills have redefined life skills for college students. Actually 21<sup>st</sup> century skills are wider than the life skills canvas as it is circumstantial and dynamic in nature by considering the changing demands of working conditions, industrial needs and above all the changing value systems through Human society.

### **21<sup>st</sup> Century skills and Role of Higher education**

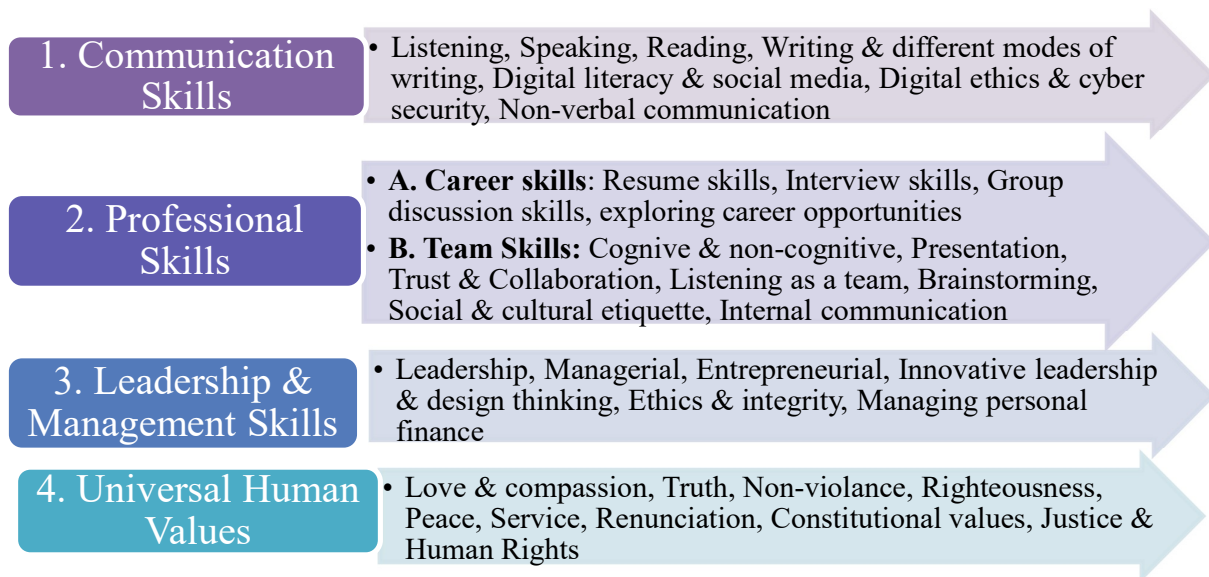
According to NEP-2020 the undergraduate students can adopt multiple entry and exit for acquiring certificate, diploma or degree as per their needs and they can also gain credits from adopting skill-based courses from different higher education institutes and transfer those with 'Academic Bank Credits'. This reformation would not only change the perspective about higher education, but it will bring massive transformation in skilled based education at higher education level and make the college students' future ready. Actually, during pandemic situation, the UGC and NCERT and other Higher education institutions had provided different online courses through MOOCs and asked the college and university students to complete these courses so as to gain extra credits. Now It would became regular practice to gain and transfer credits from other courses.

For this, the UGC has given a 'curriculum and guidelines for Life Skills 2.0' which is for

adopting 21<sup>st</sup> century skills by college students. In this curriculum structure, there would be four courses for two credits each including subskills in each. We can understand the linkage between these life skills and 21<sup>st</sup> century skills by observing different sub skills in each course.

**Figure 1**

Life Skills Courses by UGC



From the above figure we can understand that the UGC has included the 21<sup>st</sup> century skills by considering the demands of future society and it also connected these skills with Indian Knowledge system with respect to adding universal human values in it. All these skill courses are meant to be developing future citizens of India and universal citizens as well.

### **MOOCs for 21<sup>st</sup> Century Skills: An analysis**

From last two decade, the UGC and higher education authorities are progressively adopting the online education and instruction for higher education level. The COVID-19 pandemic had accelerated this adoption of online courses, use of LMS for teaching-learning and also the development of different MOOCs by HEI faculties. In this the SWAYAM and NPTEL has played major and vital role in development and dissemination of MOOCs in India. While going through

the various MOOCs available for college students, it is observed that majority of these courses are based on theory subjects in various disciplines. There are very few courses which are related with 21<sup>st</sup> century skills enlisted by UGC and W.H.O. The course wise analysis is as follows:

**a. Communication Skills:**

Majority of courses available on SWAYAM are related with communication skills in different languages for developing speaking and writing skills. Some of them are with traditional approach of translation method while major of these adopted LSRW formula for language teaching. Still there are few courses on cyber security and ICT skills. Some of the MOOCs are related to computer languages which are meant for students with technical knowledge. The courses on digital literacy, social media, digital ethics and non-verbal communication are needed to be developed.

**b. Professional Skills:**

The report of National policy on skill development and entrepreneurship had reported that the graduates in India are lacking in professional skills related with presentation and team work etc. Unfortunately, it is observed that there are no MOOCs on Career skills and Team skills on SWAYAM platform.

**c. Leadership and Management Skills:**

There are very few MOOCs focusing on Event management, design thinking and leadership, three courses on entrepreneurship whereas there are courses on ethics which are focusing on research ethics only, but the topics of managing personal finances and innovative leadership are still lagging behind.

**d. Universal Human Values:**

It is revealed from the review of MOOCs available on SWAYAM that the skills related to universal human values are only considered in the MOOCs based on Yoga education and using IKS for well-being curriculum, physical activity and mind education. But this area of skills related

with value system is not properly indicated through the online courses.

From this analysis, we can conclude that UGC has taken appropriate cognizance about the 21<sup>st</sup> century skills and its inculcation through various courses in MOOC format by AICTE, NPTEL, NCERT, CEC, NIOS and IGNOU. These courses would be part of undergraduate degree courses which are meant for college students irrespective of their disciplinary background and by considering the holistic development of students through multidisciplinary approach. This would make them future ready by adopting 21<sup>st</sup> century skills.

### **Conclusion**

The skill education is always a part of our Indian Education system informal and traditional ways from Vedic period to current formal education system. In this Basic Education system implemented by Mahatma Gandhi has great contribution towards skill based courses. Even in Modern Education system we have vocational education courses based on certain skills and competencies required for different vocations. But the formal education system with traditional courses needed to be reformed. So after 34 years of previous policy on education, NEP-2020 has been formulated and implemented which is going to be a major paradigm shift in Education system in India. It has changed the segregated nature of knowledge and considered knowledge as a whole and multidisciplinary in nature. It also tried to connect the theory with skill development and make the combination of traditional courses with skill based courses as per the choice of the students.

In this the HEI could play major role to provide necessary facilities and learning environment with proper experts in the respective fields as well as by motivating students to adopt online courses related with particular skills. Therefore, it is needed to restructure and reform the curriculum of higher education with respect to industrial demands, students' competencies and societal needs. For this the faculties of HEI should be retrospect their own competencies and be ready to develop and implement courses based on 21<sup>st</sup> century skills. Majority of young professors



should be motivated to develop MOOCs based on 21<sup>st</sup> century skills. This would not only helpful for students but also for the faculties in higher education to adopt 21<sup>st</sup> century skills to be ready for achieving ‘SDG-4 of Quality Education for All’ by UNESCO.

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