

Role of Online Education in Democratizing Knowledge.

Outline

1) Introduction

In Pakistan, online education appears to be most viable to democratize knowledge in a true sense. It can enable every citizen of the country to have easy access to knowledge, as desired by him or her. At the same time hurdles like poor information technology infrastructure and inadequate resources are acting as obstacles in the way of democratization of knowledge. So, in order to ~~seep~~ overcome these hurdles, and ~~seep~~ benefit of online education, immediate steps must be taken.

2) Role of online education in democratization of knowledge in Pakistan's context.

3) Contribution of traditional online education in democratizing knowledge.

i) Improving quality of education by removing geographical barriers.

ii) Can cater more students in fewer resources.

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iii) Making process of learning more interactive through tools like videos and simulations.

iv) Flexible schedule is more convenient to students.

4) Role of non-traditional online education resources in democratization of knowledge.

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i) Wikipedia, Youtube and Google provide latest and accurate data access to huge volumes of knowledge.

ii) Such resources do not limit one from accessing knowledge on the basis of academic credentials of learners.

iii) Provides most accurate and latest facts and figures.

5) Factors hindering democratization of knowledge through online education.

i) Poor information technology infrastructure.

ii) Initial cost of adopting online education is very high.

iii) Incidents involving ban on Wikipedia and Youtube may affect online education's prospects.

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iv) Steps to address the problems hindering democratization of knowledge

i) Public private partnership to bear expenditure for the adoption of online education ✓

ii) Actions against those who are involved in fraudulent activities in relation to online education ✓

iii) Agreements with Wikipedia, Youtube and Google to address government's concerns. ✓

Conclusion

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Essay

Democratization of knowledge is a gift of knowledge itself. Throughout the human history man has applied knowledge to make discoveries, and invent new methodologies, mechanism and machines. These achievements have ultimately contributed to the democratization of knowledge. In Europe, there was a time when getting education was a privilege, and it was limited to clerics and ^{the} ruling elite. Invention of printing press in 15th century proved to be a corner stone in democratization of knowledge. It made knowledge available to the masses, which basically refers to democratization of knowledge. Since then many scientific and social breakthroughs have played their part in democratization of knowledge. Despite of the contribution of scientific inventions and development, the democratization of education appears to be an unfulfilled dream especially, when viewed in the context of Pakistan. The advent of online education has, however, provided an opportunity to countries like Pakistan, to realize their dream of providing democratization of knowledge to their citizen. Online education encompasses different ways of transferring knowledge: one is the traditional way, in which universities as institutions offer online courses, and award certificate to those who complete these courses, the second way is

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a bit non-traditional in which one may use online ~~resources~~ resources such as YouTube, Wikipedia or such other platforms to study a matter of one's interest or gain skill. In this type one may not get a certificate but one may gain knowledge or skill. In Pakistan, online education appears to be the most viable option to democratize education in a true sense. It can enable every citizen of the country to have easy access to knowledge, as desired by him or her. At the same time, hurdles like poor information technology infrastructure and inadequate resources are acting as ^{obstacles} hurdles in the way of democratization of knowledge. So, in order to overcome these hurdles, and reap benefits of online education, the government must take immediate steps.

Although democratization is sought by global community, third world countries need it immediately. Similar is the situation is with Pakistan. There is a huge disparity in quality of education of rich and poor. Moreover, gender discrimination has also acted as an obstacle against easy access to quality education. Additionally, Periphery areas far-off areas situated in mountainous regions, deserts, or distant small cities are also being marginalized because

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state does not have enough resources. An estimate has suggested that around millions of children of school going age are out of schools in Pakistan. Similarly very few manage to get a university degree. The quality of education is also not satisfactory. Pakistan has tried very hard to overcome these problems, but due to its meagre resources and poor governance it has failed to get desired outcomes. In such situation, online education has emerged as a ray of hope for Pakistan to use it. Owing to its myriad benefits, online education of both traditional type and non traditional type can revolutionize the process of democratization of knowledge.

As both the traditional and non traditional resources have their role to play in democratization of knowledge, one cannot deny importance of any of the two. Starting with the traditional online education, it has a huge role to play in country's drive for "quality education for all". One of its major contribution is elimination of geographical barriers. This elimination of geographical barriers ^{has} resulted in improved quality of education. Students, while residing in Pakistan are able to

enroll themselves in international universities. All of their academic activities are carried online. This results in cost saving along with provision of quality education. Similarly, in Pakistan most of the scholars are residing in urban centres, students from far-off areas can have meetings and tutorial sessions with these scholars through platforms like Zoom, Microsoft Teams, etc. Thus, online education has enhanced quality of education by elimination of physical barriers.

Moreover, online education requires fewer resources than that of traditional education system. Pakistan is a country with scarce financial resources. It is very difficult to achieve desired results with such meagre resources. With population growing, there is an increasing need of more school buildings, more teachers and additional furniture and equipments. The online education system eliminates such needs as students are supposed to attend classes from their home. Similarly an online class-room can accommodate a lot more students than that of a physical one. This makes online system able to cater more students than traditional system. That too, in fraction of resources.

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available to the traditional physical mode of education. So it can be said online education provides a solution to scarcity of financial resources, and ultimately leads to democratization of knowledge.

Furthermore, online education is very interactive due to several tools being employed by online classrooms and platforms. The traditional education of physical nature lacks interactivity due to bland teaching methodologies and written nature of course content. In online education system videos, demonstrations, simulations and graphics are embedded in class-rooms. For instance a teacher in traditional physical class room would teach solar system using graphics available in books or charts, but a teacher teaching in online classroom will use tools like simulation to teach solar system. Simulation basically refers to display of complete motion of an actual system on computer screen. This leads to more interactive transfer of knowledge. Students are also able to visualize phenomenon being taught, in a better way. This results in more interactive and efficient transfer of knowledge. Therefore, online education makes education more interactive.

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Additionally, schedule and procedures being employed by online education system are far more flexible than that of physical education. One major factor that has hindered eradication of illiteracy from the country is inflexible nature of country's traditional education system. Many illiterate adults cannot be added to the pool of literate people because of the clash between the timings of their jobs and education system institutions. Similarly, children from poor families who have to make a choice between education and livelihood, go for livelihood owing to this intransigent nature of education system. In online education, one can attend to the recorded lectures in a given time frame as per one's convenience. Similarly Pakistan's "Virtual University" - based on the concept of distant learning - allows its students to make date sheets for their exam according to their convenience in given time frame. It can be said that the flexible nature of online education can democratize education in a true sense ✓

As the traditional online education involves certification, and it is more inclined to chance academic credentials many consider it as the only mode of online education. However, in reality a more potent mode of online education is a non traditional one, which focuses on knowledge instead of certificates. Most people adopt this mode just to gain knowledge, or to acquire a skill; certificate is not their preference. Such people are actually teachers of their own. For such people internet resources such as Wikipedia, Youtube or chat GPT have democratized knowledge. Loads of content is available on internet that can help one in developing a skill, or ^{doing} research work. For instance, one conducting a research on artificial intelligence can access hundreds of videos from scholars across the globe, on Youtube. Similarly, Google scholar can provide one with most cited articles on AI by scholars. Similarly, one can learn skills like report writing, baking and stitching. These resources do not ~~not~~ grant any certificate, but serve to enhance and democratize one knowledge. So, one can access huge reserve of knowledge through these resources.

Another advantage of non-traditional education resources is that these resources do not depend on learning skill which is not in concurrence with his academic credentials. One having a bachelor's degree in Urdu literature can learn programming language from Youtube, but in universities no such facility exists, as for that allows a student to take of linguistics to take class of a computer science. Similarly, in order to learn computer programming one has to opt it as an optional subject in schools, and usually it may take one year to master the programming language. On the other hand, a person of any background can learn computer programming in a few months. So, such resources remove the academic barriers that may block one's track to knowledge.

Furthermore, resources like Google, Youtube and Wikipedia serve as the most efficient, and most up-to-date resources of knowledge. These resources keep updating themselves every day. Therefore, the facts and figures available online are most authentic, and most up-to-date. For instance,

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The results of most recent census in Pakistan are available on internet, but the books being taught in schools and colleges do not contain the latest figures. As those books were published before the census. Similarly, for a student of current affairs documentaries on youtube, blogs and wikipedia can serve as a source of latest and accurate information, because things are changing at rapid pace and to make the books catch up that pace is nearly impossible. So, up-to-date and accurate knowledge gleaned through from above mentioned sources, resulting in democratization of knowledge.

Although online education can revolutionize the democratization of knowledge, several factors are acting as obstacles against the role of online education in democratization of knowledge. One such factor is poor information technology infrastructure and slow internet. As internet serves as basis for the online education resources, inadequate internet facilities will impact scope of online education in Pakistan. According to Ookla speed test Pakistan's internet facility is one of the slowest in the world: Pakistan ranks 118 out of 141 countries in mobile

internet speed. Similarly, only few urban centres are using fibre optical fibre base internet transmission, and many regions of the country are yet to be provided with internet. Thus, inadequate information technology infrastructure is not allowing online education to contribute towards democratization of knowledge optimally.

Additionally, in order to adopt online education the country would require to spend a hefty sum of money. As the most online education platforms are based on subscription model, government will have to pay for that. Furthermore, government will require to upgrade the infrastructure needed for online education, which will also add up to the subscription cost. Moreover, online education platforms work on electronic gadgets which are very expensive, and a big chunk of student cannot afford to buy such gadgets. Such students will either require government's help or they will not be able to buy themselves such expensive gadgets. All the above mentioned factors combine to make the up-front cost of adopting online education very high. Therefore, high upfront cost is acting as a obstacle, and hindering Pakistan to

democratize knowledge.

Another factor that may inhibit the country from reaping the benefits of online education is government's practice of banning platforms like Wikipedia and Youtube. Both of the platforms are major contributors in academic and research based activities. These platforms are being equally utilized by the scholars and the students. However, the country has come across various scenarios when such platforms were banned by the government. A ban on Youtube was imposed from 2012-2016 by Pakistan. Similarly a ban on Wikipedia was imposed earlier this year, which was lifted in a few days. According to Al-Jazeera such bans will result in un-intended consequences which outweigh their benefits. Although it is a fact that both platforms were banned for showing derogatory content against Muslims, the government should have engaged with such platform to reach a censorship mechanism agree-able to both parties, instead of going for an out-right ban. Thus, this practicing of practice of imposing bans can disrupt online education and democratization of education ultimately.

In addition to the above mentioned factors, scams and fake courses have also emerged as an area of concern. Many scammers have found the advent of online education as an opportunity to trick the naive people and make money. One such example is "AXACT", a company that claimed to be largest exporter of software and to be involved in fraudulent activities. A story by New York Times alleged "AXACT" of selling fake degrees of online courses and programs. The Government of Pakistan initiated an investigation against the company; it was revealed that company was involved in illegal activities. In 2018 the Chief Executive Officer of AXACT, Shoaib Shaikh, was convicted by Supreme Court of Pakistan. Similarly, many individuals and companies offer such courses which are not accredited by Higher Education Commission, or any other such organizations. Thus, scams and fraud have created doubt in people's mind about the authenticity of such courses, and have acted as obstacle against the democratization of education and knowledge.

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As there are many challenges which are acting as hurdles in democratization of knowledge through online education, the only way out is devising an appropriate strategy to eradicate such hurdles, and take steps for the optimum implementation of that strategy. One such step is cooperation between public and private partnership to bear the upfront cost of adopting online education. The initial cost of adopting online education is very high. Government alone cannot sustain that much burden. However, bringing private investors on table will work wonders. Private investors can act as share holders in bearing the cost, in return government can give them various concessions. Similarly, upgradation of information technology infrastructure, and improving internet connectivity can also be achieved by the cooperation of both private and public sectors. Hence, such co-operation can remove hurdles and democratize knowledge.

Moreover, government needs to take strict action against those who are involved in committing fraudulent activities in the ambit of online education. Strict

strict laws should be enacted against those who are offering online courses without accreditation from the concerned authorities. Similarly, institutions must be provided with such capabilities, through which they can identify such elements and take action against them. Punishing such individuals for illegal activities, will curb crimes in the wake of online education services. Which will ultimately restore the confidence of masses in education online education. As a result more and more people will refer to online education, leading towards democratization of knowledge and education.

Another important step is to ensure uninterrupted access to platforms like Wikipedia and Youtube. These platforms are one of the most accessed platform by student, researchers and scholars. In Pakistan such platforms have faced ban. The government finds it the only solution as there is no such mechanism and forum through which government can make them obey its orders. The solution to this situation is that, the government should sign as hold talks with such enterprises

and make them reach an agreement through ~~under~~ which government could recommend action on content which it considers hazardous or dangerous. Thus, such understanding will ensure uninterrupted access to such platform and bolsters the democratization process of knowledge.

In the twenty first century, easy and ~~uninterrupted~~ access to knowledge is a fundamental right of every living being. There is not a single entity, in the world, which denies this right. Interestingly, despite being acknowledged and ~~for~~^{as} a fundamental right, the world has not seen substantiation this acknowledgement in its letter and spirit. Democratization of education basically refers to materialization the above mentioned acknowledgment. Throughout the human history, efforts have been made to democratize education. Advancement of technology has played very crucial role in this democratization. These days, emergence of online education has emerged as revolutionary development towards the democratization of knowledge. As a country, online education appears

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to be the most potent tool in democratization of knowledge owing to its low economy and meagre resources. Online education can play pivotal role in democratizing knowledge due to its efficiency, interactive nature, and abundance of available knowledge. At the same time high up-front cost, scams, and poor internet connectivity are hurdles in the way of spreading knowledge. However, effective planning and its implementation can ensure a robust online education system which will contribute to democratization by improving quality of education, along with making it more accessible, and thus making country a democracy in a true spirit.

The examples/references are too generic

Add research based references/examples