e-Learning Teaching Strategies *and* Teachers' Stress *in* Post Covid-19

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e-learning

E-Learning-Teaching Strategies and Teachers' Stress in Post Covid-19

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Editor's Note

The COVID-19 has resulted in educational institutions shut all across the world. As a result, education has changed dramatically, with the distinctive rise of e-learning, whereby teaching is undertaken remotely and on digital platforms. Research suggests that online learning has been shown to increase retention of information, and take less time, meaning the changes corona virus have caused might be here to stay. There was an overnight shift of normal classrooms into e-classrooms, that is, educators have shifted their entire pedagogical approach to tackle new market conditions and adapt to the changing situations. During this tough time, the concern is not about whether online teaching-learning methods can provide quality education, it is rather how academic institutions will be able to adopt online learning in such a massive manner.

With this sudden shift away from the classroom in many parts of the globe, some are wondering whether the adoption of online learning will continue to persist post-pandemic, and how such a shift would impact the worldwide education market. In response to significant demand, many e-learning platforms are offering free access to their services, several arguments are associated with e-learning. Accessibility, affordability, flexibility, learning pedagogy, life-long learning, and policy are some of the arguments related to online pedagogy. It is said that online mode of learning is easily accessible

and can even reach to rural and remote areas. It is considered to be a relatively cheaper mode of education in terms of the lower cost of transportation, accommodation, and the overall cost of institution-based learning. Flexibility is another interesting aspect of online learning; a learner can schedule or plan their time for completion of courses available online. Combining face-to-face lectures with technology gives rise to blended learning and flipped classrooms; this type of learning environment can increase the learning potential of the students. Students can learn anytime and anywhere, thereby developing new skills in the process leading to life-long learning. The government also recognizes the increasing importance of online learning in this dynamic world.

As the educational disparities augment other social and economic disparities, and as structural inequalities are compounded, the gaps between the haves and the have nots will grow considerably. That the children of the poor should have severely more limited opportunities to learn during the pandemic than their non-poor counterparts, and that their lives should be significantly more disrupted by the pandemic, is of course antithetical to the basic tenets of democracy, so as the idea that this is what is happening takes hold, this will undermine confidence in democracy and its institutions, already weak in many countries, and in decline.

There are, however, challenges to overcome. Some students without reliable internet access and/or technology struggle to participate in digital learning; this gap is seen across countries and between income brackets within countries. In particular, spending on education may be compromised in the coming years. As public funds are directed to health and social welfare, long-term public spending on education is at risk despite short-term stimulus packages in some countries. Private funding will also become scarce as the economy weakens and unemployment rises. At tertiary level, the decline in the international student mobility following travel restrictions is already reducing the funds available in countries where foreign students pay higher fees. More widely, the lockdown has exacerbated inequality among workers. While teleworking is often an option for the most qualified, it is seldom possible for those with lower levels of education, many of whom have been on the front lines in the response

to the pandemic, providing essential services to society. Throughout this crisis, education systems are increasingly looking towards international policy experiences, data and analyses as they develop their policy responses.

The present crisis in education sector all around the world forced almost all the institutions of higher education to make the stakeholders in acquaint with the teaching learning system through digital platform. The Satyapriya Roy College of Education, the Premier Post Graduate Teacher Education Institution keeping the view point of present situation, arranged a International Level Webinar on 3rd July, 2020 for the Academic Community and Students for enhancing and expertise in digital platform and uses of Digital devices to continue the teaching learning system. I hope this edited volume which is a output of the Webinar will give a platform for the academic society in handling digital devices and software or and application properly in new normal of teaching system.

I acknowledge the encouragement, guidance and extreme support of Dr. Subir Nag, Principal of Satyapriya Roy College of Education to make this publication a great success.

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An Overview of the Challenges and Strategies Adopted to Cope up with the Expected Outcome of Covid-19 Pandemic from the Personality Perspective

Sumana Samanta Naskar and Dr. Subir Nag

Introduction

The lethality of corona virus has been given birth of COVID-19 pandemic at every corner of our globe at an unimaginable short span of time. On March 11, 2020 the World Health Organisation (WHO) announced this pandemic of severe acute respiratory syndrome (SARS). Human social connectedness has acted as the catalyst for this deadly process. The prolong social isolation as a preventive measure to cope up with this lethal viral activities and various political, cultural, economic and psychological consequences due to Covid-19 pandemic has compelled us to face 'once in a century' experience. The effect of corona virus on the people's physical health is well known to all of us due to the awareness created by Government, media and various health related organisations. Like previous

disastrous situations such as Spanish flu (1918-19), Chernobyl (1986), SARS (2003-2004), MERS (2012-18) etc. COVID-19 also constrained us to readjust our social behaviour, needs and hence an unexpected somatic and mental health problem have been bloomed which resulted in a persistent effect on personality as well. So, COVID-19 pandemic outcome scenarios can be well forecasted after a thorough analysis of the process. The same way consequences of the COVID-19 pandemic can be reviewed from the perspective of various personality traits or factors which are closely associated with our important behavioural and life related issues. Apparently it seems to us that Covid-19 is an issue of health hazard. How it can be related to personality? But if we carefully look into the most important life outcomes, various risk factors and our behavioural features it will be quite evident that the consequences of the Covid-19 pandemic is associated with personality factors or personality differences also. Our thinking, feeling, desire and "do's and don'ts" are the reflections of personality domain. In the context of this pandemic when some people are taking active precautionary measures while another group showing absolute carelessness that means the vivid situations or the behavioural patterns give an indication of the association between personality and adopted strategies. In other words we can say that we can predict the outcomes of Covid-19 pandemic in terms of the behavioural pattern by considering personality perspective. The World Health Organisation has also expressed their views on mental health and psychosocial consideration during this covid-19 outbreak. Various precautionary measurements have been recommended as well as several predictions regarding the outcome of this pandemic in the context of physical health are well telecasted as well as well literatured. But from the perspective of personality this is quite rare in literature so far. So, in this article we will critically analyze the following facts.

1. Relation with containment measures and personality traits.

2. Personality and mental health considerations in the context of COVID-19.

3. Challenges faced during the pandemic considering personality perspective.

4. Strategies taken to cope up Personality Disorder.

Various precautionary measurements like social distancing, lockdown etc. have profound impact on the behaviours of people of various personality traits.

What is Covid-19 Pandemic?

An outbreak,caused by severe acute respiratory syndrome coronavirus 2 (SARS CoV 2), was first identified in Wuhan, China, in December 2019. The World Health Organization (WHO) declared this outbreak as a Public Health Emergency of International Concern on 30th January, 2020 and a pandemic on 11th March. This is known as the coronavirus pandemic or COVID-19 pandemic. This ongoing global pandemic, as of now (July 2020), has been affected more than 15 million people in more than 188 countries and territories, resulting in more than 640,000 deaths.

The primary reason for the spread of this lethal virus among people is close contact. The small droplets produced by coughing, sneezing and talking, usually fall to the ground or onto surfaces. Commonly, people become infected by touching a contaminated surface and then touching their face. Transmission is also occurring through air suspended smaller droplets. It is believed to be the most transmittable during the first few days after the appearance of symptoms, although transmission is possible before symptoms appear, and from asymptomatic people also.

Fever, cough, shortness of breath, fatigue and loss of sense of smell are reported to be the common symptoms while drastic complications like pneumonia and acute respiratory distress syndrome are well observed. So far there is no vaccine or specific treatment apart from symptom based treatment and supportive therapy.

Preventive measures recommended by doctors, experts and various health related organisations are hand washing, covering mouth while coughing, maintaining social distance, wearing mask, disinfecting surfaces, increasing ventilation and air filtration indoors etc. Suspected people or those who have come across affected people are monitored and quarantined and sometimes self-isolation or home quarantine is recommended. Travel restrictions, lockdowns, facility closures etc. are implemented worldwide. On the other hand work

pressure of health sector and administration have been increased many folds due to increase testing capacity and trace contacts of infected persons.

Relevance

This globalised health hazard also has a profound impact on mental health, psychosocial considerations, behavioural modifications and personality. Beside social and economic disruption the world has witnessed the largest global recession since the Great Depression and global famines. Various sporting, religious, political, and cultural events have been postponed or cancelled. Schools, universities, and colleges have been closed. A lot of unscientific and illogical information about the corona virus have been circulated through social media and mass media. Business and worldwide supply of essential materials have been exacerbated by panic stricken environment. So every sector of our society has been hit hard and common people have faced several challenges. Hence, we are trying our best to make adaptation with the situations according to the primitive nature of survival. As a result to do this the various outcomes, either expected or observed, has a close association with personality which will be further explored in our following discussion.

1. Relation with Containment Measures and Personality Traits

The Pandemic caused by Corona Virus is now controlling our life style. The lethal virus has already affected more than 1.5 crore people around the world and a death toll of around 7 lakhs has been registered so far. To cope up with the health hazards several containment measures have been recommended by the world health organisation as well as the health authorities of various countries. However the extent of engagement of people towards these measures is being controlled by several factors. Using 'personality type' as variable we can predict the types of action people can employ. For instance, Salgado (2002) applied the big five personality traits to predict various deviant behaviours. Boone, De Brabander, and Van Witteloostuijn (1999) demonstrated how cooperative behaviour is affected by personality. Van Dijk et al., 2016; Shanker, Mohamed, Hegde, & Kumar, 2013; Meshram, Gattani, Shewale, & Bodele (2017)

individually in their study showed that personality traits are associated with health behaviour. Bogg and Roberts (2004) reported that conscientiousness is correlated to healthy behaviours. Kenrick et el. (2010) revealed that individuals who score low on personality traits like extraversion, agreeableness, and openness to experience are more prone to avoid infectious diseases. People's engagement in behavioural practices such as social distancing and personal hygiene maintain is quite natural in the perspective of a pandemic (Reluga, 2010; Cowling et al., 2010). Jones and Salathe (2009) demonstrated the relation between anxiety and prediction of engaging in protective behaviour. Several studies also found gender inequalities in the precautionary behaviours to avoid infection (Park, Cheong, Son, Kim, & Ha, 2010; Liao Cowling, Lam, Ng, & Fielding, 2010; Moran and Del Valle 2016). Therefore we aimed to analyse in what extent various personality traits are associated with these engagement of people to the various containment measures. Secondary data sources have been used in our analyses. Information from mass media, various public authorities,WHO website etc. have also been featured.

Carvalho et. al. (2020) in their study "Personality difference and the Covid-19: Are extroversion and conscientiousness personality trait associated with engagement in Containment measure?" tried to investigate in what extent Personality traits–Extroversion and Conscientiousness are associated with the engagement of Two containment measure like social distancing and hand washing. For this purpose the selected 715 Brazilian People from 18 to 78 years old. Big-Five Inventory Two Short (BFI-2-s) have been used in methodological purpose which results higher score in extroversion with lower mean in social distancing and also higher score in conscientiousness but with higher mean in social distancing and hand washing. So, their findings conclude that the importance of acknowledging extroversion and conscientiousness is as relevant in the engagement of people in the recommended Covid-19 containment measures.

Extroverted people find it very difficult to resist themselves from the social proximity. So, lower score in extroversion Personality Trait is quite expected and also observed in the social distancing

containment measures. This also indicates that these type of people also feel challenging to engage themselves in Hand Hygiene recommendation. Typical characteristics of extroverted people need for attention, maladaptive variation, closeness, avoidance compelled them to avoid social distancing and various containment measures as well as hygiene recommendation. Surprisingly a low score for conscientiousness trait was observed for the people who did not follow pandemic containment measure. This is quite opposite what we have observed for extroversion trait. Increasing tendency to follow the safety measure for the Pandemic containment is associated with the increase in conscientiousness score. People with high conscientiousness trait engage themselves in social distancing and hand hygiene recommendation.

In another studyby Aschwanden et. al. (2020) namely "Psychological and Behavioural responses to Corona Virus disease 2019: The Role of Personality" examined the relation between various Personality Trait and psychological and Behavioural responses to the COVID-19 pandemic. Personality was assessed in early of 2020 when awareness for the spread of Corona Virus was not highlighted much to the public in USA. They reassess those participants in late March regarding concerns, preparatory behaviours, precautions etc. They took large no. of participants (2066) and used the regression model to analyse the data with various covariates. The researcher found higher conscientiousness associated with more precautions, higher extroversion related to short duration and higher neuroticism related to concerns and long duration which are consisted with preregister hypotheses. Their research finding show how personality predicts concerns and behaviours related to the Pandemic.

Abdelrahman (2020) in his research "Personality Traits, Risk Perception, and Protective Behaviors during the COVID-19 Pandemic" aimed to investigate the impact of personality traits, risk perception, and personal hygiene practices on social distancing to avoid COVID-19 infection among residents of Qatar. The results showed a negative association between agreeableness and social distancing, which indicates that sociable individuals are less likely to practice social distancing to avoid infectious disease. Furthermore, conscientiousness and neuroticism were shown to be positively associated with adopting

social distancing to avoid COVID-19 infection. This means that individuals who are more inclined to obey with social norms and those who develop anxious and fearful feelings tend to practice social distancing.

Dunning, A. and Pownall, M (2020). in their paper, "Dispositional and situational attribution of COVID-19 risk: A content analysis of response typology" explored the attribution of risk and associated locus of control to individual risk perceptions of contracting COVID-19, through a lens of Heider's Attribution Theory (1958). They conducted a content and framework analysis (framework of five response typologies including intrinsic, behavioural, balanced, contextual, and disengaged responses) of 114 participant's responses to an online survey and observed that low risk participants made more dispositional attributions whereas higher risk participants made more situational attributions. This means that people with high locus of control attribute their perceived risk of contracting COVID-19 to situational factors and not readily engage with preventative advice as actively as those who position the locus of control internally. Therefore their research findings suggests that high internal locus of control promote positive engagement with health promotion (Norman, Bennett, Smith & Murphy, 1998; Wallston, 1992).

2. Personality and Mental Health Considerations in the Context of Covid-19

Public health authorities around the world are working restlessly to contain the COVID-19 outbreak. However, this catastrophic situation is creating an atmosphere of fear, anxiety and stress throughout the population. To support mental and psychosocial health in various age groups, several considerations have been communicated during the outbreak. People are becoming anxious and distressed by watching, reading or listening to news about COVID-19. Continuous news reports about an outbreak can cause anyone to feel worried. We often fail to distinguish facts from rumours in this situation and hence an environment of fear and mental turbulence predominates over logical sense. The disease should not be attached to any particular ethnicity or nationality. We have to be empathetic, supportive, compassionate to all those who are affected. It is important to separate

an affected person, only physically not mentally, to reduce the chance of transmission. Healthcare workers in the current situation are feeling under pressure due to heavy workload. Managing exhausted physical health, mental health and psychosocial well-being during this time is important. Unfortunately healthcare workers are experiencing avoidance by community and even by their family owing to stigma or fear which can make an already challenging situation far more complicated. The sense of fear and shame associated with mental health problems may create a reluctance to seek support in COVID-19 pandemic conditions. Team leaders or managers associated with health facilities are finding it difficult to keep all staff protected from chronic stress and poor mental health during this extreme situation. Implementation of flexible schedules, providing social support for workers, long-term occupational capacity and proper planning are the basic needs of the hour. As consequences managers and team leaders are experiencing additional pressure and stresses to carry out their responsibilities.

A reflection of adults' behaviours and emotions is generally observed for children to manage the same during the time of stress and crisis. They find a safe and supportive environment to express their feelings. This pandemic situation also restricted them to ease their anxiety, fear and sadness. Older people, either in isolation or having health problems, become more anxious, angry, stressed, agitated during the outbreak or while in quarantine. Lack of practical and emotional support and health professional's unavailability put them in a traumatic situation.

3. Challenges Faced during the Pandemic Considering Personality Perspective

(i)   From the ongoing events we can see that there is discrimination among the various groups of people. For example, Chinese people are discriminated by the other country people. On the other hand, within the same country a sense of fear or panic has been observed between the people of various states. Again in our locality it is quite evident that we are discriminating those people who are affected by corona virus. Even health workers like doctors, nurses or other health sector related people also have

been isolated mentally. It is more surprising that although we are appreciating and honouring the contribution of health workers still they are being attacked physically quite frequently.

(ii) Various precautionary measurements like social distancing, lockdown etc. have profound impact on the behaviours of people of various personality traits.

(iii) Behavioural modifications done to cope up with the changed situation of social and economic status either happened spontaneously or non-spontaneously for different personality trait people.

(iv) Extroverted people feel suffocated and depressed during long-time lockdown whereas introverted people also feel sadness due to absence of their known comforted friend circle.

(v) Neurotic persons become anxious from the news of sudden death or health related hazard of their near one, peer or relatives.

(vi) All people having different personality traits may suffer from anxiety of unknown fear not only for corona virus but also for the scarcity of hospital seat availability.

(vii) Psychotic people get boredom and channelized their anger by harassing their spouse by mentally as well as physically.

(viii) Some common anxiety like fear to be affected by the virus is observed amongthe people irrespective of their personality trait. People are becoming more conscious about hand washing, immunity building for the benefit of mankind in this unavoidable situation by making an impact on the conscientiousness personality trait.

(ix) Unbelievable challenge and responsibility to overcome the pandemic situation has been given to doctors, nurses and police personnel.

(x) Unexpected societal and economic changes due to corona virus pandemic have been given birth of social mobility of different occupations and hence a modification in the array of various personality traits is observed. For example, migrant workers now have to think and act differently for their living.

(xi) Restrictions on touching the dead body (due to covid death) of near and dear one are causing emotional crisis and mental health problem.

4. Strategies Taken to Cope up Personality Disorder

A borderline personality disorder which is also shortly named as BPD has been evolved during this pandemic situation as because a sense of fear, anger, confusion, lethargy has been observed in people by the panic of getting affected by the virus. So to cope up with the challenges several strategies can be adopted as follows:

- Use of technology and software to connect with near and dear one and peered via chat or video calling.

- To be adaptable and flexible for setting the mind with this crumbling situation. Learning the best survival technology or grow more by knowledge and skill development can be done via different online mode.

- Stigmatization towards a particular country or social strata should be removed and have to look all the affected by a supportive and compassionate manner.

- Instead of spending all the time in social or mass media or any unauthentic source for getting news about corona virus, the reliable source like WHO or Government website can be followed at a particular time of the day. Continuous follow up for the news about corona virus may lead to be anxious or distressed.

- Recommended containment measures like social distancing, hand washing etc. have to follow and use the leisure time by watching movies, playing with children, reading and spending time with family and older parents.

- Honouring' the healthcare personnel and administrative people on a regular basis will inspire them to work enthusiastically in this over pressurized situation and help the community.

- The family members and relatives of health care personnel must show support in this adverse condition to be psychologically fit. They should also take proper rest, nutrients, balanced diet and counselling.

- Online class is important for the students but at the same time some physical exercise and innovative work will keep themselves relaxed. Parents are requested to give enough time and encourage especially their little children by storytelling, indoor games and experience sharing to cope up the bad time.

- Older people need more emotional support. Generally, they are impatient to stay inside and are frequently agitated to follow containment measures. We should try to involve them more in family work in this quarantine period so that they feel mentally strong enough to overpower the death risk threat situation.

Conclusion

So, from the above discussion we can clearly observe that there are profound associations between containment measures and personality traits but in a different extent. Higher score in extroversion trait indicates that extrovert people are reluctant to follow the precautionary measurements like social distancing, hand washing etc. On the other hand high conscientiousness engages people to be involved in recommended measures. Again relation between neuroticism and anxiety or concern has been established by several researchers during this pandemic situation. So it can be clearly said that various personality traits can be applied to assess the outcomes during COVID-19 pandemic. On the other hand it won't be wrong to state that response to overcome the challenging situation of coronavirus pandemic is dependent on personality. The role of personality towards psychological and behavioural response has been established by several researchers. We have also seen how older people, children and especially health sector workers are facing monumental challenges. So we have to work together irrespective of gender, demography, class, time to overcome this catastrophic situation as because it is not a sprint but a marathon.

REFERENCES

Abdelrahman, M. (2020). Personality traits, risk perception and protective behaviours during COVID-19 [Preprint]. PsyArXiv. https://doi.org/10.31234/osf.io/6g7kh

Aschwanden, D., Strickhouser, J. E., Sesker, A. A., Lee, J. H., Luchetti, M., Stephan, Y., Sutin, A. R. and Terracciano, A. (2020).

Psychological and Behavioural Responses to Coronavirus Disease 2019: The Role of Personality. *European Journal of Personality*, DOI: 10.1002/per.2281.

Blagov, P. S. (2020). Adaptive and dark personality traits in the COVID-19 pandemic: Predicting health-behavior endorsement and the appeal of public-health messages [Preprint]. PsyArXiv. https://doi.org/10.31234/osf.io/chgkn

Bogg, T., & Roberts, B. W. (2004). Conscientiousness and health-related behaviors: a meta analysis of the leading behavioral contributors to mortality. *Psychological bulletin*, *130*(6), 887.

Boone, C., De Brabander, B., & Van Witteloostuijn, A. (1999). The impact of personality on behavior in five Prisoner's Dilemma games. *Journal of Economic Psychology*, *20*(3),343–377.

Caley, P., Philp, D. J. & McCracken, K. W. J. (2008) Quantifying social distancing arising from pandemic influenza. *Journal of The Royal Society Interface*, 5 (23), 631-9.

Carvalho, L. D. F., Pianowski, G., & Gonçalves, A. P. (2020). Personality differences and COVID-19: are extroversion and conscientiousness personality traits associated with engagement with containment measures? Trends in psychiatry and psychotherapy, S22376089202 0005005201. https://doi.org/10.1590/2237-6089-2020-0029

Dunning, A. & Pownall, M.(2020) Dispositional and situational attribution of COVID-19 risk: A content analysis of response typology. [Preprint] DOI: 10.31234/osf.io/czskd.

Glass, R. J., Glass, L. M., Beyeler, W. E., & Min, H. J. (2006). Targeted social distancing designs for pandemic influenza. *Emerging infectious diseases*, *12* (11), 1671.

Jones, J. H. & Salathe, M. (2009). Early assessment of anxiety and behavioural response to novelswine-origin influenza A (H1N1). *PLoS one*, *4* (12).

Liao, Q., Cowling, B., Lam, W. T., Ng, M. W., & Fielding, R. (2010). Situational awareness andhealth protective responses to pandemic influenza A (H1N1) in Hong Kong: a crosssectional study. *PLoS One*, *5* (10).

Meshram, S., Gattani, D., Shewale, A., & Bodele, S. (2017). Association of Personality Traits with Oral Health Status: A Cross-Sectional Study. *The International Journal of Indian Psychology, 4* (2), No. 95, 61.

Moran, K. R. & Del Valle, S. Y. (2016). A meta-analysis of the association between gender and protective behaviors in response to respiratory epidemics and pandemics. *PloSone*,*11*(10).

Morrison, L. G., & Yardley, L. (2009). What infection control measures will people carry out toreduce transmission of pandemic influenza? A focus group study. *BMC public health*, *9*(1), 258.

Mortensen, C. R., Becker, D. V., Ackerman, J. M., Neuberg, S. L., & Kenrick, D. T. (2010). Infection breeds reticence: The effects of disease salience on self-perceptions of personality and behavioral avoidance tendencies. *Psychological Science*, *21*(3), 440–447.

Reluga, T. C. (2010). Game theory of social distancing in response to an epidemic. *PLoS computational biology*, *6*(5).

Salgado, J. F. (2002). The Big Five personality dimensions and counter productive behaviours. *International journal of selection and assessment*, *10* (1 2), 117-125.

Shanker, R. K., Mohamed, M., Hegde, S., & Kumar, M. A. (2013). Influence of personality traitson gingival health. *Journal of Indian Society of Period ontology*, *17*(1), 58.

Van Dijk, S. D. M., Hanssen, D., Naarding, P., Lucassen, P. L. B. J., Comijs, H., & Voshaar, R.O. (2016). Big Five personality traits and medically unexplained symptoms in laterlife. *European Psychiatry*, *38*, 23–30.

World Health Organization. (2020). *Coronavirus disease 2019 (COVID-19): situation report, Mental health and psychosocial considerations during the COVID-19 outbreak 18 March 2020.*

https://who.int/camigns/connecting-the world to combat-coronavirus (retrieved on 21.07.2020)

https://individuals-borderline-personality-disorder (retrieved on 23.07.2020)

https://coronavirus.beyondblue.org.au(retrieved on 26.07.2020)

https://mcleanhospital.org/news/impact-covid 19(retrieved on 17.07.2020)

2

Challenges of E-Learning among the Children Residing in Slum Area in Howrah, West Bengal

Tapas Pramanick and Dr. Nandini Samaddar

Introduction

In rapidly changing world education plays a very significant role. But the slums are far behind till the days. Basically, the slum are all-over the world and their images are typically similar. Slum develops with those people who come to the cities and towns for earning and live in a congested sub-human environment with their families. Many initiatives by Government help the children of slum dwellers to come under the roof of education. They are developing themselves by education.

Howrah is an adjoining district of Kolkata, the capital of West Bengal. Hence communication and transportation are also developed. So many commercial and industrial organizations are here and many people who come to earn from peripheral area and return home after their work but who come from other districts and other states stay with their families beside the streets and congested places for months and years and develop slums. Many slums are scattered in different

places of Howrah district. Government has taken some innovative actions like Sarva Shiksha Abhiyan aimed universalization of elementary education in the country, Right to Education Act for free and compulsory education up to elementary level to all children etc. These activities help to draw the children under the roof of education. Slum children in Howrah district are not exception of that. They were going to nearby schools but out blasting of covid-19 hamper everything. The educational institutions remain close for months to avoid transmission of this pandemic disease. Formal education is not possible in current situation, so e-learning among slum children would be effective. E-learning introduced in last two decades (1995). It is also known as Internet-based Training (IBT), Web-based Training (WBT), Online learning, Digital learning etc. E-learning is computer and network based teaching. Here teaching is delivered through internet, video tape, television, radio, CD-ROM, DVD etc. Distancing is not barrier of teaching-learning due to e-learning process.

Rationale of the Study

The educational institutions remain closed for months for occurrence of covid-19. Therefore formal education is not conducted. Many students draw their interest from their syllabus. In this situation e-learning is suggested to continue teaching among pupils. E-learning needs some technological support that is poor to slum children. This study emphasizes on how e-learning will be conducted among children residing in slum area instead of different barriers.

Research Questions

What are the problems and challenges of e-learning among the children residing in slum area?

How would the problems and challenges of e-learning among slum children be solved?

Objectives of the Study

To find out the problems and challenges of e-learning among the children residing in slum area.

To suggest some recommendations to solve the problems and challenges of e-learning among slum children.

Methodology

The purpose of this study is to analyze the challenges of e-learning among the children residing in slum area in Howrah. Case study research method has been adopted for this study. The investigator has adopted purposive sampling technique to choose 30 slum children under age group of 6-14 years who are studying in different schools. The participant and non-participant observation and interview methods have been followed in the study. The collected data has been analyzed and interpreted by qualitative content analysis method.

Analysis and Findings

Majority of slum children are not engaged with e-learning. On the basis of interview among slum children the problems of E-Learning are:

Student-1:

- Reduction of family income
- No digital device
- Small home premises

Student-2:

- Loss of job of parent
- No knowledge regarding e-learning
- Engage to household work

Student-3:

- No knowledge regarding e-learning
- Spent time to care siblings
- Engage to household work

Student-4:

- Reduction of family income
- Hampering daily life
- No T.V. or smart phone

Student-5:

- Unfavorable environment
- Reduction of family income
- Stress related to present situation

These problems are basically seen among rest of all students.

Table-1

Problems of E-Learning among Students Residing in Slum Area

Code	Category
Reduced income	Problems of E-Learning among students residing in slum area
Loss of job of parent	
Small house and home surrounding	
Lack of smart phone, computer, T.V. or other devices	
No knowledge regarding e-learning	
Engage to household work	
Spent time to care siblings	
Hampered daily life	
Unfavorable environment	
Stress related to present situation	

Problems and Challenges

Financial Problem

Basically slum dwellers work in unorganized sectors like hotels, shops, garages, small industries or even some slum dwellers work as self employee like rickshaw driver, hawker or some collect old papers, books and exercise books, broken plastics etc. Due to occurrence of covid-19 the slum dwellers can't attend their works. Hence their income is reduced or some losses their job. Daily lives of slum dwellers become insecure. Even some have no food properly. In this situation the education of slum children is neglected. Hence, e-learning is far behind in their minds.

Problem Related to Living Condition

The slum dwellers live in sub-human and congested environment. They use to live more people in a small room. Due to spread of covid-19 corona virus; everyone try to avoid to go outside and they also have no work in their hands. So every family member is present in the single room. In this situation the children can't be attentive in their education though who having provision for e-learning.

Lack of Modern Technology

The slum dwellers are unfamiliar to modern technology. Most of them have no smart phone, computer, lap-top etc. for e-learning and those who have any facility they are not aware about e-learning. Hence, the importance of e-learning to slum children remains in dark. Majority of slum dweller are illiterate or low educated; they are not aware about continuation of their child's education. Besides this for e-learning, internet facility is needed that is payable. When men have no money to eat, they can't think for extra expense.

Learners' Motivation

Formal education has the advantage of direct supervision but e-learning can't assess the motivation of pupils. So the student not to be attentive many times when e-learning going on. The children of slum dwellers almost involve in household work or raring to their siblings. Easily they become involve in other works during the session of e-learning.

Lack of Consciousness among Children

Most of slum children are first generation learner. So the children are not conscious about continuation of learning and nobody is there to encourage them.

Stress

Many elderly pupils state about their stress on present situation (occurrence of covid-19). Their parent losses job, family falls into trouble. They can fell the situation. Schools are closed, so the children can't go to school or even outside. They spent all the time in a small

room, the life becomes monotonous. The children can't talk with their friends or play outside. Hence they fell disappointment.

Solutions of the Problems

Financial Support

For pandemic covid-19 attack, most of slum dwellers lose their job and they have not enough money too. If the Government provides financial support to those people, they can be secured and they can be motivated to e-learning for their children.

Provision of Basic Needs

Due to inadequate money in hands, the slum dwellers can't meet their basic needs, like food. Already the Government provides whole grains through ration but if more items would be given then present stress will reduce in some extent.

Role of Teacher to Aware about E-Learning

The teachers have an important role in this context. As slum dwellers are not aware about e-learning the teachers might contact with the parents and ask for continuation of teaching through e-learning in the present situation and guide the children promptly.

Facilitate for Free Internet

As internet is payable, so the Government has to access free internet facility for the current situation to everywhere. So that lack of internet would not the barrier.

More use of Radio and Television

It is seen that the slum people have T.V., radio rather than other technological support for e-learning like smart phone, computer, lap-top etc. Hence, teaching will be conducted through radio or television to reach to more pupils.

E-Learning from Primary Level

On-line classes in television are already conducted. It is suggested to carry out the classes from the root of education means class-I and

more classes to be arranged. There should be facility of repeat telecasting of previous classes so that no student left any class.

Psychological Support

Elderly children are more sensitive. They loss their childhood but not mature like a man. The parents should spend more time with their children and give the positive assurance. No darkness is permanent the sun will rise. The Government can take a step to secure their lives and provide the basic needs like food. Different NGOs and many kind hearted people can stretch their hands to those needy slum people. The teacher will contact with the slum children and give the up to date knowledge about their curriculum and provide mental support.

Conclusion

Last few centuries bring a pandemic disease in human civilization that creates great lose of every segment of human life. Everyone fights against this pandemic. The educational institutions remain close to avoid spread of this virus among the students who are the future candle of a country. It is not possible to conduct formal institutional education in present situation. The children need to regular touch with their syllabus, if not they may lose their interest. Most of slum children are first generation learner. So the slum dwellers are not caring to their child's education. The e-learning should be facilitated to slum children with solving their problems. In this warfare stage we need hands over hands.

REFERENCES

Agarwal, S. & Nath, A. (2011). Some Challenges in Designing and Implementing Learning Material for Ubiquitous E-learning Environment. Journal of Global Research in Computer Science, 2(2).

Malik, D.R. (2014). Challenges of educational mobility among Slum Children in Odisha: A Special reference to Bhubaneswer City. International Journal of Multidisciplinary Educational Research, 3(1).

Rathod, G.R. & Koli, V.L. (2015). Child Labour and School Drop-out. Scholarly

Research Journal for Interdisciplinary Studies, Retrieved June 24, 2020 from http://www.srjis.com/pages/pdfFiles/146710341437.%20Dr.%20 G.R.%20 Rathod_Mr.%20V.L.%20Koli.pdf

Shaikh, F.F. (2013). E-Learning trends issues and challenges. International Journal of Economics, Commerce and Research, Retrieved June 25, 2020 from http://www.tjprc.org/publishpapers/2-41-1363675286-1.E-earning. Shaikh.full.pdf

Sunny, D. & Nair, M. (2017). School Drop-outs engaged in child labour: The case of Maharashtra, India. International Journal of Management and Applied Science, Retrieved June 24, 2020 http://www.iraj.in/ journal/journal_file/journal_ pdf/14-424-151685798555-61.pdf

3

Adoption and Transformation of Technology in Online Education during Covid-19: A Study Based on School Teachers

Dr. Dipak Kumar Kundu and Santanu Ghosh

Introduction

Around the world, the novel corona virus has infected millions of people and countless people are dead. And this has created a pandemic situation which effected all the sector of society. Locked down with maintaining social distancing is the only way to break the spreading chain as there is no vaccine against the virus. So, like other countries, the Indian Government first instructed the people to stay at home through 'Janata Curfew' and later the locked down was declared in the several state through various phase. In this pandemic situation Education Sector has affected more and suffered a lot. As per Govt. instruction all the educational institution should shut down temporary. For this instruction formal education is hampering a lot because the teaching-learning process is not continuing. In this crucial situation, the teacher has found a new way for the teaching-learning process. At first, they adopt technology as a tool, then they transform the teaching-learning process. In this paper we attempted to study the

transformation from formal teaching to online education during COVID-19. Formal teaching means classroom teaching which are more suitable for learners. The teachers in the classroom with the help of teaching-learning materials and interacts directly with the students. Online education refers to the innovative teaching this is given remotely with the help of digital tools and technology. Online education is electronically supported learning that relies on the internet for teacher-student interaction. We can say that technology adoption is very important for everyone in the home quarantine situation because technology is the only way to conduct online education. So, teachers have been forced to engage students by adopting new and alternative teaching strategies with the help of technology. But in this form of change, they faced many barriers.

However, technology is the main key to education in this locked down period. And this has changed the teaching-learning process from formal to online education as well as the role of the teacher totally changed.

Research Questions

- Why teachers should adopt technologies during COVID-19?
- How teachers should adopt technologies and influence all the students to engage in this?
- How has the transformation in digital education taken place?
- What is the experience of all the teachers about digital education?

Objectives

Based on our research questions we have developed these objectives:

- To understand the adoption of the technology.
- To know the transformation towards digital education.
- To find out the student's engagement.
- To know the experience of all the teachers about the digital education.

Methodology

The study is based on survey method with quantitative research as well as qualitative analysis for data collection from 108 school teachers

in higher secondary institutions in West Bengal. So, online purposive sample survey was conducted for collecting data from Government, Government-Aided and Private School teachers. The questionnaire was developed consisting of close-ended multiple response questions and few open-ended questions to fulfill the objectives of the study. The survey schedule consists of questions pertaining to basic information on technology adoption, transformation towards online education, student's interest and attendance, teacher experience etc. Personal interviews were also conducted with telephonic calling. The teachers shared their experiences on the virtual classes, teaching-learning process and student's engagement.

Objective Wise Analysis and Interpretation

Adoption of Technology

As a social being man is always changing. People adopt the situation in despite of their own will or reluctance. COVID-19 pandemic creates a crucial situation in society. The teaching-learning process came to a complete halt as all the institutions were totally closed during locked down period. Then teachers are forced to find new way. Since only technology alone can keep the teaching-learning process afloat, they adopt technology. Technology adoption is a term that refers to the acceptance integration and use the new technology in society. COVID-19 is favoring the adoption of technology. So, the teachers should change their mind set towards the online education and adopt technology for the better future of all the students.

Figure: 1

CAUSES OF TECHNOLOGY ADOPTION

■ To continue teaching-learning
■ Pressurization of school
■ For continuation of salary
■ Moral duties
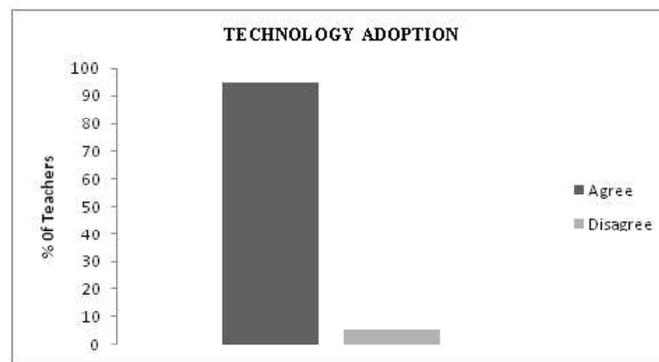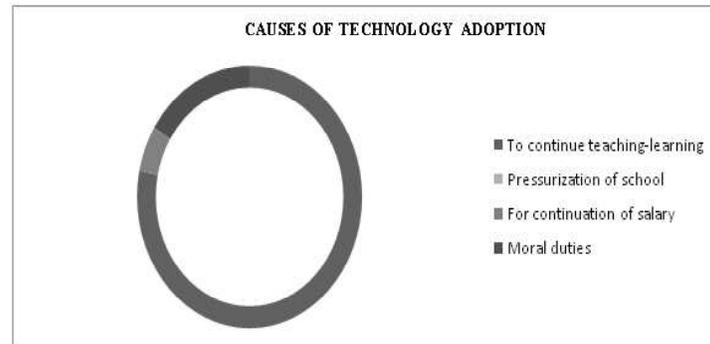
Figure: 2

In figure: 1, from the total 108 respondents most of them have agreed (94.4%) to adopt technology and few respondents have disagreed (5.6%) to adopt technology. Figure: 2 shows that 78.2% teachers out of 102 adopted technology for continue teaching-learning process,16.1% teachersfor moral duties, 5.7% teachers for continuation of salary and 0% teachers for pressurization of school.

Transformation towards Online Education

Formal learning is education normally delivered by trained teachers in a systematic intentional way within a school. On the other hands online education is a flexible instructional delivery system that encompasses any kind of learning that takes place via the internet. The education system in West Bengal is based on traditional but the locked down situation it has transform towards online education to continue teaching-learning process.

Teachers first learn how to use applications by browsing, asking colleagues or friends and watching you tube reviews. Then they make themselves ready to give online education with the help of specific devices. The teacher uses different types of application during locked down for teaching-learning through online modes are google meet, zoom, micro-soft team, skype, webex meet, facebook live, you tube live, whatsapp etc. They also conduct virtual classes. This online education has changed the role of teachers and mode of teaching-learning process. It has created the revolution and transformation in school education system.

Respondents were asked about the way of acquainted with the technology. In figure: 3 shows that the majority of respondents (55.6%) used different application to know technology, 25% of respondents acquainted from viewing you tube, 5.6% of respondents from technology expert, also 5.6% of respondents from friends or colleague and 8.2% of respondents learned from family member to use technology.
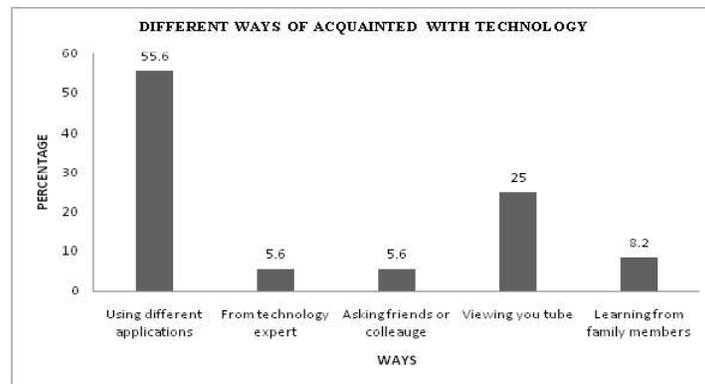
Figure: 3
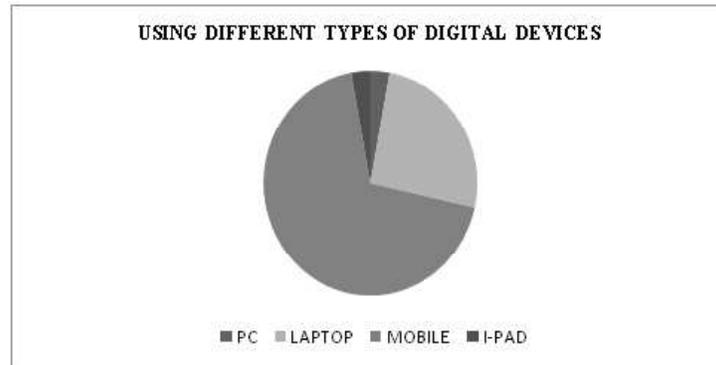
Figure: 4

The teachers used different devices for online teaching. In figure: 4 shows that most of teachers (68.6%) used mobile, around 25.6% of teachers used laptop, 2.9% of teachers used PC and 2.9% of teachers used I-Pad for conducting online education.
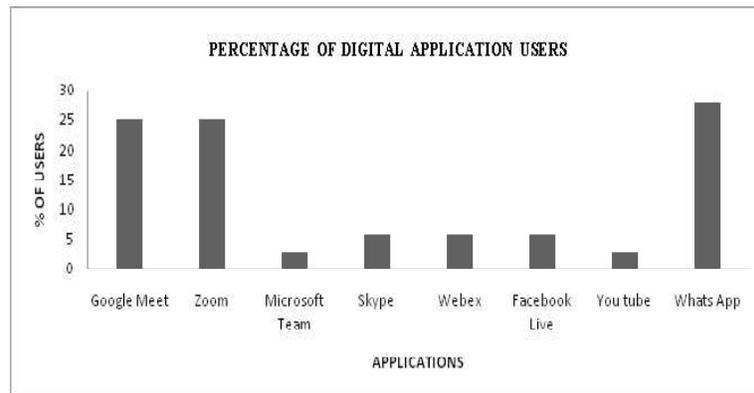
Figure: 5

The teachers used digital applications for online education. In figure: 5 most of teachers (27.8%) used whats app, 25% of teachers used zoom, also 25% of teachers used google meet, same percent (5.6%) of teachers used skype, webex, facebook live and few (2.8%) teachers used YouTube.

In figure: 6 shows that 77.8% of teachers used different applications for conducting virtual classes. 22.2% of teachers used different applications but they had not conducted any virtual classes only shared ppt, pdf, audios, videos etc.
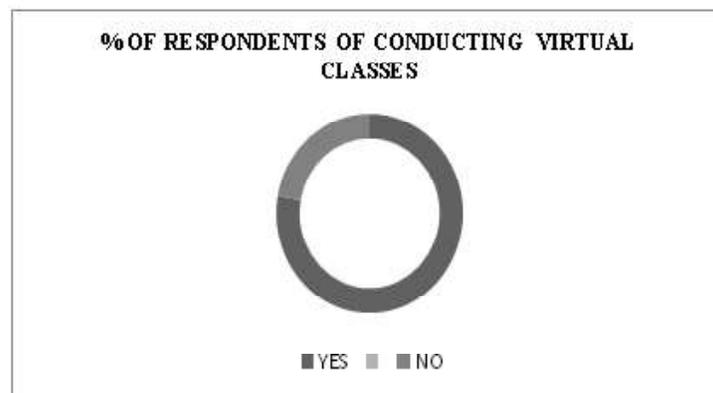
Figure: 6
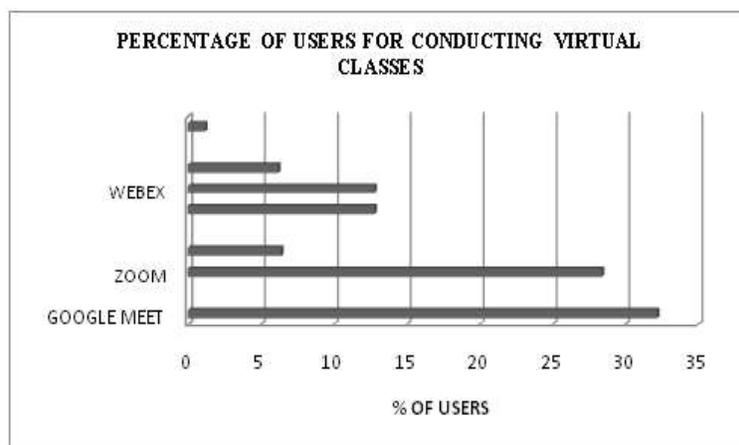
Figure: 7

In figure: 7 shows that most of teachers used google meet (32.2) and zoom meeting (28.4) applications for conducting vitrual classes. Most of teachers told that these application is mostly preferred for easy to access, for better audible and visibility conditions and also friendly useres. 12.8% of teachers used both application (skype & webex), 6.2% of teachers used facebook live and few (1.2%) teachers used others (team link, hangout).

Student's Engagement

Student's engagement refers to the degree of attention, curiosity, interest, optimise and passion that student's show when they are learning or being taught which extends to the level of motivation they have to learn and progress in their education. Student's engagement is a challenge today for online education. Teacher faced lot of problems for student's engagement during locked down. Teachers first try to communicate with the students. Then create a whatsapp group with their contact number, share link for the online classes and join them. They faced some problems to engage students for online classes such as network issues, lack of digital devices, lack of interest, proverty etc. Besides this teachers also notice student's interest and their attendance in online education.

STUDENT'S INTEREST FOR ONLINE CLASSES

5.7
17.1
25.7
51.4

■ High ■ Moderate ■ Low ■ Very Low

Figure: 8

STUDENT'S ATTENDANCE OF ONLINE CLASSES

Low
Medium
High

0   10   20   30   40   50   60

PERCENTAGE
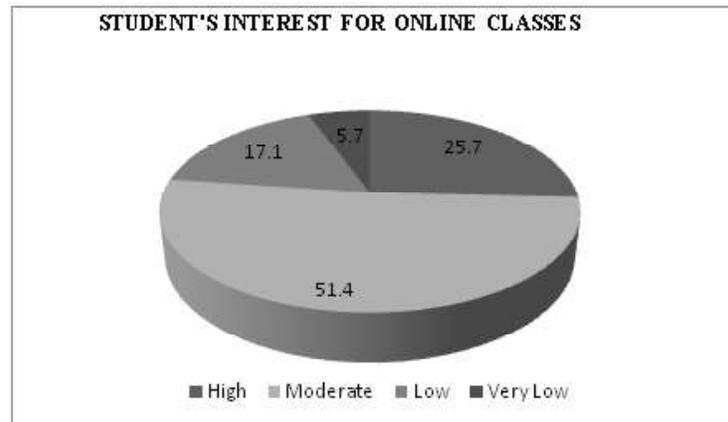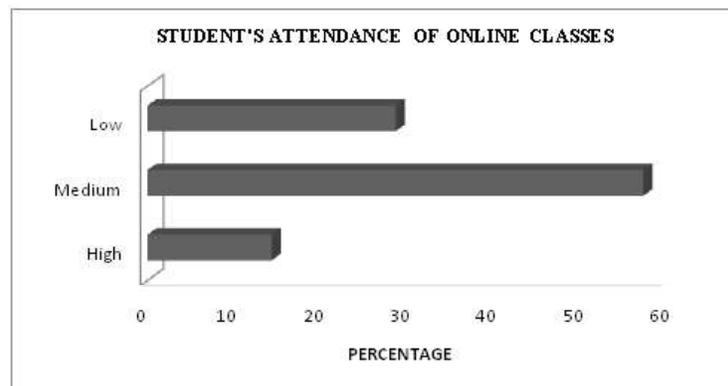
Figure: 9

In figure: 8, most of the teachers (51.4%) told that the student's interest were moderate, 25.7% of teachers said that the student's interest were high and few teachers (17.1%) told that the student's interest were low and very low (5.7%) for online classes.

In figure: 9, most of the teachers (57.1%) said that student's attendance of online classes were average, about 28.6% of teachers told that student's attendance of online classes were low and a few teachers (14.3%) said that student's attendance of online classes were high.
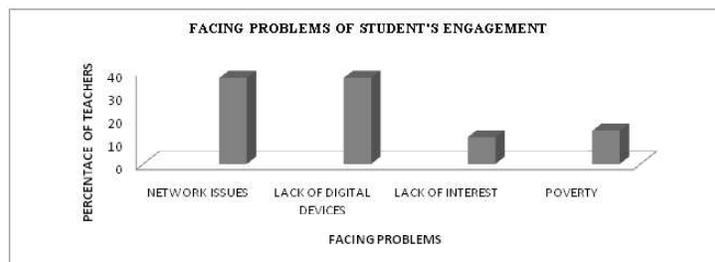
Figure: 10

In figure: 10, most of the teachers (37.1%) told that they faced both problems, network issues and lack of digital devices of student's engagement. About 14.3% of teachers faced problems of poverty and a few 11.4% of teachers faced lack of student's interest of student's engagement for online classes.

Teacher's Experiences

At first when the teaching-learning process were totally stopped, teachers were mentally depressed and stressed. Initially, they were uncomfortable in conducting online education through technology. But when they started the online classes it gradually became their habit and they started to love online education. In word of Mrs. Purba Sarkar, online teaching is very interesting but time consuming for teacher. As too much preparation is needed to deliver a good speech in the class. To add on Mrs. Subhajah Bose said this online teaching is the future of teaching especially in the pandemic situation because there is no substitute of classroom teaching. Mr. Chanchal Kumar Pal shared his experience, online teaching is better than regular classes, as you can completely focus on your family, no travelling expenses, total mental peace. Mr. Subir Saha shared his views as it was the first time I am teaching through online and I am very happy, first I thought it must be too much difficult but I was wrong because its access is too much easy, I am fully satisfied by taking classes through online. Mr. Sajal Paik was focusing on student's perspective, as they are experiencing it for the first time, they are facing lots of problems because some students are from poor family background, they have no proper digital devices and proper internet facilities. So, central and state govt. need to take some actions on this. Overall, all

are happy with technology adoption in teaching-learning process in higher secondary institutions in West Bengal.

Major Findings

In the light of the objectives, after completion of data analysis and interpretations, several points have been come out as a major-findings:

•   The study is confined that in this lockdown situation education system has been changed by technology adoption.

•   The study is confined that the teaching-learning process has been transformed from formal to online education.

•   Unmasking the new face of education and new opportunity towards digital learning.

•   Managing online education, conducting virtual classes and student's engagement is a challenge for teachers.

•   For this transformation many problems (lack of digital devices, lack of interests, poverty, network issues etc.) has been found.

•   It has been identified that an online teaching-learning system has creating a new digital division among the students with and without digital accessibility.

Conclusion

The COVID-19 changes the total education sector in our country with an opportunity to use new education process. Online education is the most preferred in the present crisis. Due to the pandemic situation most of the teachers at higher secondary schools in West Bengal uses technology and they started online teaching-learning process. The teachers have become success to engage the students in online mode of education. But they face many problems like network bandwidth, low cable tower, low internet speed and also financial constraints while imparting teaching. Nevertheless, most of the teachers and students are using social media tools for virtual classes. The new digital technology in response of teaching has revolutionized the education system. The revolution towards adopting technology and transformation from formal to online education is a mandatory scenario. COVID-19 has changed the stakeholders in education

system from normal to new normal with the usage of technologies and even very coming years education system will move toward blended mode of teaching-learning with complete technological expertise.

REFERENCES

Ali, W. (2018). Transforming higher education landscape with blended approach as an evolving paradigm. Journal of Advances in Social Science and Humanities, 3 (7), 143-169.

Buabenga-Andoh, C. (2015). ICT usage in Ghanaian secondary schools: Teachers perspectives. The International Journal of Information and Learning-teaching, 32(5), 300-312.

Fu, J.C. (2013). ICT in education: A critical literature review and its implications. International Journal of Education and Development Using Information and Communication Technology, 9 (1), 112-115.

Jena, K.P. (2020). Online learning during lockdown period for COVID-19 in India. International Journal of Multidisciplinary Educational Research, 5 (8), 82-92.

Shenoy, V; Mahendra, S; & Vijay, N. (2020). COVID-19 lockdown: Technology adoption, Teaching-learning, Students engagement and Faculty experience. Mukt Shabd Journal, 9 (4), 698-701.

Tapscott, D. (1998). Growing up Digital: The Rise of the Net Generation. New York: Mc Graw-Hill.

UNESCO. (2020). COVID-19 Educational Disruption and Response. Retrieved from https://en.unesco.org/covid19/educationresponse/

Wikipedia. COVID-19 Pandemic in India. Retrieved June 20, 2020 from https://en.wikipedia.org/wiki/covid

Wikipedia. Education in India. Retrieved June 24, 2020 from https://en.wikipedia.org/wiki/education_in_india

4

E-Learning Teaching:
Barriers for Isolated Learners

Dr. Jayashri Roy

Introduction

The trouble that effect learners from learning fully engaging in online learning. Different types of troubles are faced by the learners while learning. Like a student who has left his /her textbooks at home and an employee who didn't receive the notes for preparation of the training workshop and many things. (P.E. Williams: 2003). When learners cannot fully participate in a learning activity they cannot be truly engaged in online learning. All of these can be considered barriers to online learning. In a studying environment, the troubles are many more and unpredictable. Isolation, a barrier of online learning of education system technology. Playing out as one of the factors behind poor retention to online learning. Here we discuss about some of the most common cases of barriers to learning and how to overcome them.

Objectives

- To find out the experiences of students on isolation and collaboration.

- To find out the barriers and challenges to improving the learning experiences for such students.

- To find out solutions could be used to overcome these barriers and challenges.

Methodology

This study followed a qualitative research methodology supported by survey results. A survey regarding prior to the qualitative engagement through a questionnaire was done. The findings from the students' voices were captured, narrated and analyzed using summaries under identified themes.

Barriers

Lack of Focus

Now a day are numerous forms of digital, verbal, and chat communication. Phones ring, email and meetings conference run back to back. That often leaves learners unfocused. The learners read their lessons without feeling their essence; they watch videos of learning without attention of the lessons. In the modern digital technology demands for most jobs leave little opportunity for learners to fully focus on learning (Cavanagh, Burston, Southcombe & Bartram: 2015).

Isolation and Connectivity

Isolation may arise from the geographical separation and lack of contact with peer students. Through field survey seven students mentioned the term isolation specifically, felt it was a problem for their learning, however, not all students felt isolation to be a problem as they expected not to have face-to-face contact with the university or their peers, as they selected a programmer which meant studying alone. So, addressing negative feelings associated with isolation is a challenge, particularly as students have different needs and experiences.

Negative Past Experience

Bad teacher's online classes a history of boring schooling are all factors that can foster one of the barriers to learning, poor past

experience of students. Many adults have had experiences that gave them distaste for learning. Unfortunately the bad learning experiences cannot be undone.

Personal Mindsets

Whether it is due to negative past experience and low self-esteem many learners simply believe that they are too old to learn new technology. They are just resistant to online class and technology. Their own negativity can even foster disengagement among their peer's learners.

Remoteness and Ruralness

One of the major and serious findings of the study is the unavailability of electricity in the rural areas, in some cases connectivity of internet for students to 'switch on to online class' (rural student)

Isolation and Connectivity

As learnt from students have showed that psychological feelings of isolation may arise from the geographical separation, lack of time and contact with fellow students. Sometimes Student said that "I am at a distance of about 50 km from the student who is sitting nearest to me and doing the same class with me. We cannot easily meet unless if we meet at the end of a month when we go monthly shopping (Stoessel et al., 2015). This is the time we can arrange with the Teachers Resource Centre for us to meet and discuss our lessons." Asked if there is an expert of the subject matter that would lead the discussions when they meet, another Student said "There is no expert to talk to or guide us so we have to phone our lecturers to give us answers in time before we meet".

Motivation and Self-Discipline

The irregular contact with other students, colleagues at work and tutors to maintain momentum demotivates students. Students cannot meet deadlines for the submission of assignments and projects. Sometimes, as a result of distance and failure to learn from sources when the results are due and the writing of examinations dates make them miss it all. They place this difficult on the fact that they are

isolated from one another and where teaching-learning activities take place. (Assareha , M. Hosseini Bidokht: 2010)

Lack of Technical Skills

Every learner has not the same degree of technical experience in digital technology. When learners struggle the platform, they waste precious time and energy that should be spent on learning. Lower quality of communication, Demands high self-discipline, Lack of practice Delayed answers is the main barriers of isolated learners.

Solution

Overcome this barrier to learning by making social features, like Discussions, group work and leader boards can further reduce feelings of loneliness.

Solutions were ranked considerably higher than other potential areas of improvement in the questionnaire survey:

A. Improved tutor contact

B. Discussing experiences and tips with peers

C. Tips and comments posted by previous students

D. Material and content posted by previous students

E. Make online calendars of tutor availability, ensuring tutors notify students of any periods of absence due to holidays, sick leave etc.

F. Introduce student welcome emails from topic tutors, offering a friendly welcome with guidelines for expectations of contact, response times, feedback and information about the student and tutor relationship

G. Encourage more detailed feedback by tutors and send acknowledgement of submissions

H. To encourage their studies and to check on progress

I. To provide tips, reviews and commentary as 'footprints','hidden gems'

J. To illustrate course materials and relate them to real world practice

K.   To contact each other to discuss material and develop critical thinking

L.   Generate a geographic information feature which will broadly indicate the location of students on the course, facilitating mediated contact if required

M.   Humanize the course by including staff profiles with photos alongside relevant modules and topics

Contact between students and tutors should be improved. Students should be encouraged to form up self-study groups while waiting for e-learning platforms. There is more that they can learn from one another. There is also need for the university to provide maps of where all students doing the same programmes are found. Their contacts, if made available to all students will add value to collaborative learning. In terms of preference for improvements to distance learning programmes, students emphasized the following in their groups (T.M. Egan and M. Akdere: 2004)

Conclusion

The importance of improving student communication was identified as a second theme; various measures exist which could be used to overcome the challenges and to create an online classes, even in this environment; these measures can address the issues of isolation either directly or indirectly. Collaborative learning has many benefits to students in the institutions. (J.E. Allen: 2004). Collaborative learning builds self-esteem in students and thus helps them complete their studies in time. Isolation is still an issue in distance education. The study materials should be written in a way as to help students commence their studies wherever they may themselves in such a remote and rural areas. There is need to investigate the experiences of tutors on isolation of students and what they propose would arrest the situation (R. Joiner and J. Gavin: 2005).

REFERENCES

Cavanagh, J., Burston, M., Southcombe, A., & Bartram, T. (2015). Contributing to a graduate-centred understanding of work readiness: An exploratory study of Australian undergraduate students'

perceptions of their employability. The International Journal of Management Education, 13(3), 278–288. doi:10.1016/j.ijme.2015.07.002

Cavanagh, J., Burston, M., Southcombe, A., & Bartram, T. (2015). Contributing to a graduate-centred understanding of work readiness: An exploratory study of Australian undergraduate students' perceptions of their employability. The International Journal of Management Education, 13 (3), 278–288. doi:10.1016/j.ijme.2015.07.002

Cavanagh, J., Burston, M., Southcombe, A., & Bartram, T. (2015). Contributing to a graduate-centred understanding of work readines A. Assareha, M. Hosseini Bidokht, Barriers to e-teaching and e-learning, Procedia Computer Science 3 (2011) 791–795,2010.

Cavanagh, J., Burston, M., Southcombe, A., & Bartram, T. (2015). Contributing to a graduate centred understanding of work readiness: An exploratory study of Australian undergraduate students' perceptions of their employability. The International Journal of Management Education, 13 (3), 278–288. doi:10.1016/j.ijme.2015.07.002

Davidson, R. (2015). Wiki use that increases communication and collaboration motivation. Journal of Learning Design, 8 (3), 94–105.

J.E. Allen and J.Seaman , The quality and extent of online education in the United States, MA: Sloan Consortium, 2004.

P.E.Williams, Roles and competencies for distance education programs in higher education institutions. The American Journal of Distance Education, 17(1), 45-57. (2003)

R. Joiner and J. Gavin, Gender, Internet identification, and Internet anxiety: Correlates of Internet use, 8(4): 371-378, 2005.

Stoessel, K., Ihme, T. A., Barbarino, M-L., Fisseler, B., &Sturmer, S. (2015). Socio demographic diversity and distance education: Who drops out from academic programs and why?

Research in Higher Education, 56, 228–246. doi:10.1007/s11162-014-9343-x

T.M. Egan and M. Akdere, Distance learning roles and competencies: Academy of Human Resource Development. 2004

5

Health Education: Basic Need in Todays Pandemic Living: A New Approach

Dr. Trishna Goswami (Kundu)

Introduction

Much has been spoken of and written on how the world, as we know it, has and will transform during and after the Covid-19 pandemic. Rebooting the economy is as much about macro considerations as it is about reinventing businesses and people skills at the micro level. Drilling down deeper, it becomes apparent that the essence of reinvention has trickled down to all constituents of humanity, societies and individuals. As we read about the effects of the pandemic and speak with friends and professional across the globe, here are some interesting learning that have come to the forefront. When Covid-19 broke out earlier this year, there was panic and fear among beings across countries. With lockdowns simultaneously imposed in many parts of the world, life came to a standstill. But now, with time, the atmosphere of fear has slowly been replaced by a sense of acceptance. Humans have adapted to the new normal by making the necessary adjustments such as minimizing

physical contact and practicing social distancing even though it wasn't a very familiar exercise. There has been more time to turn the collective attention of humans toward self-care and general well-being, with people being forced to spend fewer hours outdoors. The trends reflect this shift. Fitness apps, for instance, have witnesses a 40 per cent increase in the time users spent thereon. Human beings now also recognize the risk of loss and an increased perception about mortality. This awareness has prompted people to focus on self-preservation. Acceptance of this mortality risk has even been reflected in how consumers now perceive life insurance as a must-have. According to Irdai data, the new business premium of life insurers saw a 15 per cent year-on-year increase in August 2021. The changes from this defining event have also trickled down to society at large. With societal engagements being restricted, various sections of the community adapted to the change by learning new skills and evolving on the professional as well as the personal front. Many salaried individuals have reinvented themselves as self-employed professionals owing to job redundancy. In addition to the move to self-employed status, the gig economy has also gained prominence in the employment landscape. This is because many organizations are now increasing their share of gig workers and freelancers as part of the remote working culture. In the midst of this shift, there's also another impending change on the horizon. Society as a whole is making a transition from self-gratification and self-aggrandisement to long term sustainability. This is reflected in how consumers are now shopping for goods. A Capgemini report revealed how 79 per cent of Indian consumers have altering their purchase preferences based on social responsibility, inclusiveness, or environmental impact. Clearly, there has been a shift in retail behaviour, with choices moving from luxury goods to need-based products and more focus on buying from business that make a difference. Thus, there's greater focus on socially impacting activities and tasks rather than mere self-gratification.

The changes at the societal level have also spurred transformations at the level of the individual. There is greater focus on becoming self-sufficient. Coming hand-in-hand with this shift is a greater gravitation towards knowledge acquisition and up skilling. It is heartening to see that Massive Open Online Courses (MOOCs)

witnessed a huge surge earlier this year. Clearly, the average Indian consumer is ready to make the transition from familiar territories to broader horizons. This may also equip individuals to work on multiple assignments from the comfort of their homes, in the wake of the new work-from-home culture, rather than seek permanent employment through conventional channels. This could also mean that individual entrepreneurship will also rise as traditional jobs shrink. With this three-tier transformation, it's also essential that businesses need to reinvent themselves to keep pace with the societies they operate in and the individuals they seek to serve. We believe that a shift in perspective is the need of the hour in health & immunity.In today's time, there is a greater need to support our health and well-being, primarily our immune system, at different stages of our life. These concerns regarding immunity have become more important, given the periodic outbreaks of infectious diseases such as SARS (Severe Acute Respiratory Syndrome), MERS (Middle East Respiratory Syndrome) and now the corona virus pandemic. The key to building a good immune system is focusing on our gut health because 85 per cent of our immunity lies in the gut. Hence the health of our gut and billions of gut bacteria that lives within it is extremely vital. The food of our gut bacteria is fiber, so when we eat more fiber, which is only fund in plant foods, we improve the health of our gut and thereby boosts our immunity. To lead a healthy life one has to understand and discriminate between good and bad practices. Preservation of good health depends on the understanding of the factors conducive to good health and the factors causing ill-health. Individuals have selective perceptions and in functioning as members of the society they conform to social norms and group sanctions. Culture is a dynamic process of change depending again on individual and group perceptions and predilections.

In recent years the importance of Health Education has been increasing so much so that it has emerged as separate discipline and profession. Experiences have been showing that delivery of health care is unproductive if not sufficiently supported by health education. It has been aptly pointed cut in the Alma Ata (WHO and UNICEF). Declaration that community participation is the essence in ensuring optimum, if not maximum, utilization of the services that are being provided by any health care delivery system. It has also been realized

in the Alma Ata Conference that health to begin with is an individual responsibility and there is need for every individual to be health conscious in order to observe healthy practices of living and seek medical relief at the proper time. To lead a healthy life every individual has to be aware of factors governing health and disease so that appropriate decisions are taken to enjoy normal health. In developing countries considerable efforts have been taken to strengthen health education and to make it a part of total health care activities.

Health: Concept

The World Health Organization defines health as "A State of complete physical, mental and social well-being and not merely the absence of disease or infirmity." Health education is concerned with imparting knowledge to the people about the principles of Hygiene. As a matter of fact, health education is but another name of Hygiene Health education plays a very important role in educating people for the preservation and development of their physical one mental health. With the help of health education, we are able to acquire and practice the knowledge of the various principles of hygiene in our day to day life. The concept of health, definition provided by the World Health Organization will be taken into account and it will be used as the basis for discussions. This broad definition is multi-dimensional and as a result of which concept of health also becomes multi-dimensional in nature. The main issues of these dimensions are the following:-

- Physical Well-being
- Mental Well-being
- Spiritual Well-being

Physical Well-being

When we talk about physical well-being, it implies the state when human being is free from all kinds of diseases. It is very necessary to have protection from various diseases, as it is only in such state that various parts of the body can grow or develop properly. A person, who suffers from various diseases or get pray of various diseases easily, will not achieve a good and sound physique. A person with good and sound physique possess of certain features which become part of his personality. For instance, such a person will have a good

complex, clean skin and good appetite. Not only this, it is only such kind of person that take a peaceful sleep.

Mental Well-being

A really healthy person will be health mentally also. By mental health, it implies the ability to make adjustment in accordance with the prevailing conditions. As known that the society in which we live is a changing society, which gets affected to considerable extent by the scientific discoveries and world. With the change in living conditions, considerable change is taking place in the conditions of various areas.

Spiritual Well-being

Spiritual Well-Being is a state in which a person beliefs on the notion of some super natural power or godly power in the universe. The validity of the spiritual dimension of health is dependent upon the fact that whether one belief on the existence of any spiritual forces in the universe or not and the particular nature and manner of functioning of these forces. Majority of health professionals doubt the existence of spirituality in the true sense of the term and among those who recognize such existence, perceptions of the nature and function of spiritual forces appear to vary considerably.

Principles of Life as a Basis for a Positive Concept of Health

The basic principles of life described below are formulated on the abstract level of systems theory so that they may be applied and understood in different disciplines and, in particular, form a link between science and humanities. This approach does not mean a fallback reducing humanities to biology, but the attempt to derive both areas of life sciences from the same formalized roots.

- *Entropy reduction*

  Each living phenomenon is continuously counteracting the internal natural increase of entropy by means of energy conversion.

- *Reinforcement and reproduction*

  Compartments or variables are able to increase or multiply due to a mechanism of positive feedback.

- *Elasticity and stability*

  Each living phenomenon has the capability of self-stabilization.

- *Adaptation*

  Each living phenomenon is able to its environment by different mechanisms.

- *Individuality*

  Each living phenomenon is delineated from its surroundings by a semi-permeable surface.

- *Compartmentalization*

  Living phenomena are characterized by open systems and sub-systems.

- *High complexity and interdependence*

  All parts within a living phenomenon are related and dependent to each other.

- *Hierarchy*

  Hierarchy in living systems means that there are different priorities. There are organs in our body which need more attention than others.

- *Semantics*

  Living phenomena have the capability of codifying structures variables by means of signals.

- *Information storage*

  Living phenomena store information by codifying it in durable carrier systems.

- *Active movement*

  Each living phenomenon is able to move actively either totally or in parts.

- *Internality*

  It is a kind of consciousness, awareness, internal view which we know from ourselves and which to some extent, we must also attribute to other living beings.

Health Education: Concept

Health education is "a process which effects changes in the health practices of people and in the knowledge and attitudes related to such changes." The world "Hygiene" has its root in the Greek word 'Hygienos' which means 'healthful'. There was a Greek Goddess called "Hygiea". According to Greek Mythology it was said that she was the goddess of health or healthy living. The purpose of hygiene is to allow man to live in healthy relationship with his environment. But in the modern times, it means 'an art of living'. We practice this art in order to have a sound body and a sound mind. According to Anthoy Coteriall, "Hygiene is very roughly the process of making things difficult for germs".

Today, we are living in a highly complex society. The technological complexities of such a society are reflected in our day to day life. Spread of ailment is caused by germs. Modern science has given us knowledge and devices which can make our life safer and healthier. If the germs could be kept away, the body shall principles of hygiene that help us keep free from ailments. The health of the individual is the concern of the community and is very useful for the healthy life of a community.

Today's Pandemic Living and Health Education

The Novel corona virus has now become a very common virus just like the flu, influenza & other viruses which attack the human respiratory track. However, it is deadlier than the other viruses. The virus has been active in all seasons throughout the year and is currently spreading at a raid rate across India. In winter, it is assumed that the virus can attack more patients including those of flu, influenza, common cold, since the virus tends to survive longer in a cold climate. However, wearing proper masks, sanitizing hands, maintaining social distance and following other protocols of social safety can reduce the spread of the air-borne disease. Many cases accelerated mostly because people refused to use proper masks, especially when affected. In this current situation, proper ventilation rooms, especially offices, should be well maintained. During winter, symptomatic patients should stay indoors to avoid the spread of the virus through respiration. The patients having lesser immunity, especially those who having co

morbidity should be extra careful during the winter season as they are more prone to getting attacked by this virus, therefore people are advised to stay safe in their homes and observe proper protocols of social safety.

Immunity: Concept

The word 'immunity' is a much-used one in 2020. Recovery during the ongoing pandemic is much dependant on one's immune system. In simple words, immunity is our body's natural defence system, which protects us from invasions by foreign substances. There are special mechanisms in place, which can destroy foreign substances, like bacteria, viruses, fungi, parasite; before they multiply and cause illness. The immune system is made up of special organs, cells and chemicals. The main parts of the immune system are white blood cells, antibodies, the complement system, the lymphatic system, the spleen, the thymus, the bone narrow and even the gut wall.

The Innate Immune System or Natural Immune System

People are born with this and it is genetically determined. It is people's first line of defense from pathogens that try to enter the body, achieved through protective barriers, such as phagocytic cells, natural killer cells, mucus, stomach acids, enzymes and so on. All these mechanisms are present prior to exposure to infectious agents. The main job of this is to fight harmful substances and germs that enter the body through the skin or digestive system.

The Adaptive Immune System or Acquired Immunity

People develop this when their body is exposed to microbes or chemicals released by microbes. This system makes antibodies and uses them to specifically fight certain germs that the body has previously come in contact with. It has two categories.

Active Immunity: It arises when the bodies own cells produce and remain able to produce antibodies following an attack of a disease or deliberate stimulation. Antibodies are manufactured specifically to deal with different diseases as they are encountered.

Passive Immunity: The production of immunity by artificial means by injecting ready-made antibodies. Babies have passive

immunity conferred by antibodies from the maternal blood and colostrums to common disease for several weeks after birth.

All of us are at some risk from infection every day of our lives. However, some of us need to take particular care to keep our immune system working at its best. People are more prone to infection if they are:

- Recovering from any kind of illness.

- Work in a place where one interact with a lot people, such as schools, hospitals, call centers, banks as one is more likely to be exposed to various infections.

- The elderly.

- Children.

- If one is taking medications which suppress the immune system, like corticosteroids or anticancer drugs.

- Have poor health.

Balanced or Bolstered

The layman is faced with an onslaught of information (and misinformation) and wide range of products to boost immunity. However, the very concept of boosting immunity is unscientific and dangerously misleading. The only evidence-based approach to boost immunity is vaccination. One must appreciate that one's immune system like most other things in life, need to function in a state of balance, neither more nor less. If it gets weak and sluggish, it can make one more prone to frequent infections, fatigue, and headache and so on. Sometimes, if this group of special cells, tissues, and organs get overactive, one may end up with conditions like allergies, eczema and asthma. Or if one's immune system gets hyper-excited and it starts to attack one's body instead of protecting it, one can end up suffering from autoimmune disorders like type 1 diabetes, lupus and rheumatoid arthritis. Moreover, if one tries to boost immunity in the absence of infection, he may experience inflammation in the body such as redness, soreness and pain. Our approach should be to protect our immune system and make it function efficiently and try to exclude lifestyle factors that weaken it instead of boosting it.

Factors which reduce resistance and increase susceptibility to infections

- Overeating
- Obesity
- Lack of physical activity
- Lack of sleep
- Chronic stress
- Smoking
- Alcohol consumption
- Anger
- Engaging in arguments
- Strong sunlight
- Exposure to smoky atmospheres
- Taking antibiotics regularly

Some Healthy Practices: Application of Health Education

Diet Forever, the name itself highlights a new dimension of being healthy fit and fine: Being basic for the best. There's something more than this weight loss. It's staying happy with good quality sleep, with no fatigue, ability to manage stress and radiate positivity. Diet Forever and Rupashree always stick to one's heritage while making the appropriate dietary guidelines for the individual. It is not believed in giving symptomatic relief rather finds out the causative factor and work on it. The most number of cases was founded in these two years and 9 months of journey that out of 100 women at-least 94 of them suffer from PCOS. Many of them regard it as a medical disorder but it's not. It's an absolute lifestyle disorder which needs a basic sustainable lifestyle change. Rupashree (Lifestyle and nutrition Consultant) says' "I always suggest these girls to be a bit active, recommend them with seed cycling and ask them to, avoid refined food items." Diet forever serves 3 services of lifestyle management with only one motto being basic for the best. Diet Forever always believes that if my client cannot fit into my dietary guidelines then the plan needs to be checked.

Growing up, mangoes meant summer and invariably the change of seasons brought about a definitive change in diet. From litchi to mulberry, melons to jamun, summers were the time for relishing an abundance of fruits and the larger canvas of memories included school holidays, late sunsets and generally doing the 'summer' things. Likewise, winters are associated with oranges, apples and grapes and plentiful vegetables, which included but were not limited to fresh green peas, radish, spinach, carrots and beetroot.

Food Seasonality

Historically, across the world, the season has food habits of people. The starting point might be the multitude of harvest festivals all over the globe, where a bountiful harvest is celebrated along with the change in seasons. Be it the Sankranti in India, the Thanks giving in the US, the Sukkot of Israel, or the Olivagando of Italy, the celebration of the harvest also generally signifies the change of seasons. All over the globe, most harvest festivals celebrate and feature the consumption the new crop of the season, thereby indicating the availability of the seasonal food that is to be available till the next harvest. Although many foods are harvested more than once a year, these also have distinct characteristics of their own and are enjoyed in recipes that are attuned to their usage. As well as that, especially in countries and regions with cold climates, people begin the process of preserving foods so that they are available in some form or the other the entire year round an also to ensure that the plentiful food does not go to waste. In essence, nature has created food cycles in a way that we enjoy certain foods at certain times of the year. This is what creates balance and harmony.

Defining Seasonality

With increasing globalization, the definition and interpretation of seasonal food depends on who is using the food and in which context. In the Indian context, the seasonality of food is generally also perceived as 'locally produced' food, 'local' meaning the larger geographical area. For example, litchis grown in Muzaffarpur will qualify as summer fruit in the entire country, even though many regions might be colder at that time of the year than the coldest it gets in Muzaffarpur in winters. It might, however, not hold for foods that are grown during the non-season, in climates that are conducive to the growth

of such fruits and vegetables but the consumption is associated with a certain season.

Benefits of Regular Exercise

Physical activity may help reduce the risk of chronic diseases, like obesity and diabetes. Both these conditions have been linked to lower immune response. It also lowers blood pressure and improves cardiovascular health. It can also help one manage stress better, which will inadvertently improve one's immunity. Exercise contribute to general well-being and therefore to a healthy immune system.

- *We may live longer*

  Studies link even 5 to 10 minutes of vigorous exercise or 15 minutes of moderate exercise everyday can lower the risk of death from any cause.

- *Enhanced cognitive function*

  Exercise improves focus and attention, as well as motor reaction time.

- *Good for our mood*

  Exercise can lift our mood by decreasing symptoms of anxiety and depression by washing our brain with mood-enhancing neuro-chemicals.

- *Protection for our heart*

  The heart is a muscle. Exercises help the heart become more efficient and better able to pump blood throughout the body.

- *Better sleep*

  A workout during the day can help us to get better sleep. Exercises also increase time spent in deeper stages of sleep, allowing for more restorative sleep.

- *Stronger bones*

  Exercise helps keep the bones strong by increasing mineral density levels.

- *Mobility boost*

  Exercise boosts our ability to do everyday tasks, walking, climbing stairs, carrying groceries, lifting luggage overhead, moving a couch or playing with children.

- *Weight loss*

   This is one subject that does not need elaboration. But one should remember to lose weight one needs calorie deficit: one has to eat fewer calories than one burn.

- *Lower risk of cancer*

   The American Cancer Society says that physical activity is linked to a lower risk of 13 types of cancer, including the colon, breast, endometrial and liver.

- *Reduces risk of diabetes*

   Regular exercise is linked with a 26 percent reduction in the risk of developing type 2 diabetes, says an October 2016 analysis in Diabetologia.

Planter's Pleasure

In the early days of knowing each other, Jean-Paul Sartre would often refuse to go for walks with Simone de Beauvoir to the countryside, saying he was "allergic to chlorophyll". The French philosopher was actually ignorant of the joys of nature; he'd rather spend time with his lover in the library or the bedroom. There are many who are impervious to the pleasure plants bring. But for others, watching and caring for greens is a way of life and recourse to inner well-being. Few things boost our emotional well-being like gardening does. Plants have way of giving back, as those in the know would say; one feel blessed and heal oneself in the process. Several scientific trials have revealed the beneficial effects on mood and mental health of even simply observing nature. In a Japanese study, viewing plants altered EEG recordings and reduced stress, fear, anger and sadness, as well as blood pressure, pulse rate and muscle tension. A later Japanese study found that it was more beneficial physiologically to view a green hedge rather than a concrete fence. A pioneering randomized study by the environmental psychologist Roger Ulrich in the 1980s found that views of plants and trees from post-operative wards improved the mood of patients and reduced analgesic use, surgical complications and length of stay.

Spring into Fitness

The physical development of young women has gained a lot of attention over the last few years. Previously, most of the research with regards to physical and athletic development focused on young boys. Although boys and girls tend to show similar growth in physical development during the first decade of life, there is a significant difference in physical and athletic development over the second decade. This is partly due to maturation and hormonal changes during puberty. Girls tend to mature comparatively earlier (approximately around 12-12.5 years) whereas boys tend to mature late (approximately around 14 years). Studies have reported that biological maturation is a better measure of growth compared to chronological age. Multiple methods have been studied to assess maturation. One common measure is identifying peak height velocity or PHV (the point of rapid increased in stature). This is calculated using anthropometrical variables such as height, seated height, leg length and chronological age.

Stereotyping Hinders the Physiological Aspects of Growth

During the time of PHV, the bones tend to grow faster than muscles and tendon in boys and girls. Due to the influence of testosterone (sex hormone), boys tend to also see improvement in hypertrophy of muscle tissues, strength and power. However, girls do not see the same improvement in strength, power and hypertrophy due to the influence of estrogen (sex hormone). Besides, girls tend to increase fat mass comparatively more than boys that can negatively influence power-to-weight ratio, therefore, making participation in sports and exercise more challenging compared to their male counterparts. Furthermore, the psychosocial aspects often associated with physical self-concept also tend to change during this time. With social construction of how a female body should look and behave along with stereotypical gender biases further adding to the problems, girls are often expected to be thin, weak and pick "lady-like" physical activities whereas boys are expected to be strong, big and pick masculine activities.

The stereotype hinders the physiological aspects of growth, as both boys and girls are mostly trying to align to unrealistic and not

sustainable norms set by the society in general. As a result, it pushes many young girls away from participating in physical activities, impairs relationship with peers and creates more self-doubt in their understanding of their physical self. Therefore, the time leading up to PHV is crucial for girls to be exposed to various movement skills and create a broad movement vocabulary. This can help them be more resilient with a greater focus on learning skills as opposed to trying to align to unrealistic social norms of focusing on appearance. There are several ways to increasing young girls' movement vocabulary. Although more specific ways can be developed based on collecting relevant individual information but some common factors should be acknowledged in general; they are provided below.

Environment

Creating an environment that can mitigate the gender stereotype and allow girls to participate freely without having to worry about unrealistic outcomes associated with physical appearance is important. Young girls should be exposed to various movements, be it through sport or physical activity regularly.

Enjoyment

Although some amount of structured work is required to master any skill, however, young girls–particularly pre-PHV (before puberty)- should participle in less structured physical activities. This can increase enjoyment and help them be more creative. It is also important to make sure older girls (mid and post-PHV) also have fun when more structured physical activity is introduced. For example, semi-structured and unstructured form of play can be incorporated within a structured strength training session before or after the session.

Growth and Maturation

It is important to acknowledge biological growth and maturation when it comes to improving movement vocabulary in young girls. For example, two girls of similar age but one of them has matured earlier and magnitude of growth is comparatively greater than the other might affect their ability to learn movement skills. This can affect both physical and psychosocial factors associated with learning movement skills. Therefore, acknowledging biological age and

maturation along with chronological age is vital when it comes to increasing movement vocabulary in young girls.

Strength and Power

Improving strength and power can have a positive influence on young females, particularly during mid-PHV. This is the time when the bones tend to grow faster than muscles and tendons. Therefore, improving overall strength and power can positively influence tendon stiffness, neural drive, and lean muscle mass, provide them with an advantage in sports and even help reduce injury incidents. However, care should be taken in incorporating strength and power training with gradual progression based on individual movement competency.

Varied Diet

Out of fear of contracting the virus, many of us have been rummaging around for super foods or vitamin supplements that are believed to boost immunity. Vitamin C supplements, lemon water, concoctions made of various spices, hot beverages like green tea or tea with honey are popular choices. Our immune system is complex and is controlled by an ideal balance of many factors, not just diet, and especially not by any one specific food or nutrient. The immune system, like all other body systems, needs the right fuel if it is to function efficiently.

Beta-Carotene

It is converted into vitamin A in the body. It helps protect the immune system from the action of damaging free radical molecules. Vitamin A strengths the skin inside and out, and therefore acts as a first line of defence and keep viruses and bacteria out of the body.

Vitamin and Gut-Friendly

A high fiber rich plant-rich diet with plenty of fruits, vegetables, whole grains, and legumes appear to support the growth and maintenance of beneficial microbes, such as probiotics and prebiotics in the gut. The gut is a major site of immune activity and the production of antimicrobial proteins.

Restorative Sleep

Lack of sleep has a profound effect on the immune system. While we sleep, a type of cytokine is released which can fight infection. Inadequate sleep reduces the amount of these cytokines in our bodies and can even lower other immune cells. Sleep debt cannot be compensated with naps or sleeping longer during weekends. Seven to nine hours is recommended each day for adults, and children need eight to 14 hours, depending on their age. But not just any sleep will suffice one need restorative sleep for efficient immune function.

Calm Mind

Chronic mental stress makes us prone to illness and disease. Stress triggers our brain to send signals to the endocrine system to release an array of hormones which severely depresses our immunity. The body's ability to fight antigens is reduced for it lowers the number of lymphocytes and action of white blood cells.

Conclusion

Health Education comprises consciously constructed opportunities for learning involving some form of communication designed to improve health literacy, including improving knowledge, and developing life skills which are conducive to individual and community health. Health education is not only concerned with the communication of information, but also with fostering the motivation, skills and confidence (self-efficacy) necessary to take action to improve health. Health education includes the communication of information concerning the underlying social, economic and environmental conditions impacting health, as well as individual risk factors and risk behaviors, and use of the health care system. Thus, health education may involve the communication of information, and development of skills which demonstrates the political feasibility and organizational possibilities of various forms of action to address social, economic and environmental determinants of health.

REFERENCES

Auxter, D., Pyfer, J. and Huettig, C.H. (1993). Principles and Methods of Adapted Physical Education and Recreation, St. Louis, MO, Mosby.

Block, M.E. (1994). *A Teacher's Guide to Including Students with Disabilities in Regular Physical Education, Baltimore,* MD, Paul H. Brookes Publishing Co.

Cheatum, B.A. and Hammond, A.A. (2000). *Physical Activities for Improving Children's Learning and Behavior: A Guide to Sensory Motor Development*, Windsor, OH, Human Kinetics.

Cosentino, Frank, and Maxwell L. Howell. (1971). *A History of Physical Education in Canada*, Toronto, General Publishing.

Cratty, B. (1989). *Adaptation Physical Education in the Mainstream*, Denvor, CO: Love

Dauer, Victor P., and Robert P. Pangrazi. (1983). Physical Education for Elementary School Children, Minneapolis: Burges Publishing Company.

Dunn, J.M. (1997). *Special physical Education: Adapted, Individualized, Developmental,* Madison, WI, Brown and Benchmark Publishers.

Fait, H.F. (1960). *Adapted Physical Education*, Philadelphia, W.B. Saunders Company.

Hanlon, J.J. (1964). *Principles of Public health Administration*. C.V. Mosby Co.

Hardman, A.P., King, N.A, Byrne, N.M. (2007). *Children, Obesity and Exercise: Prevention, Treatment and Management of Childhood Obesity,* Routledge.

6

Redefining Teaching in the Post-Covid-19 Era: A New Age Challenges for Teachers

Dr. Dolan Das

Introduction

The traditional teaching system in academic institution for a long time has been a classroom with a teacher giving lecture to students and the students listening and taking notes. Communication between teacher and students has been identified to be an essential learning component in this delivery platform. But with the advancement of technology a complete revolution has been taken place in recent times. Technology suggests many new novel tools that can be applied to make teaching-learning phenomenon more interesting to learners. Many proponents of e-learning are of opinion that everyone should be acquainted with basic knowledge of technology as well as its utilization as a means for getting educational aims (Harandi, 2015).

Though we are quite familiar with e-mail, e-commerce, e-business and e-trading, even well acquainted with e-banking, before the Corona Virus pandemic majority of the members from teaching fraternity were not so well versed with the term e-learning and e-teaching. E-

learning is commonly referred to the deliberate use of networked information and communications technology in teaching and learning. A number of other terms are also used to describe this mode of teaching and learning viz. online learning, virtual learning, distributed learning, network and web based learning (Pushpanathan, 2012). As the letter "e" in e-learning stands for the word "electronic", e-learning would incorporate all educational activities that are carried out by individuals or groups working online or offline, and synchronously or asynchronously via networked or stand alone computers and other electronic devices. Each student gets in contact with a world-class education, which is not easy to impart by the long-established chalk and board method of teaching.

In our Indian teaching system the teacher-student relationship is supreme in which teachers are not just knowledge-providers but also mentors and guides to their students in every aspect of their lives. But presently in a COVID-ravaged world, the education system, not just in India but across the world turned upside down making all the education takers and givers completely dependent on modern technology. Schools and colleges are now striving to adopt the online way of imparting education and developing measures to integrate e-learning in their methods of teachings. This new learning is more interesting, personalized and enjoyable (Kasrekar & Tapaswi, 2020). India is one of the nations that is developing at an exponential rate in terms of technology. With the population of more than 1.3 billion, with the availability of high-speed internet and smartphones, India has the most number of technologically driven persons. The rise of the internet has changed the way of life in India (Eduxpert, April 2020). The world today is facing the biggest public health risk and the Corona virus pandemic had spread to over 185 countries and resulted in the closure of over 90 percent of all schools, colleges and universities impacting close to 1.38 billion students. The speed of the spread of the epidemic, the closure of all educational institutions and the transition of traditional mode of teaching to online teaching mode to online teaching was so hasty that it hardly gave any time to plan and to reflect on the potential risks or opportunities that such a sudden change could bring. The sudden shift to online learning without any planning, especially in countries like India where the backbone for online learning was not ready and the curriculum has no compatibility

with the online teaching format, has created the risk of most of our students becoming passive learners and they seem to be losing interest due to low levels of attention span. (India Today, 2020, May 12)

Paradigm Shift

E-learning challenges the traditional ways of training and learning, and provides new avenues of the existing education system. The role of teachers is probably changing from importers of knowledge to expeditors of knowledge (Haverila & Barkhi, 2009; Tamrakar & Mehta, 2011). Academic institutions like school, colleges and universities will shift to a model of blended learning where both face to face delivery along with an online model will become a norm. This will require all teachers to become more technology savvy and go through some training to bring themselves to the level that would be required. The teaching community to a large extent has been very insulated and more so in a country like India. There is a new opportunity where collaborative teaching and learning can take on new forms. India is not just going through a reform in the higher education sector, but now it will go through a major transformation in general. The lockdown has accelerated adoption of digital technology. This is an ideal time to experiment and deploy new tools to make education delivery meaningful to students who cannot go to campuses. It is a chance to be more efficient and productive while developing new and improved professional skills and knowledge through online learning and assessment. The growth of e-learning is directly related to the increasing access to information and communications technology, as well it's decreasing cost. It is also a fact that use of technology in education is resulting in different concepts in the system, for example the move from teacher-centric education to student-centric education.

Looking at this challenge of higher educational institutes and schools being shut, Government of India, as well as different state governments and private players have regularly been publishing information on various initiatives undertaken by ministries like MHRD, Department of Technical Education, NCERT and others to support and benefit students. The national institutions of UGC and MHRD are at the forefront of provisioning technology-enabled learning through audio-video mode or through e-books and journals. A few of the

initiatives are SWAYAM online courses for teachers, UG/PG MOOCs for non-technology courses, e-PG Pathshala or e-content containing modules on social science, arts, fine arts, natural and mathematical science, CEC-UGC YouTube channel, Vidwan – a database of experts who provide information to peers and prospective collaborators, NEAT – an initiative by AICTE based on the PPP model to enhance the employability skill among students, in collaboration with Education Technology Companies and National Digital Library (NDL), a repository of learning resources with single window facility. Many free and open source software for education has been already in the web, like e-Yantra, Google Classroom, Google Meet, Skype, Microsoft Teams, Zoom, etc. that are making easier for teachers to conduct virtual classes. Central as well state governments, through their various ministries/departments, have created infrastructure to deliver e-education. These include National Knowledge Network (NKN), National Project on Technology Enhanced Learning (NPTEL), National Mission on Education Through Information and Communication Technology (NMEICT), National Academic Depository (NAD), among others. All these enhance our ability to connect easily with institutions and enhance our access to learning resources. For instance, NKN provides high speed network backbone to educational institutes in India (Sharma, 2020, April 15).

E-Learning and its Impact on Teachers

Education through virtual teacher is a type of teaching and learning in which the teachers and learners are geographically separated from each other (Hadadnia et al., 2012). Therefore, to provide educational services, one needs electronic means such as android phones, computer and internet to provide them. The networked environment of this new internet-connected world has expanded the opportunities for teaching and learning in ways that we are only beginning to understand. According to Baras (2000), increasing development of science and technology of today demand new methods of teaching and learning. The use of the theory of "the teacher, the only knowledgeable on the scene" is already an old and rejected belief. Learners must play a more active role in teaching and learning, and the teacher must turn into the guide by the side, the facilitator, the mediator and the education designer. Implementation of e-teaching

is therefore challenging for many teachers who are asking to teach using modern technology in such a way in which they have never been taught during their academic career. They are compelled to work in an environment in which they have never been learners and may have had few first-hand experiences. Rutherford and Grana (1995) have identified a few areas of fear of teaching staffs from making changes that would enable them to integrate technology into their teaching, like fear of change, fear of time commitment, fear of appearing incompetent, fear of techno failure, fear of not knowing where to start, fear of rejection or reprisals, etc. Teachers need to be able to adopt a range of roles and skills to suit specific situations, often during the same teaching session.

Effective tutors are essential to ensuring that small groups work well. Any teaching event will be more successful if the teacher is enthusiastic and has organized the session well. Teachers must have a feeling for the subject, can conceptualize the topic, have empathy with the learners, have the skills in teaching and managing learning. They have to be prepare to context and classroom (virtual) events and teach with their preferred teaching style. They also have a wide range of skills in their teaching repertoire, including questioning, listening, reinforcing, reacting, summarizing and leadership. Making the shift from teacher as expert to facilitator is sometimes seen as diminishing a teacher's power and authority, but this should not be the case. Facilitating learning is empowering for both the learner and the teacher.

Advantages-Disadvantages of Online Classrooms

Advantage

E-learning makes education more available. It makes the whole process more entertaining. Many teachers think that the more diverse the educational process is, the more interesting students find it. Virtual learning allows students to study from any place where they have a stable internet access. It also allows them to study at any time they find comfortable. This makes the learning process easier for people living in different time zones and allows them to combine online education with work or getting a college degree.

One significant advantage is that the virtual classroom can help the teacher to be more organized. Areas for course documents, assignments, class notes and other information can be readily categorized. The creation of a "virtual notebook" can make locating documents easier for both teacher and student. Having this information on the Internet can provide faculty with a method for quickly updating and revising course content.

Another advantage lies in the intellectual and social partnership created by technology of the virtual classroom. Student using the equipment engaged additional social skills when they spontaneously took leadership roles in relation to their peer group (Husu, 2000). The technology used increased group cohesion and mutual support especially in the remote classroom.

Cost is also considered to be an advantage. Online teaching is cost saving, both for the educational institutions and students. Students save money by not having to travel to class thus saving time, health and travel expenses. In India where a huge number of colleges have infrastructural problems to accommodate large number of students enrolled, they don't have to provide students with space for learning. Another advantage of the virtual classroom is time. Students who are motivated and/or quick learners may be permitted to move ahead at a faster rate than in a normal in-class setting. Communication is considered a benefit because most contact with instructors will be done via email, messages can be sent at any time day or night.

Disadvantage

The biggest problem is the network connectivity. E-learning depends a lot on technology. Large number of students who comes from rural area of our country do not have stable internet access, computers or android phones which are the most necessary equipments for online learning. These creating differences between students of rural and urban societies.

Training is obligatory especially to teachers who are not comfortable with computers or the Internet. In order for the college to be represented professionally, teachers must undergo training. The more familiar the teacher is with the online service, the more effective and efficient their curriculum will be. The use of the internet

causes many teachers to step out of their comfort zones because internet teaching goes against the traditional method of teaching. In order to capitalize on the benefits of the internet, teachers must first structure their material to fit the layout of the internet. This process does not occur overnight, it requires time, dedication, and patience. They are required to adjust their curriculum to meet the standard requirement for providing the right resources for the students. It can require more time than teachers want to exert or afford to give up.

Adapting non-online course to online courses can be tough or challenging. Although many classes have performed well with the online course, courses are also there that has not. An example is the laboratory portion of a science class. Practical classes require a great amount of hands-on work. Online courses cannot offer the hands-on experience that an in real laboratory class could offer. This is not to say that some of the lab exercises can be done by the computer, because it can. However, Internet cannot duplicate the hands on approach students experience with an in class lab (Posey, 2010).

Conclusion

The internet is a very unique and powerful tool that has a huge effect on all the teaching and learning activities that are done in the classroom. It can play a major role in education reform. Teachers need to adapt themselves to a changing technological society to prepare productive citizens. The flexibility, availability and adaptability of the web environment must serve the needs of both e-teachers and e-learners. Adapting to this shift will require educational organizations to adopt new approaches for defining faculty work and securing funds for new technology. Despite the changes and lingering uncertainties, distance education is key to dissolving learning boundaries. Making the shift from teacher as expert to facilitator is sometimes seen as diminishing a teacher's power and authority, but this should not be the case. Facilitating learning is empowering for both the learner and the teacher. Finally to conclude, considering all the pros and cons of e-learning, we are still in doubt about the affordability, adaptability, accessibility and feasibility of the paradigm shift from traditional teaching to e-teaching in the Covid-19 and post Covid-19 scenario in a developing country like India.

REFERENCES

Baras, J.S., (2000). Educational connoisseurshipand critics. *Journal of General Education*, 4 (2), 213-245.

Eduxpert., (2020). Retrieved fromhttps://eduxpert.in/online-education-india/

Hadadnia, S., Hadadnia, N., & Shahidi, N. (2012). Effects of Teaching through Online Teacher versus Real Teacher on Student Learning in the Classroom. *Contemporary Educational Technology.* 3 (1), 50-59.

Harandi, S.R. (2015). Effects of e-learning on students' motivation. *Procedia-Social and Behavioral Sciences,* 181, 423–430.

Haverila M, & Barkhi R, (2009). *The influence of experience, ability and interest on e-learning- Effectiveness, School of Business and Management.* 1-13.

Husu, J., (2000). Access to Equal Opportunities: building of a virtual classroom within two 'conventional' schools. *Journal of Educational Media*, 25 (3), 217-228.

India Today. (2020, May 12). Covid-19: 4 negative impacts and 4 opportunities created for education. Retrieved from https://www.indiatoday.in/education-today/featurephilia/story/covid-19-4-negative-impacts-and-4-opportunities-created-for-education-1677206-2020-05-12

Kasrekar, D & Tapaswi, G.W. (2020, May 16) Impact of covid-19 on education system in India. Retrieved from https://www.latestlaws.com/articles/impact-of-covid-19-on-education-system-in-india/

Posey, G., Burgess, T., Eason, M., & Jones, Y., The advantages and disadvantages of the virtual classroom and the role of the teacher. Retrieved from http://www.swdsi.org/swdsi2010/sw 2010_preceedings/papers/pa126.pdf

Pushpanathan, T. (2012). The role of a teacher in facilitating e-learning. *Journal of Technology for ELT,* 2(2), 1-4. https://www.researchgate.net/publication/224946774

Rutherford, L., & Grana, S., (1995). Retrofitting academe: adapting faculty attitudes and practices to technology. *Technological Horizone in Education Journal,* 23 (2), 82-83.

Sharma, A.K., (2020 April 15) COVID-19: Creating a paradigm shift in India's Education System. *The Economic Times*. Retrieved from https://economictimes.indiatimes.com/blogs/et-commentary/covid-19-creating-a-paradigm-shift-in-indias-education-system/

Tamrakar A., & Mehta K. (2011). Analysis of Effectiveness of Web based E-Learning. *International Journal of Soft Computing and Engineering.* 1(3), 55-59.

7

Schools Off, But Classes On: An Evaluative Study with Respect to Preparedness towards Online Teaching in Higher Education Due to Covid-19 Scenario

Dr. Sreetanuka Nath

Introduction

Sometime in the second week of March, state governments across the country began shutting down schools and colleges temporarily as a measure to contain the spread of the novel coronavirus. It's close for around four months and there is no certainty when they will reopen. This is a crucial time for the education sector—board examinations, nursery school admissions, entrance tests of various universities and competitive examinations, among others, are all held during this period. As the days pass by with no immediate solution to stop the outbreak of Covid-19, school and university closures will not only have a short-term impact on the continuity of learning for more than 285 million young learners in India but also engender far-reaching economic and societal consequences.

The structure of schooling and learning, including teaching and assessment methodologies, was the first to be affected by these closures. Only a handful of private schools could adopt online teaching methods. Their low-income private and government school counterparts, on the other hand, have completely shut down for not having access to e-learning solutions. The students, in addition to the missed opportunities for learning, no longer have access to healthy meals during this time and are subject to economic and social stress.

The pandemic has transformed the centuries-old, chalk–talk teaching model to one driven by technology. This disruption in the delivery of education is pushing policymakers to figure out how to drive engagement at scale while ensuring inclusive e-learning solutions and tackling the digital divide.

With a neighboring border with China, the low number of cases (979 as of 29 March; WHO, 2020a) relative to the large population size of India left many concerned that the number of community-acquired cases is higher than reported (Mansoor, 2020). Their health system is poorly underprepared should the number of cases reach the proportions seen in Italy or the United States of America (The Economist, 2020). Public gatherings continued, with a gathering on 24 February of students from the Manav Rachna International Institute of Research and Studies (MRIIRS), University at Faridabad to show solidarity with victims of COVID-19 (Hui, 2020). Whilst there has been no nationwide decision to shut down schools (Mansoor, 2020), most regional governments have announced schools in their areas will be closed (The Economist, 2020). Schools in Delhi were closed from the 13 March (Press Trust of India, 2020) and the Maharashtra government announced on 16 March, it would postpone all university examinations (Mansoor, 2020). Pondicherry University (TNN, 2020) announced on 17 March, it would suspend all academic activities, followed by the University Grants Commission advising all universities on 19 March to postpone examinations until the end of March (The Economic Times, 2020). The University of Hyderabad (2020) announced on 20 March, it would defer all academic activities and close their hostels, followed by the SRM Institute of Science and Technology and VIT, Vellore declaring the summer vacation for

students (Sujatha, 2020). No universities could be identified as announcing a move to online instruction because of COVID-19 and many are implementing a shutdown or postponement strategy until the end of March. However, as days passed there was a drift towards online mode of communication, though not consistently tested for its effectiveness and acceptability in a long run. In a time bound short term analysis there is an ambiguity towards the effectiveness towards the online mode of communication for students.

Several researchers have used faculty perceptions of student learning as a measure of learning effectiveness in online courses. Dobrin, for example, found that 85% of the faculty teaching online courses felt that student learning outcomes were comparable to or better than those found in face-to-face classrooms. Hoffman reports similar findings, as does Hiltz. in this vein, other researchers have surveyed students and used their perceptions of their own learning as an effectiveness measure. Shea, Fredericksen, Pickett, Pelz and Swan, for example, found the 41% of 1,400 students enrolled in SUNY Learning Network's online classes believed that they learned as much as they learned in traditional classes. Forty-seven percent thought they learned more. Many researchers have reported similar findings from their research conducted in last 10 years.

Indeed, Thomas L. Russell created a "No Significant Difference" website that presents the results of 355 research reports, summaries and papers reporting no significant differences between the learning outcomes of students learning over distance and students learning in traditional classrooms. Likewise, in a review of distance education studies involving students in the military, Barry and Runyan found no significant learning differences between resident and distant groups in any of the research they reviewed.

Most recently, Hiltz, Zhang and Turoff reviewed nineteen empirical studies comparing the learning effectiveness of asynchronous online courses with that of equivalent face-to-face courses. Using objective measures of content learning as well as survey responses by faculty and students, the studies provide "overwhelming evidence that ALN tends to be as effective as or more effective than traditional course delivery."

Of course, there have been instances in which studies have reported significantly poorer learning in online courses. For example, Chen, Lehman, and Armstrong compared traditional, correspondence, and online learners and found that achievement test scores were highest for correspondence students and lowest for students taking courses online. Similarly, Brown and Liedholm report significantly worse performance on examinations for virtual graduate microeconomics classes. These sorts of findings, however, are very much in the minority. With no other option left during this Covid-19 situation, our education system had to be pushed towards online mode of teaching learning without any idea of its acceptability as well as challenges faced. This study records this acceptability as well as challenges faced while executing this online mode of teaching learning.

Objectives of the Study

• To understand the perception among student teachers and teacher educators towards the acceptability and challenges faced during teaching-learning through online mode during crises of Covid-19.

• To suggest probable instructional plan of action to improve upon the teaching-learning through online mode during crises of Covid-19.

Research Questions

What were the perception among student teachers and teacher educators towards the acceptability and challenges faced during teaching-learning through online mode during crises of Covid-19?

What are probable instructional plan of action to improve upon the teaching-learning through online mode during crises of Covid-19?

Methodology and Design of the Study

Survey technique was employed to understand the perception among student teachers and teacher educators towards the acceptability and challenges faced during teaching-learning through online mode during crises of Covid-19. A questionnaire comprising of few open ended questions was prepared for this purpose. Also interview of the respondents were taken.

Sample of the Study

Sample for the present study included B.Ed students-teachers and teacher educators belonging to 3 numbers of Govt. B.Ed colleges of West Bengal. The survey involved 55 respondents comprising of teacher educators and students of B.Ed level. Of the 55 respondents, 35 were students and 20 were teacher educators.

Findings of the Study and Discussion

The findings revealed from the questionnaire and interviews were–

a. Around only 54% of the students had access to proper data internet facility as per the response. The reasons for such low value are that many of the students taking admission to such govt. colleges are meritorious but belong to low socio-economic strata and could not afford data services or are from remote areas where data connectivity are not available or are intermittently available.

b. 50% of the students feel that there is internet security threat if they use some of the apps for online education and hence were not interested in transacting through online mode.

c. 75% of the students feel that it would be difficult for them to understand the contents when taught through online mode.

d. 52% of the student-teachers feel that since the exams dates are uncertain and there is uncertainty about Covid-19 situation, they are not motivated towards learning through online mode.

e. 67% of the respondents feel that online form of teaching-learning is an excellent alternative mode of communication for shy students, those who are reluctant to express themselves.

f. 60% felt that it is difficult to carry out submission of assignments since they does not have access to ICT facilities.

g. 50% of the teacher educators felt that there is lack of administrative support and motivation from the authority towards conducting classes in online mode.

h. 80% of the teacher-educators felt that online mode of transaction towards teaching-learning should be continued also after the pandemic of Covid-19 is over.

i.   80% of the teacher-educator felt that Flipped Classroom can be used during online teaching learning. In flipped classroom groundwork of any concept that is instructional content can be delivered through online educational apps, and activities, including those that may have traditionally been considered homework, can be conducted into the classroom.

j.   80% of the students and teachers felt that technological facilities should be improved in colleges and assistance to be provided to access online mode while at home.

k.   80% of the student-teachers and teacher educators feel in-confident towards operation of technological gadgets and apps and try to operate through trial and error

Clark. R in Reconsidering Research on Learning from Media (1983) mentions that "Consistent evidence is found for the generalization that there are no learning benefits to be gained from employing any specific medium to deliver instruction." Kozma argues that success is found when the "capabilities of the medium" are employed. And, Jenks and Springer conclude that "CAI should be at least as effective as conventional instruction." There are two aspects that need to be taken into consideration. One of it is medium of transaction and other is the process itself and its efficacy. The overall concentration should be on the process itself and to improve upon.

Suggestions and Conclusion

Certain instructional plan of action needs to be followed to better handle online mode of teaching learning. They are as under–

a.   *Making emergency preparedness plans for unexpected problems*

While conducting online classes various unexpected hurdles may arise, hence preparedness to handle such unexpected circumstances is expected to be taken on part of the teacher. There could be problems like the online education platform may often shut down because of overload. In order to solve all kinds of unexpected issues timely, faculty need to prepare Plan B or even Plan C before classes start and inform students in advance.

b. ***Dividing the teaching content into smaller units to help students focus***

If the whole content is taught at a single go for a large duration of online time, there could be probability that the students may not be able to concentrate due to fatigue. As a prerogative, teacher should reasonably break down the content of the online teaching into different topics and adopt a modular teaching method. In other words, on the basis of ensuring a clear knowledge structure in the curriculum, faculty divide the teaching content into several small modules with each lasting approximately 40-45 min.

c. ***Working with teaching assistants and gain online supports from them***

It was observed that generally the teacher educators are not totally conversant to handle the technicalities while conducting online classes. Also while the teacher is transacting through online classes, there is at times requirement of an assistant who could take charge of other technical things like permitting someone to enter meeting room, coordinating with chat box reply etc. In addition, teaching assistants can also provide consultations and answer questionsfor academically underprepared students by using email and other social platforms after class.

d. ***Strengthening students' active learning ability outside of class***

Normally it is observed that, students tend to skip the online classes or simply not pay attention at the content being taught. Student's interest could be aroused by scaffolding with learning activities by providing activity sheets of the concept being taught through email or through any other media. Those activities should be such that they belong part of the day to day life of the student. With this the student could make a quick introspective observation and fill the form and submit the scanned copy of it through email.

e. ***Combining asynchronous learning and synchronous learning for improved efficacy***

The teacher educator should, prior to conducting online class, provide some reading materials, research papers, study notes, etc. to read so that the students stay in away prepared to handle the online

class to be taught. This will also improve the understandability of the concept being taught by the teacher.

f. *Conjoining social presence and interaction of the students*

By working on improving the social presence of the students in the online lectures and continuous interaction, the teacher could make the students aimed towards assimilation of the content covered

Above suggestions could serve as few thumb rules, but one of the important aspects is the element of social presence so as to derive maximum interaction. Social presence is described as the ability to project one's self and to establish personal and purposeful relationships (Rourke et al., 1999). Richardson and Swan (2003) explored perceptions of social presence in online courses and found that students perceptions of social presence were highly correlated with perceived learning and satisfaction with their instructors (Steinweg, Trujillo, Jeffs, & Hopfengardner-Warren, 2006). Picciano (2002) found relationships between student perceptions of social presence, learning, and interactions in the course discussions. Our education system should thrust towards acceptance of this online form of teaching-learning and motivate the stakeholders. Through exalted efforts it could be that on a consistent basis the online mode of teaching learning could see the dawn of the day of progress and then the classes could go on irrespective of circumstances compelling upon to keep the school or college complex closed.

REFERENCES

Barry, M. & Runyan, G. A review of distance-learning studies in the U.S. military. The American Journal of Distance Education, 9 (3), 37-47, 1995.

Brown, B.W. & Liedholm, C.E. Can web courses replace the classroom in principles of microeconomics? American Economics Review. May, 2002.

Chen, H., Lehman, J. & Armstrong, P. Comparison of performance and attitude in traditional and computer conferencing classes. The American Journal of Distance Education, 5 (3), 51-64, 1991.

Dziuban, C. & Moskal, P. Emerging research issues in distributed learning. Orlando, FL: Paper delivered at the 7th Sloan-C International Conference on Asynchronous Learning Neworks, 2001.

Dobrin, J. Who's teaching online? ITPE News, 2 (12), 6-7, 1999.

Fulford, C.P.Y. Zhang, S. Perceptions of interaction: the critical predictor in distance education. The American Journal of Distance Education, 7 (3), 8-21, 1993.

Hiltz, R., Zhang, Y., Turoff, M. Studies of effectiveness of learning networks. Elements of Quality Online Education: Volume 3 in the Sloan-C™ Series. Needham, MA: SCOLE, 2002.

Hoffman, K.M. What are faculty saying? eCollege.com, May, 1999.

Hiltz, S.R. Impacts of college-level courses via asynchronous learning networks: some preliminary results. Journal of Asynchronous Learning Networks, 1 (2), 1997.

Jenks, M.S. & J.M. Springer. A View of the Research on the Efficacy of CAI. Electronic Journal for the Integration of Technology in Education 1(2): 2002. http://ejite.isu.edu/Volume1No2 /Jenks.htm.

Kozma, R.B. Will Media Influence Learning? Reframing the Debate. Educational Technology Research and Development 42(2): 7–19, 1994.

Mansoor, S. (2020, March 12). India is the world's secondmost populous country. Can it handle the coronavirus outbreak? Time. https:// time.com/5801507/coronavirusindia/

Picciano, A.G. Developing an asynchronous course model at a large, urban university. Journal of Asynchronous Learning Networks, 2 (1), 1998.

Russell, T.L. The No Significant Difference Phenomenon. Montgomery, AL: IDEC, 1999. http://teleeducation.nb.ca/nosignificantdifference/

Richardson, J.C., & Swan, K. (2003). Examining social presence in online courses in relation to students' perceived learning and satisfaction. Journal of Asynchronous Learning Networks, 7 (1). Retrieved April 2, 2009, from http://www.aln.org/publications/jaln/v7n1/pdf/v7n1_richardson. pdf

Rourke, L., & Anderson, T. (2004). Validity issues in quantitative computer conference transcript analysis. Educational Technology Research and Development, 52 (1) 5-18

Swan, K. (2001). Virtual interaction: Design factors affecting student satisfaction and perceived learning in asynchronous online courses. Distance Education, 22, 306-331

Shea, P., Fredericksen, E., Pickett, A. Pelz, W. & Swan, K. Measures of learning effectiveness in the SUNY Learning Network. In J. Bourne

& J. Moore (Eds) Online Education: Proceedings of the 2000 Sloan Summer Workshop on Asynchronous Learning Networks, Volume 3. Needham, MA: Sloan-C Press, 2001.

The Economic Times. (2020, March 19). UGC tells universities to postpone exams, suspend evaluation work due to COVID-19. https://economictimes.indiatimes.com/industry/services/education/ugc-tells-universities-to-postponeexams-suspend-evaluation-work-due-to-COVID-19-spread/articleshow/74707411.cms?from=mdr

The Economist. (2020, March 21). The billion-person question If covid-19 takes hold in India the toll will be grim. The Economist. https://www.economist.com/asia/2020/03/21/if-covid-19-takes-hold-in-india-the-toll-will-be-grim

University of Hyderabad. (2020). Notification–COVID. http://gadmin.uohyd.ac.in/mdocs-posts/registrarsoffice-11/?_ga=2.86163483.2007255542.1584962560-1262420287.1584962560

8

Challenges of E-Teaching-Learning in Covid-19 Era in India

Dr. Md. Nijairul Islam

Introduction

Since the onset of the present Christian year, humanity have been passing through an eerie time, as Corona Virus has been out to shatter the world order. The number of infected people and loss of precious lives continue to increase every day. The physical, mental, psychological and social trauma that this pandemic has unleashed is unprecedented as it has impacted all aspects of life. It has compelled complete lockdown of market places, restaurants, malls, movie theatres, offices, factories, places of worship, parks, airlines, railways, road transport and almost everything except emergency services. As in other walks of life, 'COVID-19 emergency' has been reshaping our education system for the last four months. It is difficult to follow social distancing in educational institutions where teaching and learning go on, depending on integrative activities. Naturally, the disruption has compelled the education system to adjust itself to accommodate the 'new normal', and educational institutions are adopting more and more e-teaching-learning as prominent mode of delivery. However, there remains certain challenges of education via e-mode as Indian

education system is not yet equipped enough to implement this system on a mass scale.

Objectives of the Paper

The objectives of this paper is to understand the situation that has compelled us to put stress on e-teaching-learning, clarify the concept of e-teaching-learning, its importance, to learn about some doubts regarding this mode of delivery, and above all, to shed light on the challenges of e-teaching-learning in our country.

Methods and Materials

The study is qualitative in nature. It deals primarily with secondary data that have been collected through various websites, institutional publications, journal, newspaper reports, and government publications. On the basis of data analysis, the major challenges concerning e-teaching-learning in India under the backdrop of COVID-19, were identified.

A Glimpse of Indian Education Sector

As per NITI AAYOG Report (June, 2015), there are 13.42 lakh anganwadi centres, serving 80.4 million below 6-year-old age group children. In school education sector, there are about 1.5 million schools, and about 250 million children according to UDISE Report (2018-19). In higher education, there are 993 universities, 39931 colleges and 10725 stand-alone institutions. Total enrolment in higher education has been estimated to be 37.4 million (AISHE Report, 2018-19).

E-Learning

Web Based learning and its newer and more general synonymous term 'e-learning' are buzz-words now-a-days in the academic and business fraternity. The term 'e-learning' was made familiar for the first time in October 1999, when it was used at a Computer Based Training (CBT) systems seminar in Los Angeles, USA. It is defined as acquisition of knowledge and skill using electronic technologies, such as computer and internet-based courseware and local and wide area networks. Content is delivered via internet, intranet/extranet,

audio or video tape, satellite TV, and CD-ROM. It can be self-paced or instructor-led and includes media in the form of text, image, animation, streaming video and audio. e-Learning also refers to web-based learning, online learning, and networked learning. In its broad connotation, the term covers some ideas, such as

i.   The convergence of internet and learning;

ii.   Internet-enabled learning;

iii.   The use of network technologies to create, and deliver teaching-learning materials, and facilitate learning – anytime, anywhere;

iv.   The delivery of individualised, comprehensive learning content–synchronously or asynchronously, aiding the development of learning communities.

However, in many cases the emphasis is put on 'e' and not on 'learning'. The very concept of learning is embedded in 'e-learning'. Hence, e-learning requires many paradigm shifts in many in the traditional system of education. All these requirements broadly fall into two categories: financial issues, and pedagogical and methodological issues. The latter issues include the creation of necessary learning environment, pedagogical changes, and creation and delivery of relevant teaching-learning materials.

Why e-Teaching-Learning?

The Indian educational framework primarily relies on the traditional physical face-to-face classroom methodology. However, advancement in ICT led to the pursuit of improved instructional methods and techniques long before Corona came to compel us to shut down our educational institutions. Internet has made online learning possible, and many universities in India have already adopted online teaching-learning to improve student learning outcomes (Pepe, 2010). Given the growth of online education and its potential, especially in higher education, it is imperative that educators take-up online teaching-learning when the traditional face-to-face learning becomes impossible (Nguyen, 2015). At this critical juncture under the threat of COVID-19, we must take recourse to e-teaching-learning mainly for the following reasons:

- ***Compensation for academic loss*:** The lockdown is adversely affecting academic progress of the learners. This loss can be compensated by embracing e-teaching methods. Though, all students may not be benefitted fully in this process, at least it can assist us to narrow down the gap caused due to the lockdown situation.

- ***Help for 'flipped learning'*:** Even in normal study conditions, useful articles, essays, videos or writeups are provided to the students beforehand with a message of what to do with them as an instruction. This proceeds classroom discussion on the provided material. This type of 'flipped learning' is very useful, especially in higher classes.

- ***Aid to teacher*:** ICT can aid a teacher in his duty and can help make the teacher-student relationship more interactive.

- ***Improve digital literacy*:** e-learning will augment digital literacy among learners which is very essential to survive in today's competitive world.

- ***Helpful for collaborative learning*:** It also contributes to collaborative learning by sharing information and knowledge through global connectivity.

- ***Makes learning interesting and practical*:** Since the young learners are tech-savvy, it facilitates their learning and makes learning interesting and practical.

- ***Helps implementing constructivist pedagogy*:** e-learning can be used as an effective resource for implementing constructivist pedagogy among the learners. It makes them learn 'how to learn' rather than 'what to learn'.

Doubts Regarding e-Teaching-Learning

It is the nature of human being to resist change and prefer the 'status quo' situations. Naturally, many among the academic fraternity are doubtful about the success of e-education.

- ***Doubt about feasibility of e-education in reality*:** When we think about the advancements in the field of Artificial Intelligence (AI), there is no room for any doubt in terms of its feasibility. It

is possible that machines would take up the job of teaching, conducting classes, clearing doubts and almost all the duties a human teacher does in a classroom.

- ***Doubt about effectiveness of online classes****:* Some people may doubt whether e-education could be as effective as conventional mode of teaching-learning programme. It is to be accepted that machine is a machine. Therefore, the success of e-education depends upon the effective content generation, designing and planning for its delivery by the teacher.

- ***Doubt about replacement of human teacher by machine***: This doubt is about the replacement of human teacher by the machine. But technology can only supplement the effort of the teacher; it cannot supplant him.

- ***Doubt about feasibility of creating an environment suitable for e-teaching-learning***: This doubt pertains to creating an environment for e-teaching-learning with necessary equipment and investment. It is true that many educational institutions are not yet able to catch up to the demand, only for the reason that the technologies relating to e-teaching-learning may prove costly to afford.

Challenges of Continuing with e-Teaching-Learning

Diagram: 1 Challenges of e-learning

Source: https://www.learnpick.in/blog/e-learning-in-india

e-teaching-learning surely has some advantages, but at the same time, it poses the following challenges. The following diagram points out some prominent challenges, among many, of this mode of delivery.

Now, these challenges of e-teaching-learning, as we face today, may be discussed though the following sub-points;

- ***Learning depends on the readiness of teachers and the taught to accept this method:*** Merely moving classrooms online would not mean effective e-teaching-learning, because interactions among peers and teachers are very important in this regard. On a digital platform, how students learn and communicate with others depends mainly on the readiness of both teachers and students to accept it.

- ***Disparity in access to gadgets:*** The major challenge of online teaching-learning is disparity in access to devices like computer or smartphones. While 24% Indians own a smartphone, only 11% of households possess any type of computer, which could include desktop computers, laptops, notebooks, netbooks, palmtops or tablets (Kundu, 2020).

- ***Disparity in access to internet:*** According to the Global Education Monitoring Report (2020), 40% of poorer countries are not focusing on at-risk learners during the pandemic. Almost half of the world's population has no access to the internet, as per the World Inequality Database on Education (2020). Unequal access to internet aggravates social stratification and limits educational opportunities. According to 75th NSSO Report on Education (2017-18), only 24% of Indian households have an internet facility. While 66% of India's population lives in villages, only 15% of rural households have access to internet services. For urban households, the proportion is 42%.

- ***Digital disparity across the states:*** The digital divide is evident across States in India too. For example, the proportion of households with access to a computer varies from 2.7% in Bihar to 34.7% in Delhi. The difference is starker with regard to internet access. In States like Delhi, Kerala, Himachal Pradesh, Haryana, Punjab and Uttarakhand, more than 40% households have access

to internet. The proportion is less than 20% for Odisha, Andhra Pradesh, Assam, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh and West Bengal (ibid).

- *Gender disparity in internet usage:* The gender divide in internet usage draws special attention. As per the Internet and Mobile Association of India Report (2019), while 67% men had access to internet, this figure was only 33% for women. The disparity is more prominent in rural India, where the figures are 72% and 28% for men and women, respectively.

- *Poor connectivity and signal issues:* As per Scoonews (2020), a report by Quacquarelli Symonds shows that in case of mobile data, 40.2% people face poor connectivity and 56.6% complain about signal issues.

- *Problem for digitally inept teachers:* Internet is replete with tools to makeinteractive on-line education happen, but a tool is only as useful as its user and his/her creativity. But many of the teachers are digitally inept, and a large number of teachers have never used an online environment to teach (Singh, 2016; Kundu, 2020).

- *Possibility of replication of daily classroom-boredom:* A major portion of the e-teaching-learning-materials currently available is composed of videos and quizzes that prompt for rote learning. Over-reliance on lecture-based or video-based content may even replicate the daily classroom-boredom into online space also.

- *Learners' multiples intelligences, and learning styles neglected:* Amid the rush of hosting online classes, the best teaching practices such as nourishing learners' multiples intelligences and learning styles are being neglected.

- *Lack of conducive environment for e-learning:* Learning demands a conducive environment for study. However, not all students have a quiet space for learning at home. NSSO Report (2017-18) revealed that 37% of households in India have one dwelling room; so it would be just a luxury for many to attend e-lectures by teachers in an undisturbed environment.

- *Illiterate guardians' inability to help their children in e-learning:* e-learning demands that guardians also help their children to learn. But nearly 45% of Indian population above 15 years of age is either illiterate or has just attended formal primary education. In rural India, such population consists of almost 70% (ibid). This section may not have the required level of education to help their children in e-learning.

- *Learners' inability to afford the cost of e-learning:* Having online classes on a regular basis has a cost implication too, as students have to bear the cost of internet services. In the current situation, many students, especially whose families have lost income as a result of a lockdown-related job-loss, will not be able to afford this cost.

- *Possibility of negative impact on social relation among peers, teachers and the taught:* e-teaching-learning system may impact the social relation between peers, teachers and school and community on the whole in a negative way. The social class gap between the teachers and students may widen if and when the school reopens after lockdown period (Kumar, 2020).

- *Not beneficial for the marginalised primary school children:* India cannot afford to provide primary education in online mode. Even those who are able to avail themselves of online learning, will not be benefited except a small proportion of children from elite families where parents are also educated.

- *Problematic for learners with disabilities:* Learners with disabilities will face problems in accessing e-learning resources.

- *Concern regarding cyber security:* Cyber security remains a concern in using the e-teaching-learning platforms.

- *Problem in monitoring students' understanding and getting feedback:* A physical classroom imparts education incrementally, so students do not get lost and it is easier to provide feedback. In an online environment, it is harder to monitor students'

understanding, and there is a possibility that the lecture-flow may be delivered too early; leaving learners lost (Martin, 2020).

- ***No or little scope for co-curricular activities:*** Apart from classroom learning, students are to attend laboratory and library work, physical education, NCC and NSS related activities, and other co-curricular activities that include seminars, debates, art and crafts, music and dance, theatre etc. meant for the wholesome development of students. There might be little scope for fulfilling these needs or no schedule for such co-curricular activities in online mode of teaching-learning.

- ***Insufficient budget allocation for e-learning:*** Despite initiatives from the Central and State Governments, there has not been enough expenditure on improving the digital infrastructure for e-teaching-learning. In fact, in 2020-21, the MHRD budget for Digital India e-learning was reduced to Rs 444 crore from Rs 541 crore in 2019-20 (Sources: Union Budget 2020-21. Expenditure Budget, Vol. 2, MHRD; PRS, GOI).

Concluding Remarks

If the learners and teachers are blessed with required gadgets and internet access, and skill, online education has an advantage of universal access and increased flexibility (Jensen, 2011). It has also been observed that teachers were generally motivated when they were provided with the opportunity "to gain new pedagogical knowledge through online teaching, including opportunities to experiment with new pedagogy, reflect on classroom teaching, and gain new understanding of assessment issues" (Shea, 2007). Besides, e-teaching-learning may build confidence and communication skills in both the teachers and the taught, augment experiential learning, and allow wider choices of gaining knowledge. Digital education could catalyse our offerings if made a part of institutional mission with thorough planning for reliable infrastructure and crystallized vision for learner support. But as for now, keeping the challenges of e-learning in mind, in a populous yet technologically growing country like ours, blended learning seems to be the most viable option.

REFERENCES

AISHE Report (2018-19). Department of Higher Education, MHRD. New Delhi: GOI.

Global Education Monitoring Report, Inclusion and education: All means all (Rep.). (2020). UNESCO. https://en.unesco.org/gem-report/report/2020/inclusion

Internet and Mobile Association of India Report (2019). India Internet 2019. Retrieved June 28, 2020 from: https://cms.iamai.in/Content/Research Papers/d3654bcc-002f-4fc7-ab39-e1fbeb00005d.pdf

Jensen, S.A. (2011). In-class versus online video lectures: Similar learning outcomes, but a preference for in-class. Teaching of Psychology, 38, (4), pp. 298-302.

Kumar, R. (2020). Lockdown is disrupting a generation's education: What can be done? Blog, April 24, 2020. Retrieved June 28, 2020 from: https://thewire.in/education/coronavirus-lockdown-education-students

Kundu, P. (2020). Indian education can't go online–only 8% of homes with young members have computer with net link. Blog,5th May, 2020. Retrieved June 26, 2020 from: https://scroll.in/article/960939/

Martin, A. (2020). How to optimize online learning in the age of Coronavirus (COVID-19): A 5-point guide for educators. Online article posted at UNSW Newsroom. Retrieved June 27, 2020 from: https://newsroom.unsw.edu. au/news/social-affairs/how-optimise-online-learning-age-coronavirus

Nguyen, T. (2015). The Effectiveness of online learning: Beyond no significant difference and future horizons. MERLOT Journal of Online Learning and Teaching,11, (2), pp. 309-19.

NSSO Report, 75th Round (2017-18). Key indicators of household social consumption on education in India. Ministry of Statistics and Programme Implementation, New Delhi: GOI.

NITI AAYOG (2015). A quick evaluation study of anganwadis under ICDS. Programme Evaluation Organisation, New Delhi: GOI.

Pape, L. (2010). Blended teaching and learning. School Administrator, 67, (4): pp. 16-21.

Scoonews (2020). As schools remain shut, India struggles with equal online education for all. Retrieved June 28, 2020 from: https://www.scoonews.com/news

Shea, P. (2007). Bridges and barriers to teaching online college courses: A study of experienced online faculty in thirty-six colleges. Journal of Asynchronous Learning Networks, 11, (2), pp. 73-128.

Singh, G. (2016). Challenges for teachers in the era of e-learning in India. Scholedge International Journal of Multidisciplinary & Allied Studies, 3, (2): p. 14.

UDISE Report (2018-19). Department of School Education and Literacy, MHRD. New Delhi: GOI.

Union Budget (2020-21). Expenditure Budget, Vol. 2. MHRD, PRS. New Delhi: GOI.

World Inequality Database on Education. Retrieved July 10, 2020, from https://www.education-inequalities. org

Website Consulted

https://www.learnpick.in/blog/e-learning-in-india

9

Educational and Economic Challenges of Hijras during Covid-19 Pandemic in West Bengal

Nafisa Khatun and Dr. Nandini Samaddar (Chakrabarti)

Introduction

The word "hijra" is a Hindustani word. It has traditionally been translated into English as "eunuch" or "hermaphrodite", where "the irregularity of the male genitalia is central to the definition". However, in general hijras are born male, only a few having been born with inter sex variations. Some Hijras undergo an initiation rite into the hijra community called nirvaan, which involves the removal of the penis, scrotum and testicles.

Ancient Indian texts like the Kama Sutra describe the third gender as tritiyaprakriti, or "third nature," insinuating that three genders are part of the natural order. Most famously, the 2,300-year-old Indian epic poem Ramayana tells the story of the deity Lord Rama, who is banished from his kingdom for 14 years. His subjects attempt to follow him into the forest, but he tells the "men and women" to return to their city. His hijra followers—not belonging fully to either gender—feel unbound by his order and stay. Touched by their loyalty,

Lord Rama grants them the ability to bestow blessings at weddings, births, and other important occasions.

During the Muslim Mughal dynasty, which ruled much of India from the 16th to 18th centuries, hijras were often compulsorily castrated and became trusted guardians of the harems. In this time period, some hijras also enjoyed prominent positions as political and legal advisers, administrators, and generals.

Then the British arrived, foisting Victorian sexual mores on Indian culture. The colonists accused the "eunuchs" of sodomy, prostitution, and kidnapping and castrating young boys. They saw the third gender as a threat to morality and political authority. The British criminalized being a hijra under the Criminal Tribes Act of 1871, stripped hijras of their inheritance rights, and launched a campaign to erase them from public consciousness.

Since then hijras have lived on the fringes of society. They typically earn money by asking for voluntary donations in exchange for their blessings. Most hijras undergo castration, and the absence of penis and testicles is believed to give them the power to confer fertility. Newlywed couples and pregnant women often seek hijras' blessings, which they bestow during flamboyant performances of singing and dancing at public functions like weddings and baby showers. Some hijras also beg at traffic intersections and on public transportation, or solicit sex in public cruising areas. These ways of self-employment are the opposite of "social distancing," a public hygiene practice the Indian government has adopted in its fight against the global pandemic. Performing at weddings, begging, and engaging in sex work are now no longer available to the hijras as primary sources of livelihood. Leelavathy (2014) conducted a research on Socio-Economic Problems of Transgender in Workplace. She said that Transgender Community should not get their basic rights, which included Right to Personal Liberty, Dignity, Freedom of Expression, Right to Education and Empowerment, Right against Violence, discrimination and exploitation. She concluded that some of the key problems which need consideration and appropriate action are access to essential services, education, health and resources. These problems can be solved by sensitize the society with regard to their identity,

support of civil society organization to advocate for their cause and efforts like advocate for land/shelter, creation of separate public toilets, hospital wards, recognition of their right to vote as citizens, reservation of seats in elections, etc. and support of Media to highlight their status and plight rather than portraying them in poor light.

The coronavirus COVID-19 pandemic is the defining global health crisis of our time and the greatest challenge we have faced since World War Two. Since its emergence in Asia late last year, the virus has spread to every continent except Antarctica. But the pandemic is much more than a health crisis, it's also an unprecedent socio-economic crisis. Stressing every one of the countries it touches, it has the potential to create devastating social, economic and political effects that will leave deep and longstanding scars. UNDP is the technical lead in the UN's socio-economic recovery, alongside the health response, led by WHO, and the Global Humanitarian Response Plan, and working under the leadership of the UN Resident Coordinators. Priyadarshini & Swain (2020) conducted a study on the impact of COVID-19 on the Socio-economic life and Psychology of Transgenders: Insights from India. They focuses on the impact of the Coronavirus crisis on the socio-economic life of Transgender people taking into account the explosion in unemployment, adding to an already disproportionate healthcare support system pushing them further to the margins. The study comes forward with useful suggestions based on content analysis of published and aired information to reduce the existing woes of transgender people during COVID-19.

Every day, people are losing jobs and income, with no way of knowing when normality will return. Small island nations, heavily dependent on tourism, have empty hotels and deserted beaches. The International Labour Organization estimates that 195 million jobs could be lost.

The World Bank projects a US$110 billion decline in remittances this year, which could mean 800 million people will not be able to meet their basic needs. The COVID-19 pandemic was first confirmed in the Indian state of West Bengal on 17 March 2020 in Kolkata. The

Health and Family Welfare Department of Government of West Bengal has confirmed a total of 53,973 COVID-19 positive cases, including 19,154 active cases, 1290 deaths and 33,529 recoveries, as of 24 July, 2020. The present paper intends to explore Educational and economic challenges of Hijras during COVID-19 Pandemic in West Bengal.

Objectives

The objectives of the present study are

1. To study the educational challenges of Hijras during COVID-19 Pandemic in West Bengal.

2. To study the economic challenges of Hijras during COVID-19 Pandemic in West Bengal.

Educational Challenges of Hijras during Covid-19 Pandemic in West Bengal

The closures of the educational institution due to the outbreak of COVID-19 lead to an unprecedented impact on education. During the lockdown, teachers are instructed to teach through online learning platforms. There is a need to adopt innovative teaching for continuing education and to overcome mental stress and anxieties during the lockdown. In the Pandemic period, it was reported that learners including Hijras were mostly suffering from stress, depression, and anxiety. The students were also facing problems related to poor internet connectivity, followed by the absence of a favourable environment to study at home. Students residing in rural and remote areas may face poor internet connectivity. Moreover, poor economic conditions might be a reason for the unfavourable environment and lack of separate room for their study. Online learning process is often discriminatory. Many students face enormous challenges in e-learning and a substantial proportion of students could not attend online classes. Students from remote areas and marginalized sections (specially Hijras) mainly denied online learning due to the lack of electricity and poor internet connectivity. Poverty further exacerbates the problem of the digital learning process in this unwanted crisis period (Kapasia et.al., 2020).

Deprived of acceptance in the society, marginalised since birth, lack of education and no proper documentation makes the lives of transgender people very difficult in times of a pandemic and lockdown like the present one. Even they do not get direct guidance and influenced by teachers as well as from society. Therefore, it is clear that educational status of Hijras are very low and during COVID-19 Pandemic in West Bengal they are facing challenges like lack of technology friendly instruments, lack of internet connection, unable to involve in the Teaching Learning Process through online platforms, unable to cater educational programmes and instructions and thus lagging behind more than pre-COVID-19 Pandemic in Education.

Economic Challenges of Hijras during Covid-19 Pandemic in West Bengal

Many individuals in the transgender community, such as the hijras, have lost all sources of income due to the nation-wide lockdown. Social stigma makes it difficult for them to access essential items like food, and many are struggling to pay rent. Those who depend on traditional livelihoods, such as sex work, badhai (offering blessings at weddings and other festivities), and begging, are the worst hit by the pandemic and the subsequent lockdown. The red light areas are already closed, shops are shut, weddings and other forms of celebration stand cancelled. All their sources of incomes have shut down. The transgender and hijra community that are dependent on daily-wages they earn from begging or sex work face issues due to lockdown too. Due to not having access to social entitlements, most of them do not even have bank accounts or savings to cope during these trying times (Times of India, April, 2020).

India's hijra community has proven particularly vulnerable and hard-hit by the pandemic. The sixty-eight-day lockdown virtually decimated the livelihoods of hijras, who tend to be daily-wage earners and often subsist on alms collection, begging, and sex work. Widely known for their ability to bless or curse, especially in matters of fertility, many hijras are likewise dependent on money earned from officiating small, private ceremonies (badhai), a practice made nearly impossible under lockdown (Baumgart and Farooqi, 2020).

Moreover, hijras routinely face housing discrimination and consequently tend to cohabitate in densely populated urban areas, often under the spiritual guidance of a hijra guru, in order to insulate themselves from the violence they face outside their communities. Often disowned by their biological families and thus unable to return home, many hijras have little choice but to remain in the streets or crowded slums where COVID-19 transmission more readily occurs. Recent months have witnessed a marked increase in misinformation and blatant prejudice against the hijra community (Baumgart and Farooqi, 2020).

A substantial rate of economic instability, as well as social discrimination, was visible before the pandemic, thereby worsening their situation with a lack of food, fund, insecurity, safety, and mental health concern during COVID-19. Due to the pandemic scenario, the hand to mouth transgender people are adversely affected and are left out to rely on their savings (Priyadarshini and Swain, 2020).

Hijras face food insecurity in the wake of COVID-19. The section of transgender is particularly affected in coronavirus crisis because transgenderism under poverty is a persistent reality playing out in everyday life. Most of the hijras does not have any bank account that's why they do not get government grants. Most of the people exhausted because lack government id proofs like Aadhaar, DL, Passport, PAN, Ration, Voter ID cards and are ultimately excluded from food security schemes of Central or State Government (Priyadarshini and Swain, 2020).

Conclusion

Hijras have lost their livelihood due to nationwide lockdown during COVID-19. The income of hand to mouth transgender people have dwindled to zero making it difficult for their survival. The government should ensure cash transfer in favour of this community, irrespective of identity documentation. Indian government should direct nationalized banks to enable the registration of transgender members in every state to channelize the cash transfers.

In order to prevent the spread of coronavirus infection, the proper sanitary facility is a requirement. Most transgender people stay in crowded slums with limited or no access to water and toilet facility.

The unhygienic and unhealthy lifestyle in slum exposes them to coronavirus infection. Further, their financial instability due to lockdown does not permit them to buy soaps, sanitizers, and masks. The government must take initiatives in providing the aforementioned items free of cost through Anganwadi centres and other NGOs.

Moreover, there should be precise policy prescriptions for the interest of the said community so that they will be more than the daily earners. It must be ensured that, in days to come, Hijras are educated enough in order to be eligible for a befitted job so that they can work from home during quarantine and do not depend on menial jobs for their livelihood. Formal education and skill development need to be channelized among Hijras such that their survival does not get endangered in a nation-wide lockdown. For the purpose, there should be awareness among the Hijra community regarding the legitimate existence of the transgender so that the latter will not drop-out from Schools/Colleges owing to humiliation by the peers and teachers. Overall, an inclusive approach is essential to combat with the current situation.

REFERENCES

Baumgart, P. & Farooqi, S. (2020). India's hijras find themselves further marginalized amid the pandemic, retrieved from www. atlanticcouncil. org on 27.07.2020

Das P. (2019) Higher Education of Transgenders in India: Opportunities and Challenges, International Journal of Research in Engineering, Science and Management, Volume-2, Issue-2, PP 371-375

Kapasia, N., Paul, P. & Chauhan, P. (2020). Impact of lockdown on learning status of undergraduate and postgraduate students during COVID-19 pandemic in West Bengal, India. www.ncbi.nlm.nih.gov. Retrieved on 25.07.2020

Goel, I. (2019). India's Third Gender Rises Again, https: www. sapiens. org. Retrieved on 25.07.2020

Leelavathy K. (2014) Socio-Economic Problems of Transgender in Workplace, International Journal of Scientific Research, Volume 3, Issue 4, Retrieved from https://www.worldwidejournals.com/international-journal-of-scientific-research-(IJSR)/fileview.php?val=April_2014_1397136311_d8bdf_211.pdf on 19/04/2020

Priyadarshini S. & Swain S.C. (2020) Impact of COVID-19 on the Socioeconomic life and Psychology of Transgenders: Insights from India. Retrived from https://pharmascope.org/ijrps/article/view/2286/4474#toc on 20.07.2020

COVID-19 pandemic Humanity needs leadership and solidarity to defeat the coronavirus, UNDP, www.undp.org. Retrieved on 24.07.2020

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www.timesofindia.indiatimes.com

10

Role of E-Learning during the Covid-19 Pandemic to Reduce Differential Educational Achievement

Debjani Ganguly

Introduction

Broadly speaking education is related to what we learn from our experiences. Education and learning, both of them are processes where learning always facilitates our education. The teaching-learning process is the only methodology for acquiring knowledge and skills where the teacher may be human, animal or non-living things. Acquire some knowledge and skills with value, belief and habits are our education which shapes our behaviour. Sometimes we are educated under the guidance of an educator and sometimes we can educate ourselves. Usually, we get our formal education from organised academic institutions like schools and colleges. Formal education is intensely required for our society because it has some power of judgement and evaluation through critical understanding to distinguish what should we learn or not. Informal and non-formal educations help us to get some experiences. Formal education shape it them academically.

But the COVID-19 pandemic has closed the schools across the world. Over 1.2 billion schools going population are out of the classroom temporarily. As a result, the education system has changed dramatically. With this change, e-teaching and e-learning have distinctively raised whereby teaching-learning is assumed responsibility remotely through the digital platform. (UNESCO, 2020)

Purpose of the Study

Purpose of the study was to understand the usefulness of the e-teaching and e-learning for all section of society in the pandemic situation. The usefulness of e-teaching and e-learning was reviewed based on Differential Educational Achievement. The major question of the study was whether there is an important role of e-teaching and e-learning to reduce the Differential Educational Achievement in the pandemic situation.

Methodology

Basis of the study was a conceptual and empirical literature review. Some contemporary articles, conference, reports, news information etc. were followed by the investigator for gathering data source of the study. Some experts' opinions were also followed.

Differential Educational Achievement (DEA)

Usually, we taste the flavour of achievement after planning and completion of work. So we can say that hard work ultimately leads to achievement. We plan our learning objective and targeting our goal of achievement. Academic Achievement relates with students, teachers and institutions, and their short or long-term goals. But Educational Achievement is related to only learners, whether they achieve their education or not. In most of the cases, learner's educational achievement evaluates through examination. Sometimes, the learners usually do not stay in the stable mental condition during the time of evaluation as anxiety, motivation; different kinds of emotional pressure influence them. In the traditional teaching-learning system, those are not considering at the time of assessment. (Nicholas, A.B., et al., 2015).

Causes of Differential Educational Achievement

Psychological Causes (Meritocracy)
- Intelligence
- Level of Effort
- Learning Attitude

Differential Educational Achievement

Social Causes
- Social Status
- Economic Status
- Gender
- Ethnicity
- Culture
- Home environme
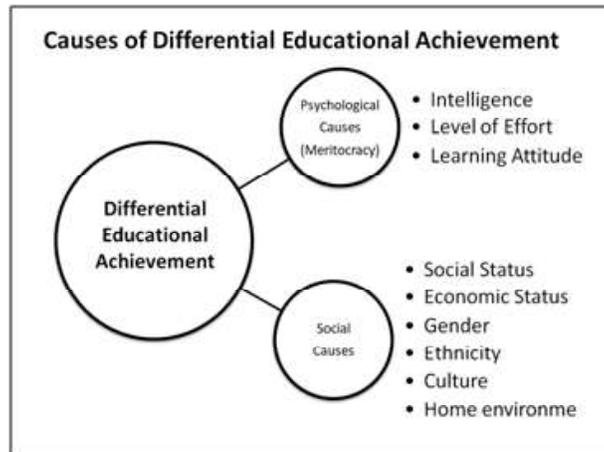
Differential Educational Achievement (DEA) is a sociological concept which means that everyone's educational achievement differs for many causes. Every child cannot get equal educational achievement where all aspect of facilities is almost the same. Because children usually have their merit by utilising which they achieve something. (Heaton, T. & Lawson, T., 1996) On the opposite side, we have found that many children have deprived of equal facilities and opportunities in educational surroundings. These require for their educational achievement. So we can say that these are mainly the causes of Differential Educational Achievement.

Meritocracy: Psychological Perspective of Differential Educational Achievement

Different functionalist has a different opinion about the DEA. Many functionalists explain that academic success and failure of a child depends on their intelligence and applying effort to their academic study. So, they believe in a meritocracy where an individual's talent, effort and achievement are the causes of academic success rather than social and economic perspective. Performance of work depends on what they achieve from academic life. Their achievements mainly lead them to a suitable place or job which they deserve. These things are associated with their merits and efforts. Therefore, the child works hard with intelligence to get success in later life. So, intelligence

and meritocracy are invariably related to Differential Educational Achievement.

Intelligence is an ability to solve the problems through knowledge and skills of a learner. It is a combination of genetic and environmental factors. Due to environment, intelligence can change over time and context. Intelligence has comprised of analytical and reasoning skills which are the relevant component to the success and failure of an individual learner. The mental and behavioural journey is associated with successful learning. Without intelligence, it is quite impossible. (Nicholas, A.B., et al., 2015)

On the other side, educationists have the opinion that not only intelligence but hard work and intense effort can lead a student towards his or her desired goal. Increase in the effort level with the motivation can lead a student towards success. Their effort level is gradually increased or decreases due to previous success. If we are motivated by success and failure, then we are motivated ourselves to more effort for development. Sometimes our experiences develop our skills that can reduce our time for future effort. Then we invest remaining time for effort in the next learning. A student can put his or her best effort in any assigned work and can get the best educational success. (Nicholas, A.B., et al., 2015).

Role of E-Learning-Teaching on Merit during and After the Pandemic

In the pandemic situation, education has suddenly shifted away from the real classroom to the virtual classroom in many parts of the world. One question is arising whether the virtual classroom will continue to post Covid-19 pandemic or not. Another question is how much e-learning-teaching would create an impact on future education. Even before the pandemic, education technology was already in high growth in modern and developed societies. Language app, virtual tutoring, video conferencing tools and online learning software have been using on a large scale since the pandemic. During the pandemic period, numbers of online learning platforms are offering free access to their services. According to the Times of India report, a Bangalore based highly valued edu-tech e-learning platform has announced free online live classes. Since that, they have got two hundred percent, new students.

Some educationist believes that rapid move to online learning without any proper planning would be a poor experience for the learner in the perspective of merit. Before introducing the new learning strategies, we need proper training, sufficient internet facility and technical preparation. Otherwise of these, the growth and development of a child could not sustain and its direct impact may be seen in a child's intelligence and effort. Other educationists believe that e-learning with real classroom learning creates a hybrid model of education which strengthens blended learning. In blended learning, the student learns via electronic and online media as well as traditional face to face classroom instruction. Blended learning accelerates the interest toward learning which helps the child to develop their intelligence gradually. Blended learning also comparatively reduces the level of effort for understanding specific facts and concepts. That means this type of method of learning develops intelligence with minimum effort. In this situation, children have more time to learn more things. It may expect that e-learning will be the integral component of school education in the post-COVID-19 pandemic.
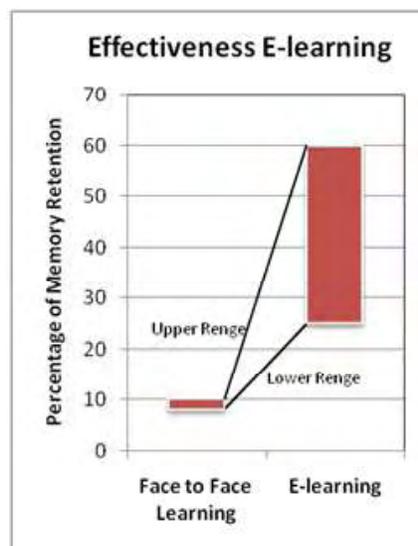
If we properly use technology, then e-learning will be most effective for one's merit in several ways. From some research, we

found that student can retain 8-10% information in memory after some time due to traditional face to face classroom learning. But in e-learning, this retention is averagely 25-60%. (Gutierrez, K., 2016) So, e-learning is more efficient to develop mental ability which enriches our intelligence. Another research shows that students require averagely 40-60% less time to learn anything through online rather than traditional classroom learning. (Chernev, B., 2020) It has happened because the student can learn at their own pace as they choose. It also reduces their effort level for a particular work. So, they have more time to do other things. If we want to get the full benefit and effectiveness of online learning, we need a structured environment where distraction from the mind can reduce. (Loeb, S., 2020) This structured environment must promote inclusion, personalization and intelligence. This structured environment can help to select importance stuff, build selective attention and emphasize the elaborative rehearsal for online learning. With e-learning, the student learns nearly five times more material without increasing the time spent in learning. (Gutierrez, K., 2016) That can reduce our effort level to achieve knowledge.

Social Perspective of Differential Educational Achievement and the Pandemic

Some sociologists go against the merit-based idea to define Differential Educational Achievement. They think that some factors are more effective than merit to get one's educational achievement. These factors are social status, economic background, gender, ethnicity etc. of an individual. (Gelling, C., 2018) Modern teaching-learning materials have been making the learning process easier. E-learning, smart-boards, computers make easy to get an education. But the problem is that some socially and economically backward people couldn't get this type of facilities. Sometimes, due to poverty, some school-going children leave their schools and join as a child labourer. For survival, they could not think of getting the proper education at that time. (Bond, G.C., 1981). The girls coming from unprivileged society face early marriage problem. Usually, they have to sacrifice their education in that process. Generation after generation have born this notion that girls are less intelligent than boys. They also think that girls give less effort than boys because girls are biologically

weaker. There are many sectors and sections in our society which do not get equal status due to caste, religion and ethnicity and naturally, the question of social discrimination creeps in. Sometimes our cultural diversity influences us what should and should not we learn. As a result, they have deprived of better educational facilities. (Strand, S., 2014)

Marxists believe that financially ruling upper-class community occupy most of the educational opportunity. Educational values have transmitted within the specific group of community. That means financially deprive working-class people are facing difficulty to connect to the educational system. From this point of view, people from the poor economic background has academically deprived of getting proper educational ambience due to this social stratification. It started from the beginning of social classification. (Bond, G.C., 1981)

The Challenges of E-Learning-Teaching during and After the Pandemic

Internet User In million: Rural-Urban Analysis

	Rural	Urban
Oct'14	101	177
Oct'15	129	246
Oct'16	157	263
Dec'16	163	269
Oct'17	182	289
Dec'17 (est)	186	295
Jun'18 (est)	195	304

Source: IAMAI & Kantar IMRB I-CUBE 207, All India Users Estimates, October 2017

Internet share Population: Urban-Rural India

	Urban	Rural
Daily	62	53
Weekly	21	19
2-3 times a Month	2	1
Atleast once a Month	1	1
Less than a Month	14	26

Source: IAMAI & Kantar IMRBI-CUBE 207, October 2017

In the pandemic situation, financially unprivileged children have deprived of learning where schools are closed and online learning sometimes they cannot afford. So, there have some challenges to introduce e-learning within the unprivileged population. We need to overcome these challenges. Otherwise, the differential educational achievement will increase across the country. For example, about 95% of students in developed countries like Switzerland, Norway and Austria have a computer and sufficient internet facility for their academic purpose where it is about 34% in developing countries like Indonesia. (OECD, 2018) Same situation we see in India in the perspective of urban-rural and private-public schools. There is a significant gap between those from privileged and disadvantage background. According to BARC report, e-learning-teaching has properly concentrated in tier-I cities with population size. But its effect gradually decreases with tier-II cities, tier-III cities and rural areas. The reason is socio-economic challenges for the population. They face a lack of infrastructure and development of internet facility that leads limited or no internet connectivity for the learner. Most of the cases, they have zero understanding of technological devices and method. (Biswas, V.S., 2020)

Suggestions and Conclusion

Schools and their students have witnessed online learning due to COVID-19 pandemic lockdown. If there has no pandemic, we would not realise the extreme prospect of digital education and be decades behind. Differential Educational Achievement is naturally arising. It is happened sometime due to the merits of a child or sometimes due to social causes. But we can reduce the differences with the help of technology. Educational technology can develop our intelligence which gradually reduces our effort level for a particular task. On the other hand, if we can reduce the cost of e-learning-teaching in the perspective of the Internet and their devices, then it will be available to everyone. In both of the case, Differential Educational Achievement can reduce, but difference not remove, because the individual learner is psychologically and socially different.

REFERENCES

Education: From disruption to recovery. UNESCO. Retrieved from https://en.unesco. org/covid19/educationresponse. [Accessed 25 May 2020]

Nicholas, A. B., Patrick, L. H., Denson, N., et al.,(2015). Keep on Truckin' or Stay the Course? Exploring Grit Dimensions as Differential Predictors of Educational Achievement, Satisfaction, and Intentions. Social Psychological and Personality Science. 6(6), pp 639-645 ISSN: 1948-5506, DOI: 10.1177/1948550615574300

Heaton, T. & Lawson, T., (1996).Explaining class differences in educational achievement. Education and Training,Skills-Based Sociology. Palgrave, London, pp 65-95, ISBN 978-0-333-64612-0, DOI:10.1007/978-1-349-13883-8_4.

Byju's adds free live classes for students amidst COVID-19. Times of India. Retrieve from https://timesofindia.indiatimes.com/gadgets-news/byjus-adds-free-live classes-for-students-amidst-covid-19-lockdown/articleshow/74971274.cms. [Accessed 3 April 2020]

Gutierrez, K., (2016). Facts and Stats That Reveal The Power Of eLearning. Shift Disruptive E-learning. Retrieve from https://www.shiftelearning.com/blog/bid /301248/15-facts-and-stats-that-reveal-the-power-of-elearning. [Accessed 25 March 2020]

Chernev, B., (2020). 27 Astonishing E-learning Statistics for 2020.Techjury. Retrieve from https://techjury.net/blog/elearning-statistics/#gref. [Accessed 30 June 2020]

Loeb, S., (2020). How Effective Is Online Learning? What the Research Does and Doesn't Tell Us, Education Week. Retrieve from https://www.edweek.org/ ew/articles/2020/03/23/how-effective-is-online-learning-what-the.html. [Accessed 25 March 2020]

Gelling, C., (2018). In-School and Out-of-School Factors Affecting Educational Achievement. A level of Sociology. Retrieved from https://www.tutor2u.net/ sociology/reference/in-school-and-out-of-school-factors-affecting-educational-achievement. [Accessed 30 July 2019]

Bond, G.C., (1981).Social Economic Status and Educational Achievement: A Review Articl. Anthropology & Education Quarterly, 12(4), pp 227-257. ISSN:1548-1492. DOI: 10.1525/ aeq.1981.12.4.05x1811q

Strand, S., (2014). School effects and ethnic, gender and socio-economic gaps in educational achievement at age 11. Oxford Review of

Education, 40(2), pp 223-245. ISSN: 0305-4985. DOI: 10.1080/ 03054985. 2014.891980

Programme for International Student Assessment 2018. OECD. Retrieve from http://www.oecd.org/pisa/. [Accessed 25 Maech 2020]

Internet in India 2017. Internet and Mobile Association of India & Kantar IMRBI. Retrieved from https://cms.iamai.in/Content/ResearchPapers/ 15c3c84c-128a-4ea9 -9cf2-a50a6d18f21c.pdf. [Accessed 22 March 2020]

Biswas, V.S., (2020). Ed-tech platforms cash in on pandemic. Financial express. Retrieve from https://www.financialexpress.com/brandwagon /ed-tech-platforms-cash-in-on-pandemic-posts-surge-in-users-and-time-spent/1947135/. [Accessed 10 May 2020]

11

E-Learning-Teaching:
A New Age Challenges

Baisakhi Bhadra

Introduction

In our rapid changing world, we find it difficult to overcome the learning challenges and the possible achievements. To bridge this gap, the concepts such as e-learning, e-teachers, e-teaching has become the part of active education.
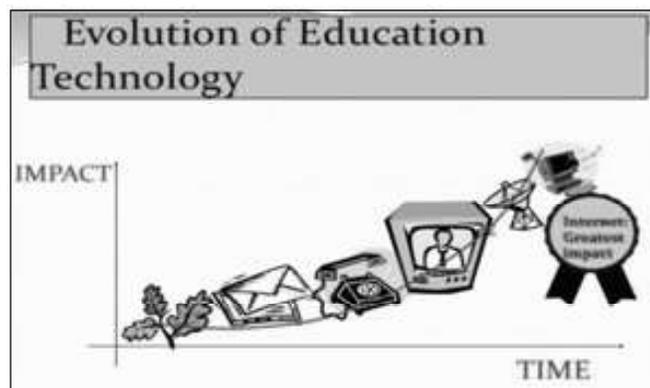
One of the natural responses to challenges of e-learning environment is the introduction of a new age challenge to support e-learning-teaching with resources network, designed to meet the needs of the learners in both individuals and collaborative settings.

What is E-Learning?

- The letter 'e' in e-learning stands for the word 'electronic'.

- E-learning is internet-enable learning.

- E-learning means the delivery of learning with the assistance of interactive, electronic technology, whether offline or online.

- E-learning is the delivery of learning; training or education program by electronic means–learning involves the use of a computer or electronic devices in some way to provide tanning, education or learning material.

- E-learning is essentially a computer and network enable transfer of skills and knowledge-learning application and process include:

  - Web based learning.

  - Computer assisted learning.

  - Virtual education opportunities.

  - Digital collaboration.

- E-learning is the use of network technology to design, deliver, select, administer and extend learning. It uses the power of

networks, primarily, those that rely not only on internet technologies but also satellite networks and digit content to enable learning.

- E-learning is a store house of education, information, communication, training, knowledge and performance management.

E-learning Provides

- Faster learning at reduced costs.
- Increased access to learning and
- Clear accountability for all participants in the learning process.

Goals of E-learning

- Access to information technology.
- Help students to achieve high academic standards.
- Improve the next generation of technology applications for teaching and learning.

Features of E-learning

- E-learning is dynamic.
- It designed around the learner.
- E-learning is collaborative.
- It enhances computer and internet skills.
- E-learning operates in real time.
- It fosters greater student/instructor contact.
- E-learning is individual.
- It is self paced and gives students a chance to speed up or slow down as necessary.
- E-learning is comprehensive.
- Geographical barriers are eliminated, opening up broader education options.

E-Learning Platforms

People can do an online course via a wide variety of different platforms, such as:

- MOOCs (Massive Online Open Courses)
- VLE (Virtual Learning Environment)
- VSS (Video Streaming Services)
- VILT (Virtual Instructor-Led Training)
- Discussion boards.
- Forums.
- Podcasts.

The Types of E-Learning

1. Synchronous E-learning

Synchronous e-learning is real time learning. In Synchronous learning, the learner and the teacher are online and interact at the same time from different locations. They deliver and receive the learning resources via mobile, video conference, internet or chat. In this type of learning the participant can share their ideas during the session and interact with each other and they get detailed queries and solutions. Synchronous learning is gaining popularity because of improved technology and internet bandwidth capabilities.

Learning from the sources of:

- Virtual Classroom
- Audio and Video Conferencing
- Chat
- Webinar
- Application Sharing
- Messaging Instantly

2. Asynchronous E-learning

Asynchronous e-learning is pause and resume kind of learning. In this type of e-learning the learner and the teacher cannot be online at

same time. Asynchronous e-learning may use technologies such as email, blogs, discussion forums, eBook, CDs, DVDs etc. Learner may learn at any time, download documents and chat with teacher and also with co-learners. In fact many learners prefer asynchronous instead of synchronous e-learning because learner can take online courses to learn at their preferable time by not effecting their daily commitments.

Learning from the sources of:

- Self-paced online courses
- Discussion forums and group
- Message boards

The Best E-Learning Tools

Google Drive

Google Drive is our favorite form of cloud storage. With team working in different locations across the globe, Google Drive provides a safe and central location where all team members can access the files they need at any time. It is also ideal for storing brochures and educational documents that account managers may need access to from e-learning conferences and other remote location.

Momentum

Momentum is a to-do list extension that can be used with the Google Chrome browser. The main strength of this e-learning tool is that it's so easy to use.

Google Calendar

Google Calendar is one of our favorite e-learning tool for staying on top of team meetings. It offers many handy features, such as the ability to add notes, send text notifications and schedule recurring reminders.

Mural

E-learning projects, such as the curation of course content, requires the input of a variety of people. Mural is an ideal program to use for people to organize, share and develop their ideas.

Just Press Record

Just Press Record is a hugely helpful app that makes for a great e-learning tool. It's a mobile audio recorder that allows people to record, transcribe, share and organize audio. The ideas discussed in e-learning conference presentations and webinars often makes for great course content.

Trello

Trello is a project management tool that is easy to use, making getting organized a breeze. E-learning projects usually require input from a range of stakeholders. Trello makes it easier to coordinate everyone's input and track the status of different tasks.

Tomato Timer

Tomato Timer is a website and app dedicated to combating procrastination, resulting in more effective time management. This technique uses a timer to break down work into intervals, separated by short breaks. This tool is simple to use and people can even customize their time.

Advantages of E-Learning

- *Media-rich:*

  Easier to understand and more engaging.

- *Repeatable:*

  As many times as like.

- *Easier to monitor progress:*

  Less administrative work.

- *Consistent:*

  Central control of content.

  Same quality of content for all.

  Same quality of education for all.

- *Convenient:*

  Self service.

  On demand.

  Privet learning.

  Self-paced.

  Flexibility.

- Class work can be scheduled around personal and professional work.

- Reduces travel cost and time to and from school.

- Learners may have the option to select learning materials that meets their level of knowledge and interest.

- Learners can study wherever they have access to a computer and internet.

- Self-paced learning modules allow learners to work at their own pace.

- Flexibility to join discussions in the bulletin board threaded discussion areas at any time, or visit with classmates and instructors remotely in chat rooms.

- Different learning styles are addressed and facilitation of learning occurs through varied activities.

- Development of computers and internet skills that are transferable to other facets of learner's lives.

- Successfully completing online or computer-based courses builds self-responsibility for their learning.

E-Teaching

World today is in the grip of information cum communication technology demanding lifelong learning. Fast changes in the field of communication technology are replacing teaching learning process from traditional Ivory Tower Mentality of teacher training programmes to e-teaching. NCTE at national level needs to come forward to plan, design and ensure the conduct of ICT based teacher education courses. Efficiently planned and designed teacher education courses will not only enhance employability but will also help the system of education to provide proficient teachers to work effectively using E-Teaching-Learning Strategies.

E-Learning: A Paradigm Shift

E-learning is empowering a paradigm shift from the traditional classroom to the network-based digital learning environment. In brief, teacher education in view of global world cannot afford to remain indifferent and unresponsive to the aura of e-learning. The spectrum of e-learning with mind boggling progression has exercised a well discernable shift from formal schooling to de-schooling to e-schooling of e-learner, e-teacher, e-learning environment, e-content, e-resources and e-learning strategies.

E-teachers

- E-Teachers are teachers who work in an internet environment in both regular and virtual classroom situations.

- They build new concepts of working in time and space.

- They find new learning resources as they interact with information, materials and ideas with their students and colleagues.

Features of E-teachings

- E-Teaching is the appreciation of live teaching with streaming lectures, whiteboards, downloadable slide sets and discussion forum.

- E-Teaching is an automation of an existing teacher-centered educational approach.

- The real work is in creating content and learning management system that support e-learning.

E-Teaching Strategies

E-Lecturing

- E-lecturing provides crucial concept and techniques to fulfill learner's need to solve the problem through electronic lecture.

- E-Lecturing involves the use of e-blackboard, Web CT, KEWL as web based platform for distributing and facilitating e-learning curriculum.

E-Discussion Forum

- E-Discussion Forum facilitates online interaction between learner and teacher with respect to structured learning content and flexible learning environment.

- E-Discussion Forum is used where learner is expected to initiate discussion/pose question.

E-Mentoring

- E-Mentoring encourages the learner to seek online professional assistance from the mentor.

- E-Mentoring has course indicator which enables a learner to locate online resource person for expert guidance.

E-Tutoring

- E-Tutoring as learning tool provides educations to the Lerner to bridge the gap of face to face interaction.

- E-Tutoring also extend expertise to master the content of a particular course.

E-Network Resources

- E-Access Network Resources provides additional reading material to the learner pertaining to the course.

- E-Access Resources facilitates the learner to share knowledge and content to prepare course assignments and project.

E-Informal Peer Interaction

- Impact of E-Informal Interaction results good learning and facilities the learner through Email, Chat, Net Learner Group.

- Social networking tools: YouTube, Face Book etc.

E-Connected Education

- Where learners, teachers and related support professionals remain connected to interact identify, understands, develop and improve effective communication with respect to:

- Learners capabilities need and goals.

- Teachers capabilities need and goals.

- Academic content.

- Approaches of teaching and learning.

- Assessment and feedback.

### *E-Quality Learning Simulations*

- E-Quality learning courses are gaining market acceptability, recognition, healthy inclination toward e-learning environment.

- Availability of competent professionals actively and co-operatively involved in creating and improving the instructional programme.

Impact of E-Learning-Teaching on Teaching Learning Process

For Learners

- Improves efficiency both in learning and teaching.

- Increases motivation.

- Deepens understanding.

- Promotes collaborative learning.

- Provides new ways of interaction.

- Paves way for personality development.

- Increases social skills.

- Creates interest in learning.

- Helpful for self evaluation.

- Wide reach and consistent.

- User convenient.

- Flexible and rich medium for students.

- Useful tool to address students with different learning and cognitive styles.

- Self-pacing for slow and quick learners reduces stress and increases satisfaction.

- Computer based networking system has provided the present day teacher with a choice of modern tools to deliver the goods in the classroom and end the instructional boundaries.

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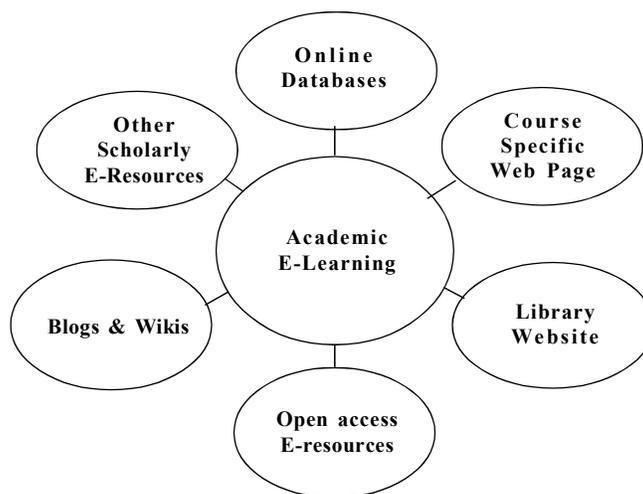
For Instructors

- Allows innovative methods of teaching with the help of technology and online tools.

- Especially useful for distance learning.

- Allows reaching out to a large number of students across geographies.

- Help to instructors to develop materials using the worldwide resources of the web.

- Retain records of discussion and allow for future reference.

- Allow to communicate information in a more engaging fashion that in text based distance education.

- Convenient for instructors to access any time, any place.

- Set a frame work for standardized course delivery.

- Information and communication technology in which e-learning, e-teaching, e-teachers are built in components has some impacts on teaching learning process.

Conclusion

With so many different ways to define e-learning-teaching and the educational approaches that can be taken in these learning environments, it is the conclusion that e-learning-teaching is an innovative approach in teaching-learning process. It is a holistic way of teaching and learning that meets the need of today's digital natives. It is an environment made up of collaboration, choice and array of technological recourses that supports a successful online teaching-learning experience. However, in order for learners to be successful in this teaching-learning environment the challenges to e-learning-teaching must be over cum with support and a best practice solution. Instructors and learners must embrace the shift away from traditional classroom practices to an e-learning-teaching approach to education. Despite the fact that today's learners are digital natives; the use of technology for e-learning-teaching can be overwhelming and provide student motivation challenges, with the proper supports from instructors learners can be successful within these e-learning-teaching environments.

Finally, and probably the most important challenge for the instructor is to focus on the overall elements of a well-developed course. Developing a purposeful and well-defined online course, which supports the instructor and learner, means devoting the appropriate time and embedding the applicable course elements into the e-learning-teaching environment.

REFERENCES

Information and Communication Technology, retrieved from http://www.unctad.org/en/docs//iteipc 20031_en.pdf

National Policy on Information and Communication Technology (ICT) in School Education (2012), retrieved from http://www.education.nic.in/secedu/ict

Future Trends of Digital Education in India, retrieved from http://www.educationinsider.net/detail_neus.php

Bollag, B, & Overland, M.A. 2001 "Developing Countries Turn to Distance Education", Chronicle of Higher Education

Bruckman, A. 2002 "The future of e-learning communities", Communication of the ACM

Impact and Challenges of E-learning in Digital Environment, retrieved from http://www.escienceworld.in

The Best E-learning Tools, retrieved from http://www.learnupon.com

E-learning & E-teaching Strategies, retrieved from http://www.e-learning.ppt

E-learning, retrieved from http://www.e-resources.net

Challenges for Teacher in the Era of E-learning in India, retrieved from http://www.researchgate.net

12

Smart Classroom: An Innovative Space of Smart Learning in Higher Education in India

Pratima Saha and Arpita Paul

Introduction

Today technology has touched every space of our life, therefore educational system could not be left unaffected by this changing phenomenon. Student's achievement should be highlighted rather than conventional one sided learning and periodical examination method. Virtually rich curriculum must be implemented in studying methods, because those methods should remember for long time.

Developed countries are more advanced to formulated the policies & programmes for accelerates Smart Classroom development, while developing countries like India, takes initial steps to introduce information & communication technology in the field of education. Now Govt. of India takes some initiative to setup online courses & virtual classroom. Most fortunately IT Savvy country, India adopts virtual classroom concepts rapidly.

In 2012, online education enrolment witnessed 21% growth rate in higher education. It is the prove of booming Smart Classroom market in India.

Literature Review

Siddiqui and Masud (2016) explain the global approach of modern education system and analyse that the technological learning enhances today's traditional educational style. According to their study, a Smart Class model to manage the entire educational activities and hence to enhance the quality of education.

Nasreen Bano (2016) investigates the effect of Smart Classroom learning on the performance of first grade students in English subject and the result reveals of Smart Classroom learning positively effects the performance of students in English.

Tena, Prakash Chandra (2013) experiments 60 Secondary school students from Royal Convent school in Jalandhar district of Punjab. T-test is also used for analysis and interpretation of data. The result reveals that smart class learning environment is better to teach both low achievers and high achievers than traditional class.

Keshari, Rakesh Kumar (2014), defines that smart class and e-learning have now become the new buzzwords among city schools as many of them are installing this technology in their classroom. "One of the major problems faced by the Smart Classroom solution providers' encoring teachers & education providers to use this technology in imparting education". Naveen Rajlani, CEO, VP & Business Head, Inside Services, Pearson India.

About Smart Classroom

"In 1986, David Martin and Nancy Knowlton were driving through upstate New York when David first described a product idea he'd been working on to Nancy. A year later, SMART was founded. Originally, the company was the Canadian distributor for a U.S. projector company, and revenue was generated through projector sales. That revenue was directed toward the research and development of the SMART Board interactive whiteboard, which would combine the simplicity of a whiteboard with the power of a computer." (Das, Dipankar. 2016)

Smart Classroom projects explore the challenges between human–computer interaction. By using this kind of technology, teachers actively and directly observe, evaluate their student's mental and intellectual potentiality. Amongst college students, Smart Classroom concept becomes very effective, because collaborative learning can be made. Student form small groups and through this group discussion different and new aspects are formed. The goal of the Smart Classroom project creative integrates two separated educational zone together. Three distinct categories are defines "Smart Class" i.e. the instructor Workstation Classes, hands on Laboratory, the Work Group Laboratory.

Students want more interactive, practical and attractive learning skill rather than traditional methods. Only theoretical learning cannot entrances the ability of students to force practical problems in life.

Smart Classroom must be covers both physical and virtual teaching space in the institution. It is basically as virtual learning platform & ideal physical classrooms, and both. Smart Classroom try to provides flexibility learning and makes the learning ubiquitous. Use of computer internet and E-learning devices makes the environment of the classroom, extremely amazing and interesting. Teachers also make their work of teaching, easily by using virtual learning technologies like Slide presentation, Audio/Video conferencing, Instant message/Tele chat etc. Those learning process are more understandable and acceptable to students.

Smart Classroom teaching sets by appropriates moods between students & teachers. Teachers are easily motivate students and other side, students are freely express their feeling and their understanding levels can be identified.

In traditional methods of learning, one side communication can happened which made by teachers only by smart pedagogy and using smart technologies in smart classroom, students are also interact with their faculties and by using this kind of education system teaching methodology focused on student's concentration more deeply. Gradually, this technology based education system generates interest in classroom education.

Smart Classroom plays as a potential tool in grating attention and concentration of students, creating anticipation and imagination

of students, improving attitudes toward content and learning, increasing easily understanding of subjects, decreasing anxiety & scarcity about education and creating memorable visual image to make learning more fun and affective.

Smart pedagogy means smart teaching with smart learning materials. It is based on advanced learning methodologies. By using practical exercise and practical example with the help of practical teaching tools, apparatus, materials etc.

Layout of Smart Classroom

- The attendance sheets, lecture notes, white board maker & conventional tool which is required for traditional classroom, are not needed in Smart Classroom. Faculties can logged in the session and performs their tasks, i.e. attendance management, lectures, notes etc. They interact to students and try to show their questions. The students can use the Smart Card to inter in the classroom; no manual attendance sheet is required in Smart Class. By using Smart Class equipments, the students can lesson, solved the problem and gets the answer etc. In this type of classroom, students are encouraged by the teachers into speak with conference and added their value based opinions. Here teachers plays the role as a facilitators to help the to projects new concept.

- In this kind of learning system, content management system is unique. All materials are retrieved online through web portal.

Components

Following components are required for Smart Classroom:

- Smart LED TV;
- Short throw projector;
- Video Conferencing Equipments;
- Laptop (with intellectual connection)/computer;
- Document camera (high resolution video)/Visualizer;
- Podium;

- E-books;

- Smart phones;

- Interactive TV's, Card readers;

- High Configuration Server & a database;

Aspects of Smart Classroom Concept

SMART CLASSROOM

Smart Pedagogy	Smart Teaching Solutions	Short Learning Space/Equipments
Entrepreneurial pedagogy+ Physical/ Methodologies Example with the help of practical teaching tool/	Virtual space/Practical exercise/apparatus/ material	Learning Platform/ Lecture Hall
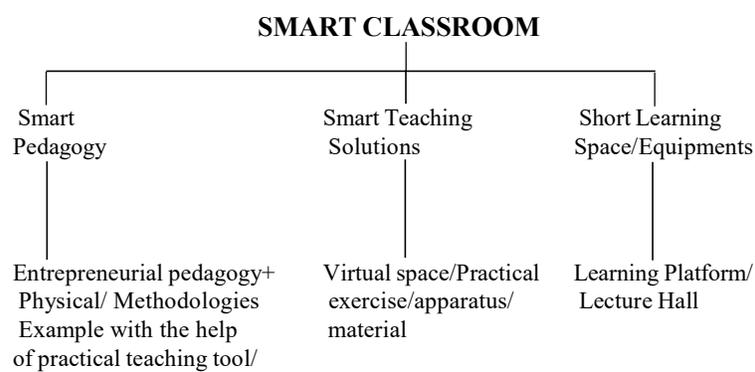
There are three dimension of smart class; one is smart pedagogy, others are smart teaching solutions and smart space and environment. Now in pandemic emergency time, smart space means completely virtual platform.

Different Initiatives Taken on Establishment of Smart Classroom

Digital learning process is initiated from the year 2002-03. After that smart class concept is generated gradually.

"In 2004 EDUCOM first launched a smart class. Now in India, across 560 districts more than 12,000 schools have implemented smart classes. The Jammu and Kashmir has been among the first states in the country to come up with smart classrooms and have more than 220 schools with this facility. For each school the cost of per smart classroom set up was Rs. 235000." (Amin Dr. Syed Noor ul, Jan Hafsah. 2018)

India Institute of Technology. (IIT), Kharagpur, India the Center for Advanced Communication (CACM) has developed over 250 Smart

Class/e-labs all over India. Over 10,000 students get advantage from this.

Bhawanipur Educational Society, provides Smart classrooms & lecture halls with multimedia projectors and technical supports, making learning more alternative and acceptable to the students South Calcutta Girls' College is equipped with two smart class for enhances the quality of education of their students.

Now, 235 Smart Classroom in the State and around 135 of those are setup and run by private groups following the guidelines of State Government. Many companies and firms like Educomp Solutions, NIIT, IIN, Hughes Global Education, 24/7 learning, eAbyas solutions, Azim Premji Foundation are some of the e-education providers in India. Govt. of India has made huge investment in higher education to digitize the educational content and delivery issuing information and communication technology. After introducing digital learning in India (2003-2004), 652 Jawaharlal Navodaya Vidyalayas across the country, 28 Government schools in Tamil Nadu and three Delhi Police Public Schools have Smart Classes setup by Samsung India, covering over 2.5 lakhs students and more than 8,000 teachers have been trained in how to use interactive technology.

Senior secondary students will also provided studying aid like test papers, question bank and syllabus oriented materials in digital format. The New Delhi Municipal Council (NDMC) introduces Smart Educational Services with 444 Smart Classrooms in 30 schools in Municipal Council in the year 2016-2017. Class VII to XII in NDMS Schools transfers from traditional classrooms to smart classrooms with State-of-art technology.& professionally developed learning content in Hindi and English based materials.

The Education Directorate, The Govt. of W.B., date on 12/10/2017, asked all principle/OICS/TICS Govt. of West Bengal, all Colleges to submit a status report of virtual classrooms formation with classroom & video conferencing components installation.

Previous Govt. tries to bridge to reduce the digital divide, with various scheme launching. Now Govt. of India launches "Digital India" and "Smart Class", in this initiative National Optical Fibre Network will be the part of the "Digital India" campaign.

West Bengal Govt. also takes some initiative to establish virtual classrooms in Universities and colleges of the state as a part of digital boost to higher education. West Bengal Govt. was developed 4000 e-classrooms in 2000 secondary schools. In last 5 years 3915 secondary schools get 39300 computers. Doon Public School, Delhi, first school in India to adopts first Smart Assessment System (SAS) of the classes. More than 12000 schools across 560 districts in India have adopted Smart Class. In 2016, HRD has recommended for smart class in govt. schools. Committee said the govt. must initiate the pilot project of establishment the smart class in school. This could be done through teaching-learning the process & through computer enabled techniques, like large of multi-media projectors and smart boards so that more visualisations of lessons for student is employed.

Today several institutions establishes modern tech-based classroom, as a "Smart School Project". Recent example of setup Smart Class in India is that Gujarat Govt. Allocates Rs. 25 thousand crore for the modern educational system. Govt. Distributes UAMO tab to all college students at a nominal cost and near about all students of India benefited by this.

Under Integrated School Development Project, ten govt. schools are established Smart Class in Noida. 3096 students are get benefits from this project and 5000 (approx.) students are expected to benefit after full implementation of this project .

At Kolkata, Mahadevi Birla High School takes many initiatives for arrange a smart classroom for their students from nursery till class VIII. They are designed their new age classroom with LCD Projectors, computers and audio-visual systems.

"The software, Educomps smart-class, brings about a complete transformation in classrooms by replacing the lecture method with interactive white boards and use of a large repository of digital instruction materials, including 3D animated modules and videos mapped to school curriculum. It has partnered with Eureka, Discovery and Crocodile simulations software for physics, chemistry and maths. The new system would better teaching-learning process by enhancing the academic performance of students, increasing teacher effectiveness and productivity in class and instant assessment of

learning outcomes. Meanwhile, Kundan Vidya Mandir has transported all its classes from Nursery to Class VIII into smart rooms. The rooms are equipped with projector, CPU and UPS, where a teacher can highlight a particular area with the help of caliberating pen. Same is the case with Satpaul School and BCM School in the city."

Importance of the Smart Class

Innovative classroom is as important potential tools to enhance educational reform process improving both access to education and quality of the education in India. Most important concept is that classroom should be built with inexpensive equipment due to future technical change. After the analysis of smart classroom facilities, it is concluded that smart class is indeed the blessing to next generation students. Most importantly, many teachers and students get relief from chalk and dust (due to Allergic problems) which is essential components of traditional classroom learning.
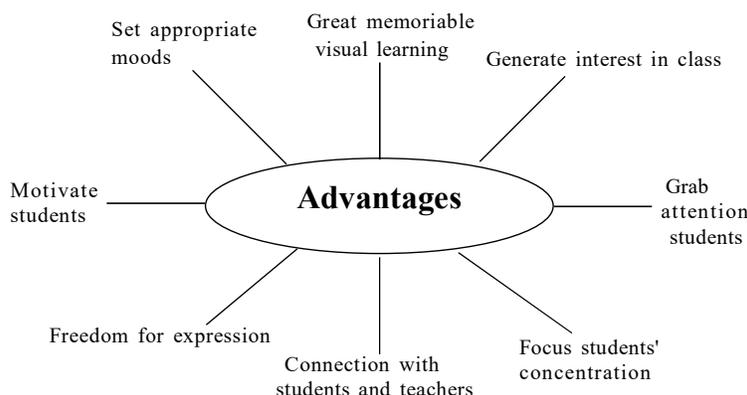
Sometimes students cannot understand the teaching methodology of a teacher. In that case, teachers can make visual or pictorial format of learning to better understanding of learning.

The audio and visual senses of students are sensitive by using smart board in class. Time is used in better way, because much time was wasted to making pictorial diagram of studies in traditional chalk/ board practice. By the digital format of learning, teacher enhances attention of students in maximum level that motivated them.

Impact on Educational Society

Educational society consists with educational system i.e. students, guardians, and others. Educational systems include the colleges, schools, universities and other educational institutions etc. By using Smart Classrooms and e-learning Technology, total educational society gets an innovative impact as a whole. Students are more beneficiated to use of smart learning procedure. They are self learner and spend more time in intensive learning to gathering knowledge. Govt. of India has also implemented this new technology in Indian educational system.

Smart Class is powered by a vast repository with continuously developed contents (consist with highly animated, 3D & 2D multimedia modules) to meet specific objectives of standard learning process.

Smart Classroom Design is Done by Three Aspects

Design of smart class is based on three aspects i.e.

A. Space/Area design (its mean total area of classroom, with classroom environment), Walls should be made by cleanable materials with light coloured base. Wainscot may used to protect from sunlight.

B. Furniture design: Furniture and fixtures which designed in modern way like movable/flexible table, chair etc., movable tables and chairs offer the greatest flexibility and comfort. They also allow for quick reconfigurations of the classroom by the instructor and students. Tables chairs and fixed seating should be a voided due to their limiting proportions and lack of mobility that hinders flexible arrangements. Desk should be movable and reconfigurable. Classrooms should have either single occupant or dual occupant desks. Desks should not have modesty panels to allow for group work and for students to sit on both sides of a desk; maximizes flexibility, faculty can use a student desk (no need for a different style). Movable desks do not have built-in surface electrical outlets (would conflict with desire for flexibility). Chairs should be movable and reconfigurable.

C. Tools/Technology design (smart class is based on technology based equipments, LED TV, projector, laptop, podium, smart phones, High configuration server & a database etc.). Some tools and technology are discussed below which are mostly used to design the smart classroom.

i.   Intent

To facilitate and promote effective classroom-based learning. To provide adequate based flexibility to allow for arrange of teaching styles. To accommodate a variety of audio/visual presentations and interactive teaching technologies. To optimize the use of space through classroom environment designed to accommodate specific ranges of class sizes.

ii.   Lighting

Day light is the ideal way to bring light into a space. It conserves energy and enhances the learning environment by creating a connection between exterior and interior. Therefore, natural lighting is recommended as a supplement to in direct artificial lighting and should be prioritized in classrooms. All artificial lighting needs to be zoned, dimmable, and programmed into maximize visibility of projectors.

iii.   Acoustics

The acoustical properties of a classroom are one of the most important factors contributing to its usage. Unw anted sound must not enter a classroom for adjoining spaces in order to preserve audible control for effective teaching experiences. At the sametime, sound must rever be rate appropriately within the room to ensure all students can hear the instructor, audio/visual media, and other students.

Design of Smart Classroom

| Space/ Area design | Furniture design | Tools/technology design |
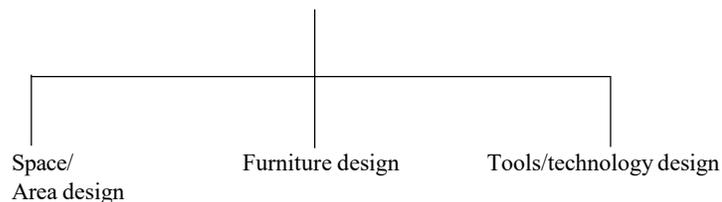
Conclusion

In today's pandemic emergency time, smart classroom converted in virtual classroom. Now teachers are arranged their classes by digital platform like, Google classroom by using social networking, online teaching, class blogs and wikis, podcasting, interactive whiteboards, and mobile devices. etc. Different courses are created in social platform like, by using moodle. Today's students are more techno savvy than before. They are not afraid to used technology and it's became integral part of education medium. The smart classroom creates two different aspect ; one is enhanced the relationship between students and teachers, and helps make teaching and learning more meaningful and fun. It is suggested that the positive approach should be implemented to creation of more and more applications of smart classrooms. And initial infrastructure and establishment cost of smart classroom is very costly. Therefore most of the schools in rural area are not implemented that facility to enriched their students. And due to digital divided, rural students are not get proper technical support to their education system and makes huge gap between rural and urban educational system. In that case, Government should taken necessary steps to increase smart class with the help of barrier free technology. And curriculum and syllabus of the classes should be complimented those technical platform.

REFERENCES

Amin Dr. Syed Noor ul, Jan Hafsah (2018). Smart Classroom a New Paradigm for Teaching and Learning: Its Implementation and Setback with Special Reference to J & K. AGU International Journal of Research in Social Sciences & Humanities, Vol.6, p 682-701.

Das, Dipankar (2016). Modern Education with Smart Classroom. RAY: International Journal of Multidisciplinary Studies, vol 1:1, p 67-79.

Singh, Balwinder. Digital initiatives for Indian Higher Education. International Journal of Advanced Research in Comp. Science, vol.18, 15.7, p 1042-1044.

Keshari, Rakesh Kumar (2014). Smart Class Room in India: An Emerging Speculation, International Journal of Education and Science Research Review, vol 1, 6, p 19-23.

13

ICT for Teachers to Create Digital Learning Content

Sutapa Aditya

Introduction

In the era of knowledge based society technical education has assumed and indisputable significant role. The digital skill that teachers need long moved on from just being able to use word processing and spreadsheets software. Digital skill that 21st century teacher should have include cloud storage and sharing solution, social media, web editing, image editing, presentation software and general multimedia. (Bhattacharjee, B, 2016). Teachers need specific professional development opportunities in order to increase their ability to use ICT for formative learning assessment, individualized instruction, accessing online resource and for fostering student interaction and collaboration. The ICT enabled methods shall help the teachers to offer quality e-content for both education in classroom situation and to a large number of population in a structured, flexible, interactive, blended, flipped and open way.

A Pandemic and Sudden Rise of Using ICT Based Education

The COVID-19 has resulted in schools shut all across the World. Globally, over 1.2 billion children are out of the classroom. (The COVID-19 pandemic has changed education forever. This is how. n.d.) Needless to say the pandemic has transformed the centuries-old, chalk-talk teaching model to one driven by technology. As a result, education has changed dramatically, with the distinctive rise of e-learning. Researchers suggest that online learning has been shown to increase retention of information, and take less time. This disruption in the delivery of education is pushing policy makers to figure out how to drive engagement at large scale while ensuring inclusive e-learning solution and tackling the digital divide. MHRD and UGC have issued certain guidelines and advisories from time to time and have taken concrete steps to impart online education by making the best use of e-resources which are available on www.ugc.ac.in. (University Grant Commission. [UGC], 2020, April). Following government instruction some institution is uploading lectures to YouTube, while the Kendriya Vidyalaya Sangathan is deploying its Swayam Prabha portal, which has lectures on DTH and online, to help students. Some institutions have adopted the Zoom app, others Google Classroom. Andhra Pradesh government is trying to tap Doordarshan to remove access barriers. (The Hindu, 2020, April)

On the basis of present condition of the society we can say that Digital learning–A new normal approach of education. And teachers related to all level of education should have the basic idea to create digital content for their learner.

Digital Learning and Digital Content

Digital Learning

Digital Learning means learning using electronic media. Modern day computers and electronics all use binary digits (1s and 0s) to construct data. Information and instructions created with these digits are

therefore called digital information. Learning that uses this digital information is called digital learning. Consequently. (Andre, 2018)

Digital Learning Content

Digital learning content takes a wide variety of forms, including tutorials, scenarios, podcasts, screen casts, videos, slideshows, quizzes and reference materials.

There is a list of different Digital learning Content used by teachers to conduct online education all over the world.

Table 1: Types of Digital Learning Content

Interaction Based	Writing Based	Fun Activity Based
PowerPoint Presentations	Case Studies	Games
Webinars	Blog Posts	Cartoons/Illustrations
Charts/Graphs	Checklists	Animated GIFs
Slideshares	Articles	Infographics
Screen Captures	Simulations	Problem-Solution Scenarios
Videos	eBooks	

Strategies Adapted by Teacher to Conduct Digital Learning

It's a challenge for all teachers especially in this pandemic situation to choose appropriate strategy for conducting digital learning in a third world country like India as we have to face different access problem. Some basic idea have been discussed below which would be beneficial for conducting Digital Learning. (Types of Digital Learning–Methods & Techniques n.d.)

Table 2: Classroom Application of Digital Learning Strategy by Using Basic ICT Tools

STRATEGY	DETAILS	APPLICATION IN CLASS
Adaptive Learning	The adaptive learning system uses feedback from the learner to gauge the strengths and weaknesses of the learner in order to adjust the delivery of content.	Teacher can prepare interactive ppt in a way where concept will be developed with students' feedback. Teacher can arrange the concept step by step by giving some clue. Students have to go through every step to reach the main content.

(Contd...)

Badging And Gamification	Badging and gamification is a motivational tool that rewards the learner through the use of digital badges. The badges are obtained as a reward for achieving a certain level of difficulty. The collection of badges turns the learning process into a gamification process that motivates learners.	Teacher can make quiz/ interactive learning games by different apps/ software like Quizziz, Google, Quiz, and Testmozfor student which contains scores for each step after successful completion. Students who complete all steps will get a system generated certificate automatically.
Blended Learning	Blended Learning offers the best of both worlds by merging digital learning with traditional classroom learning. Both teachers and students meet for physical classroom training and also online through the use of interactive chat and virtual classrooms.	Teachers can put some hands on activity/ experimental/ experience based activity in the curriculum. The guidelines of the activity will be delivered by teacher and result/ analysis done by students will be published via online mode. For the development of the work both teacher and students will meet individually and teachers physically in the class. Popular live class taking software - Zoom, Google Meet , Cisco Webex , Skype etc.
Classroom Technologies	Classrooms are becoming modernized with help from Virtual Reality, 3D printing, Cloud computing and Social Networking.	Teachers can record interactive ppt, slideshow video by different software like MS PowerPoint, H5P, screen cast-o-matic etc. teachers also can use Podcast, Mindmeister to prepare and store classroom instruction and study material also.
E-Textbooks	E-textbooks are electronic versions of traditional textbooks. E-books are less expensive than traditional textbooks, are easier to update and are more cost efficient.	Teachers can prepare study material/ course module by MS Word and convert it to pdf file. They can publish it in an e-book form or can share it like notes on any online platform accessed by students.
Learning Analytics	Learning Analytics introduces data mining to the learning experience. The analytics process involves the collection, measurement and analysis of data.	Teacher can assess the student learning via online mode by using various software/apps available (like Google Forms, Testmoz, Moodle database etc.) in the internet. First teachers need to fixed the assessment procedure and framed it by those software/apps.Those software/apps automatically asses the student learning andanalyse the result.
Mobile Learning	Mobile Learning (sometimes called M-Learning) is a term used for learning processes that can be engaged across multiple platforms. Mobile learning is popular because it enables learners to engage in the learning process "on-demand", wherever and whenever the learner desires.	Whatever the learning content a teacher will prepare or the platform for communication with students framed by teacher should be accessible through mobile also. Now-a-days all the software company have prepared the same apps which can be accessed by both computer and android phone

(Contd...)

Personalized Learning	The Personalized Learning experience is targeted towards individuals who would benefit from an individual learning path. Personalized Learning requires someone to design a learning journey that is created specifically for a particular learner and/or learning objective. When this process is generalized or automated, it then dives into the realm of Adaptive Learning.	Teachers can use mobile technologies in a variety of ways for example to document and evaluate children progress with multimedia (video, audio,, and picture based) evidence of activities or to enhance their existing activities with additional resource
Online Learning	In Online Learning lessons are usually prerecorded where the learner can attend lectures on-demand. Online Learning refers generally to publicly available, readymade courses that are delivered through the Internet to address mass consumer needs.	Teachers can create online classroom like Google Classroom, Moodle site and post lectures, materials, Assignments, project, assessment, and group discussion for students. Students can join anytime and access the class from anywhere by mobile, pc, laptop etc. Both teacher and student can interact with each other in those classroom
Open Educational Resources	OERS are free, openly licensed, publicly assessable resources that can be used for educational purposes. Legal permissions include the right to Retain, Reuse, Revise, Remix and Redistribute the OERS content.	Teacher can use different type of content (pictures, videos, gif) from Creative Commons, SWAYAM, NROER platform for preparing their own digital content
Virtual Reality	Virtual Reality Learning allows for a rich learning experience through the use of either a desktop computer, virtual learning glasses or head mounted display. Virtual Reality is a solution for situations where it is not feasible or scalable to provide real life experiences to users to achieve the learning outcome.	The teacher can prepare and present to the students various field trips. museum experience with best guides, lab environment, scientific process in human body by virtual reality apps like InMind 2 VR, YouTube VR , Discovery VR, KingTutVRetc
Augmented Reality	Augmented Reality offers learners an interactive experience that enhances certain aspects of the real world through computer-generated perceptual information.	Most popular application for augmented reality in education is the use of AR apps like UniteAR, 3DBear, Booksplus, ROAR Augmented Reality app, Augindirectly in the classroom. In this case they can help the teacher explain the subject, provide a visual representation of the material and help students test out their knowledge in practice.

Some Tips for Teachers to Create Interesting Digital Content (Next Thought Studios Staff, 2019)

•   Contextualize learners by creating an intellectual need for information and skills

- Design learning content on a trajectory of informal to formal

- Maintain a constant view of the Big Picture

- Design learning content to foster collaboration and conversation

- Take advantage of and test perceptive mass

- Make it easy to interact and play

Government Initiatives toward Digital Learning System

Digital initiatives taken by the government of India is one of the factors fueling for the growth of online education not only in school education only but higher education also. Here is a list of some excellent digital initiatives launched by Government of India for school students and even those seeking UG and PG level education. (Gupta. N, 2020)

Table 3: Most Popular Digital Learning Content Platform Used in India

PLATFORM	AUTHORITY	DETAILS
Shagun	DEPARTMENT OF SCHOOL EDUCATION IN THE GOVERNMENT OF INDIA	An online junction under which all states and union territories (UTS) have launched several e-learning platforms
NATIONAL REPOSITORY OF OPEN EDUCATIONAL RESOURCES	MHRD	E-libraries, e-books, e-courses, chance to participate in events online, and theme based education are available in both Hindi and English.
DIKSHA	MHRD	A unique app that requires students (class 1 to 12) and teachers to scan the QR code available in the book in order to access the prescribed learning material. With more than 80000 e-books solely created to train and enhance the learning of class 12th students,
E-PATHSHALA	NCERT	Through this web-portal, students from class 1st to 12th will be able to access no less than 1886 audios, 2000 videos, 696 e-books (e-pubs) and 504 flip books.

SWAYAM	GOI	Facilities study material for the students of 9th to 12th and graduation post graduation also at one destination. study material in the form of video lectures, reading material, self-assessment tests, online discussions and doubt sessions are available
SWAYAM PRABHA	GOI	A collection of 32 DTH channels which run 24x7 for the students. Top education bodies of the nation such as NPTEL, IITS, UGC, CEC, IGNOU, NCERT and NIOS provide content to INFLIBNET centre which runs these channels.
Virtual labs	MHRD GOI NMEICT	A consortium of 12 IITS which aim to disburser online classes and study resource through virtual labs wherein 700+ virtual experiments are designed and promoted for the aspirants to study and understand
National digital library of India	MHRD NMEICT	Provide content to not just school students but also students pursuing higher education and PhD. Level education.

Barriers of Digital Learning System Faced by Both Teachers and Students

•   Language barrier

•   Infrastructural deficit

•   Fear of changing system and unwillingness to embrace new change

•   Lack of awareness on benefits of online learning

•   Rural pupil could not afford the cost of digital device and internet connectivity

•   Lack of skilled manpower for developing quality online courses.

Conclusion

It's therefore necessary to ensure that all students have access to sufficient resources to maintain their learning. To make digital learning effective we need to choose the easiest platform/way first which is accessible/affordable by all students. Only a teacher can decide what strategy would be effective for students as per their present status. Lastly it can be said that there are so many resources which are available in the internet world but how to organize it and make it an effective digital learning content, it only depends on teacher's expertise and creativity skill. Without teacher's willingness it's difficult to implement any govt. initiative.

REFERENCES

Aggarwal, J.C. (1996), Essential of Educational Technology, Vikas Publishing House, New Delhi.

Bhattacharjee, B., Deb. K., (2016). Role of ICT in 21st Century's Teacher Education. *International Journal of Education and Information Studies. ISSN 2277-3169 Volume 6, Number 1 (2016), pp. 1-6.* Retrieved fromhttps://www.ripublication.com/ijeis16/ijeisv6n1_01.pdf

eLogiclearning, (2016, September 14) 22 types of content you can use in e-Learning. Retrieved from https://elogiclearning.com/22-types-of-content-you-can-use-in-elearning/

Andre. (2018, September 3). What is Digital Learning? [Blog post]. Retrieved from https://www.edapp.com/blog/what-is-digital-learning/

Next Thought Studios Staff (2019, September 16) Six Tips for Creating Great Digital Learning Content (n.d). Retrieved from https://www.nextthought.com/thoughts/2016/09/six-tips-for-creating-great-digital-learning-content

The Hindu (2020, April). Coronavirus | In the time of the pandemic, classes go online and on air .Retrieved from https://www.thehindu.com/news/national/in-the-time-of-the-pandemic-classes-go-online-and-on-air/article31264767.ece

University Grant Commission. (2020, April), UGC Guidelines on Examinations and Academic Calendar for the Universities in View of COVID-19 Pandemic and Subsequent Lockdown. Retrieved from https://www.ugc.ac.in/pdfnews/4276446_UGC-Guidelines-on-Examinations-and-Academic-Calendar.pdf

Types of Digital Learning–Methods & Techniques (n.d). Retrieved from https://leaderonomics.org/en/resources/article/228-types-of-digital-learning

Gupta. N, (April,2020), Government facilitates e-Learning Platforms for students amid COVID-19 outbreak. Retrieved from https://www.jagranjosh.com/articles/list-of-digital-learning-platforms-for-the-students-by-mhrd-and-government-of-india-1584947155-1#:~:text=SHAGUN%20is%20an%20online%20junction, and%20' Gunvatta'%20meaning%20Quality.

The COVID-19 pandemic has changed education forever. This is how. (n.d). Retrieved from https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning/

14

E-Learning-Teaching in Post Covid-19: Impact and Strategies for Higher Education Sector: An Analysis Based on Indian Perspective

Ripa Mazumder

Introduction

WHO declared Covid-19 as a pandemic on March 11, 2020. Covid-19 has affected more than 4.5 million peoples worldwide (WHO, 2020). In, India, the first affected case of Covid-19 was detected on 30th January, 2020 in the state of Kerala and the affected person had a travel history from Wuhan, China (Wikipedia). The first death due to Covid-19 was reported on March, 2020 in India. According to UNESCO report, it had affected more than 90 percent of total world's student population and now reduced to nearly 70 percent. It has significantly disrupted the education sector which is a critical determinant of a country's economic future. In India more than 32 crores of students have been affected by various restrictions and the nationwide lockdown for Covid-19. After observing the pandemic situation WHO also advised to maintain social distancing as the first prevention step. So the education sector including Schools, Colleges

and Universities become closed. Classes suspended and examinations were postponed indefinitely and it is an exceptional situation in the history of education. It has created many opportunities to come out of the rigorous classroom teaching model to a new era of digital model.

The lockdown has compelled many educational institutions to cancel their classes, examinations and internships and to choose the online modes. Initially, the educators and the students were quite confused and did not understand how to cope up with this situation. Thus the pandemic has created many challenges and opportunities for the Higher Educational Institutes to strengthen their technological knowledge and infrastructure (Pravat, 2020). The teachers were given assignment and delivered lectures through live video conferencing, using various Apps like Googlemeet, Facebook, Youtube, Skype etc.

There are also Whatsapp groups for teachers, parents and students for communication and share their difficulties through this e-medium. But the countries like India where not every student is well equipped with high-speed internet and digital gadgets. In India various advanced educational institutions are not also equipped with digital facilities right now to cope up with sudden change from traditional education set up to the online education system.

Objectives of the Study

The present study is focused on the following objectives–

1. To trace the Impact of E-Learning-Teaching in post Covid-19 for Higher Education Sector of India.

2. To identifies various strategies of E-Learning-Teaching in post Covid-19 for Higher Education Sector of India.

Analysis of the Study

Corona virus pandemic has significantly disrupted various sectors in India including Oil and Gas, automobiles, aviation, agriculture, retail etc. Same is with the education sector in India. So, Government of India has taken various initiatives, trends and strategies for e-learning-teaching in post Covid-19 for higher education sector in India.

Initiatives taken by Government of India for Higher Education during COVID-19

Covid-19 pandemic created many challenges in Higher Education sector. The Higher Education Institutions have adopted various strategies to face the crisis during the pandemic. The UGC & MHRD have made several virtual platforms with online depositories, e-book and other online teaching learning educational channels through direct to home TV. Students are using popular social media tools like Whatsapp, Zoom, Telegram, Googlemeet, YouTube Streamline during the lockdown period for online teaching learning system (e- Broucher-https://mhrd.gov.in/ict-initiatives). Some of the digital initiatives of UGC & MHRD for higher education during Covid-19 are pointed below:

E–Gyankosh (http://egyankosh.ac.in/)

E-Gyankosh is a virtual digital repository to store and share the digital learning resources and it is developed by IGNOU. Items in E-Gyankosh are protected by copyright, with all rights reserved by IGNOU, unless otherwise indicated. E-Gyankosh is used for download all courses books of IGNOU. Its main purpose is give study material to students online. Recently IGNOU was made rule that study material books only available online.

Swayam

SWAYAM is an initiative launched by M.H.R.D. [Government of India] under Digital India to give a coordinated stage and free entry to web courses, covering all advanced education, High School and skill sector courses. It was launched on 9th July 2017 by Honorable President of India (Times of India, 2020).

The platform offers free access to everyone and hosts courses from class 9 till post-graduation. It enables professors and faculty of centrally funded institutes like IITs, IIMs, IISERs, etc. to teach students.

Swayam provides Massive Open Online Courses (MOOCs) for 140 universities in India. Swayam Prabha provides high quality educational programmes through 32 DTH channels transmitting educational contents. This initiative provides an educational program

on Television on multiple time zones. The content provider is NPTEL, IITs, UGC, NCERT, etc. same as of SWAYAM online portal.

E-PG Pathshala

E-PG Pathshala is an initiative of MHRD under its National Mission on Education through ICT being executed by the UGC. The content and its quality being the key component of education system, high quality, curriculum-based, interactive e-content in 70 subjects across all discipline of social sciences, arts, fine arts and humanities, natural and mathematical sciences. E-PG Pathshala is for Post Graduate students. They can access this platform for e-books, online study material (Pravat, 2020b).

E-SodhSindhu (http//ess.inblibnet.ac.in/)

E-ShodhSindhu was formed with merger of three consortia, namely UGC-INFONET Digital Library Consortium, NLIST and INDEST-AICTE Consortium in December 2015. e-ShodhSindhu continues to provide current as well as archival access to more than 10,000+ core and peer-reviewed journals (including journals available through NLIST) and a number of bibliographic, citation and factual databases in different disciplines from a large number of publishers and aggregators to its member institutions including centrally-funded technical institutions, universities and colleges that are covered under 12(B) and 2(f) Sections of the UGC Act.

The main objective of the e-ShodhSindu: Consortia for Higher Education E-Resources is to provide access to qualitative electronic resources including full-text, bibliographic, factual and legal databases to academic institutions at a lower rates of subscription.

VIDWAN (https//:Vidwan.inflibnet.ac.in)

VIDWAN has profiles of Scientists or Researchers at national level and other faculty members working at academic Institution and Research and Development organization in India. It provides important information about expert's background, contact address, skills and accomplishments. The database is developed and maintained by Information and Library Network Centre with the financial support from the National Mission on Education through ICT.

It offers research profiles of experts in various subjects from nation's leading institutions. Web enabled interface facilitate search and browsing of profiles of experts on parameters such as name, designation, institution, specialization, state, etc. VIDWAN is committed to excellence and value. Experts can provide a link to text books, articles and other additional material available on their website.

NDLI

The National Digital Library of India (NDLI) is a project under Ministry of Education, The Government of India. The objective is to collect and collate metadata and provide full text index from several national and international digital libraries, as well as other relevant sources. It is a digital repository containing textbooks, articles, videos, audio books, lectures, simulations, fiction and all other kinds of learning media. The NDLI provides free of cost access too many books in the Indian languages and English.

Post COVID-19 Trends & Strategies of Higher Education Sector in India

Indian education system got the opportunity for transformation from traditional system to a new era. The opportunities created by the pandemic COVID-19 will lead towards a better tomorrow.

The following points may consider as the new trends and strategies for higher education system in India:

1. Blended Learning

Covid-19 has accepted adoption of digital technologies to deliver education. It is combination of both face to face and online learning and higher education institutions move towards this mode. It encouraged all teachers and students to become more technology savvy.

2. LMS

A mobile based learning platform that provides a comprehensive technology infrastructure to schools, universities and colleges. It opened a great opportunities for educational institutions to meet the

needs of the current education scenario and students can complete their learning anytime, anywhere.

3. Online Meetings

The Covid-19 pandemic has created a massive rise in online meeting like teleconferencing, webinar, e-conferencing virtual classes' opportunities. The pandemic situation also induced people to learn and use digital technology and resulted in increasing the digital literacy.

4. World Wide Exposure

Covid-19 has given a real opportunity to the teachers and learners to interact with peers from around the world. Learners adapted to an international community.

5. Demand for Open Distance Learning

During the pandemic situation, 1.2 billion students are out of the classroom globally. In this situation most of the students preferred ODL mode as it encourages self-learning providing opportunities to learn from diverse resources and customized learning as per their needs.

Suggestions

1. The way of thinking of our Government, Institutions, Organizations & people must be change for the long term.

2. India government should develop creative strategies to ensure that all learners such as remote and marginalized group must have sustainable access to learning during pandemic situation.

3. Government and Institutions should plan to continue the educational activities maintaining social distancing.

4. Immediate measures should be taken on internship programmes and research projects.

5. Higher Education Institutions should maintain quality benchmark of online learning programmes.

6. At present time, access to technology and internet is an urgent requirement. There is a need to deploy public funds to fix the

internet gap and ensure that students continue to learn digitally. So, state government should take initiative about this issue of digital education.

Conclusion

The pandemic has also significantly disrupted the higher education sector as well, which is a critical determinant of a country's economic future. The COVID-19 pandemic has upended the business as usual for colleges and universities and also suddenly grappling with grave financial challenges. Most of the institution will face the cash flow challenge. The institution will lose various auxiliary revenues. At the same time enrollment ratio in higher education will decrease during this period of economic distress. To survive in these difficult time leadership will need to prepare for numerous possible scenarios, seek creative solutions and stay flexible in the face of contagious change.

The COVID-19 pandemic has transformed the countries old chalk and talk teaching model to one driven technology. Courses are conducted online, examinations are conducted online, and assignments are submitted through email. For countries like India, this is a good opportunity to strengthen the internet connectivity across rural India. Every village and towns in India should be digitally connected for better interaction between the students and teachers. But the experience shows that the sudden shift to online learning without any planning especially in countries like India where the backbone for online learning was not ready and the curriculum was not designed for such a format. Online learning is a special kind of methodology and not all the teachers are good at it or at least not all of them were ready for this sudden transition from face to face learning to online learning. Universities and colleges worldwide are facing a major risk in the area of student recruitment and retention.

So, a multi prolonged strategy is necessary to manage the crisis and build a resilient Indian education system in the long term. Strategies are also required to prepare the higher education sector for the evolving demand supply trends across the globe. Learning management software for teachers and inclusive learning solutions, especially for the most vulnerable and marginalized, need to be developed. This paper therefore, ends by saying that post COVID-19 is an opportunity

to transform the higher education system. Institutes and universities should utilize this opportunity to transform itself. Curriculum design, collaboration, skill development and faculty involvement – all should focus on internationalizing higher education.

REFERENCES

Jena, Pravat Kumar. (2020). Challenges and opportunities created by Covid-19 for ODL: A case study of IGNOU. *International Journal for Innovative Research in Multidisciplinary Field,* volume 6, Issue-5, 217-222.

Jena, Pravat Kumar. (2020b). Impact of Pandemic COVID-19 on Education in India. Purakala, 31(46):142-149.

MHRD'S SWAYAM Progamme aims to make study material available to all- Times of India. The Times of India, Retrieved on 01/04/2020.

UNESCO. (2020). COVID-19 Educational Disruption and Response. Retrieved on June 3, 2020 from http://en.unesco.org/covid-19/educationresponse Wikipedia, Education in India, Retrieved on May 24, 2020 from https://en.wikipedia.org/wiki/Education_in_India

WHO. (2020). WHO corona virus Diseases (covid-19) Dashboard. Retrieved on May 20, 2020 from http://covid-19.who.int/ E–broucher – https://mhrd.qov.in/ict-initiatives.

http://egyankosh.ac.in/

http://swayam.gov.in/

http://epathshala.nic.in

https://ess.inflibnet.ac.in/

https://vidwan.inflibnet.ac.in

http://ndl.iitkgp.ac.in/

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Special Education for Special Child: A Real Challenge in Today's Pandemic Time

Mali Paul

Introduction

Special education is a new approach towards educating the children with disability and learning difficulties with that of normal ones within the same roof. It brings all students together in one classroom and community, regardless of their strengths or weakness in any area and seeks to maximize the potential of all students. Special education means different and diverse students learning side by side in the same classroom. People with disabilities need much more support than others in the face of a pandemic. They may not be eating properly and may experience higher stress because they are unable to understand what is happening all around them. People with disabilities are a diverse group, experiencing different hardships in accessing the information on prevention and risk of infection. People with visual impairment and blindness depend upon touch for most of their daily activities. They need to hold the hand of an escort to move around; they cannot read the messages that the rest of the people can see;

they cannot practice social distancing unless there are innovative approaches like keeping a safe distance using a white cane. For the hearing impaired, especially those who are not literate, they cannot hear the message or read it. Since many depend on lip-reading, they are compromised when the person giving a message is wearing a mask.

To include multiple colors of disability such as Autism Spectrum Disorder, Down Syndrome, Cerebral Palsy, Learning Disability, etc. and their challenges to work as a superpower in this outbreak various educational services including vocational, recreational and academic into online/virtual through video conferencing mediums zoom, got to training, got to meet, Skype, etc. are coming in help by understanding the convenient mode of learning and applied pedagogy across India and overseas. For many children with Learning Disabilities, digital learning has emerged as an indispensable resource for education. The closure of schools is not only impacting students, teachers, and parents, it will also have a far-reaching economic and societal consequence. As per Ministry of Human Resource Development, Government of India, 11.59 crore children of the country are enrolled in the mid-day meal scheme. This indicates an additional burden on the parents of the children to provide them with food. As these parents are from an economically weak background and most of them may be daily wagers, it will create a very adverse scenario, with parents struggling to provide food for the family. It is indeed a challenge for the educational institutes and the teachers on how to reach out to students and ensure continuity of education through remote learning. There are millions of students from various economic segments of society and most of them do not have access to computers or the internet. Some of them do not even have access to phones. In the given condition, where isolation is the only remedy to not get affected by the virus, ensuring the education of children has become a real challenge.

Background of the Study

Approximately 15% of the world's population, representing more than 1 billion people, lives with disabilities, and 2% to 4% find day-to-day life challenging without assistance. Disability is more prevalent

in low- and middle-income countries than in high-income countries. Disability, gender, nationality, ethnicity, poverty and many other factors affect internet access. An online-based, high-tech approach is not always ideal for creating an inclusive learning environment. Around the globe, the lives of at least 1.5 billion students and their families have been significantly affected by the school closures caused by the COVID-19 outbreak. In the global pandemic outbreak of COVID-19, people are worried and schools are shut down in this period which has a huge impact on the education of not only regular children but also, on the education of children with special needs. It is becoming difficult for children with special needs; they are affected because their memory and retention power is not similar to others.

Statement of the Problem

In the global pandemic outbreak of COVID-19, people are worried and schools are shut down in this period which has a huge impact on the education of not only regular children but also, on the education of children with special needs. During the pandemic period, home isolation, lack of socialization, changes in daily routines, and lack of services negatively affected the emotional states of children with disabilities, contributing to parental overload and stress. The statement of the problem of this study is to draw the attention regarding the status of special education of special child in today's pandemic time.

Review of Related Literature

1. A research entitled The impact of the COVID-19 pandemic on the education ofchildren with disabilities on 2020 has investigated factors that influence the level of inclusion in education for children with disabilities before and during the COVID-19 pandemic.

2. Other study An Inclusive Response to Covid-19: Education for Children with Disabilitieson May, 2020 has found that some of the ways we can move the Post COVID-19 agenda forward to make education truly disability inclusive.

3. A research entitled Emerging from Covid-19 Pandemic: A Social Inclusion Approach to Educating Learners with Disabilities on Oct, 2020 has explored solutions to promoting inclusive education for children with disabilities during & post pandemic.

4. A research entitled Covid-19 and its impact on (Inclusive) Education on September, 2020 has found that how Covid-19 has impacted inclusive education.

Objectives

The objectives of the study are to

• Sketch the status of special education of special child in today's pandemic time.

• Find out remedies so that child with special need can be benefited.

Effects of COVID-19: Challenges

Circumstances surrounding the spread of COVID-19, associated with home isolation and social distancing, have affected the lives of children with disabilities and their parents. Among the main difficulties are changes in daily routines, including prohibition of regular activities, lack of socialization, and changes in learning formats, including a lack of services, which was also emphasized as having affected their emotional state.The additional responsibilities they have in caring for their children during the pandemic have been reported to make parents feel overwhelmed. Lack of parental competence to support their children with learning, due to their own low levels of education, was highlighted as a challenge during the COVID-19 period as well. Furthermore, it was noted that parents are often afraid their children will regress during this period, which has affected their emotional states. Lack of services and isolation at home have also affected parental stress and parental practices, and led to the deterioration of marital relationships, which have also been observed to negatively impact children.

· *Cost Effective*

More time and resources are required for students with disabilities to actively participate in learning. This includes equipment, internet access and specially designed materials and support. This makes learning more costly for students and their families.

· *Lose Access to School Meals and Play with Friends*

Students with disabilities are negatively affected by the classroom shutdown in additional ways. They lose access to school meals and

to play with their friends, which are equally important for development and learning.

· *Lack of Digital Skills*

Another barrier is that many teachers lack ICT skills and knowledge. They are unprepared to teach online and cannot ensure student engagement, specifically for students with disabilities. Currently, there is no available data on special-education teachers' digital skills in developing or least-developed countries.

- Change in daily routines.

- Prohibition of regular (additional) activities.

- Lack of socialization.

- Lack of emotional support.

- Changes in learning formats.

- Lack of competence to support children with lessons, low level of education stressed out, overloaded around children.

- Fear the lack of services will lead to regression in children with disabilities.

- Children's regression affecting parents' emotional state.

- Lack of services and isolation at home impact parental stress and practices.

- Deterioration of marital relationships with an influence on children.

Possibilities to Improve Participaton (During and After COVID-19)

To increase the participation and achieve inclusion of students with disabilities in online and traditional learning environments, the participants suggested that curricula and working methodologies need to be adjusted according to individual student needs, teaching units need to be simplified; use of technology and illustrative image use throughout learning should be increased. Additionally, it was noted that providing services for children with disabilities within schools—including psychologists, speech therapists, pedagogues, and support teachers—is necessary to achieve inclusion and implementation of

individualized educational plans. Further, to achieve inclusion and equal treatment of all students, it would be necessary for children with disabilities to participate in the regular teaching process, increase the capacity of teachers to work with children with disabilities, and increase parental involvement and support. Learning processes and outcomes of students with disabilities can be improved during a crisis such as COVID-19 by:

· *Assessing Accommodations*

Educators, parents and individual students assess each student's situation and discuss adjustments needed for remote learning. Some examples include using alternatives to print, such as audio or other formats in instruction, as well as pictures, flexible scheduling and deadlines, and assistive technology.

· *Modifying Curricula and Instructions*

Learning in a remote setting may differ from mainstream, classroom-based environments. This includes expectations for students and course methodology. Curricula must often be adjusted. For example, homework can be simplified, allowing students to dictate rather than type, and audiomaterials can be provided for reading assignments.

· *Utilizing Universal Design for Learning (UDL)*

UDL aims to help teachers reach a wide variety of students, focusing on how students learn and demonstrate knowledge.

· *Implementing Project-based Learning*

Studies show that students with disabilities learn more by using research and analysis to complete a project. Project-based learning also improves self-esteem and promotes positive engagement. Both special and general-education teachers are vital for this type of learning. They need to design and introduce assignments and make sure that everyone understands how to complete them.

· *Ensuring Individualized Education Programme (IEP)*

IEP requires that educators, students, parents and families work together to decide on the effectiveness of a remote-learning setting and how to best proceed with each student's education.

· *Supporting Teachers*

As schools transition to online learning during the COVID-19 crisis, it is important to provide teachers with guidance and relevant, evidence-based resources on how to deliver lessons in remote and online settings in special education.

· *Providing Family and Caregiver Support*

Systemic approaches are necessary to help parents and caregivers with both their domestic responsibilities and students' education.

· *Collective Responsibility–More Work Needs to be Done*

The above-mentioned suggestions are just the tip of the iceberg. It is the collective responsibility of governments, teachers, parents and caregivers to help reduce educational inequality for students with disabilities, especially during a time of crisis like the COVID-19 virus. In order to ensure that systematic, long-term solutions are provided, all factors that affect access to education, including policy, legislation, financing, human resources and data, must be explored.

Conclusion

Special education stands on the following main pillars: no discrimination, collaboration, involvement, proper physical infrastructure, flexibility of curriculum and pedagogy, trained teacher, support system, financial assistance and broad outlook. Inclusive approach to education need to be developed strategically at all levels in such a way so that it can help to eradicate all sorts of discriminatory practices and at the same time allow flexibility in curriculum as per local need and context. Special children need special professional care in terms of educational and other emotional needs as well as counseling and proper monitoring. However, in the given condition, the onus falls on the parents to deal with the situation. If proper systematic care is not taken, along with their education, these children might develop other complications. Most of the parents are not yet prepared to deal with the upheaval. Attending to the educational needs of the children at home and dealing with their emotional needs is a daunting task. Parents with limited education find it difficult to facilitate the learning of their child at home. Parents who are not adept with

online learning also find it difficult to help their children. The abovementioned suggestions are just the tip of the iceberg. It is the collective responsibility of governments, teachers, parents and caregivers to help reduce educational inequality for students with disabilities, especially during a time of crisis like the COVID-19 virus. In order to ensure that systematic, long-term solutions are provided, all factors that affect access to education, including policy, legislation, financing, human resources and data, must be explored.

REFERENCES

Alur, Mithu. & Timmous, Viame. (2005). Inclusive Education Across Cultures, New Delhi, Sage Publication.

Baglieri, S. & Shapiro, A. (2012). Disability Studies and the Inclusive Classroom. New York, Ny: Routledge.

Das, S. & Kattumuri, R. (2013). Inclusive Education: A contextual Working Model. New Delhi.

Deabston, K. (1995). Seen and Not Heard: Girls Education Barriers, Nairobi.

Polloway, A.E. & Smith, E.C.T. (2008). Teaching studies with Special Needs in Inclusive settings. U.S.A, Pearson Education.

Jorgensen, C., Schuh, M. & Nisbet, J. (2005). The inclusion facilitator's guide. Baltiniore: Paul H. Brookes Publishing Co.

Mangal, S.K. (2009). Exceptional Children. New Delhi, Ashok K Ghosh PHI Learniong Pvt. Ltd.

Ministry of Education and Science. (2020a). Statistical Notes. Data on pre-university education. Education Information Management System. Kosovo.

Ministry of Education and Science. (2020b, April 29). MES launches the "Inclusive Education" platform for children with special needs.

United Nations. (2020). COVID-19 Outbreak and Persons with Disabilities.

United Nations Children's Fund (2020b). COVID-19 response: considerations forchildren and adults with disabilities.

United Nations Children's Fund. (2020c). Protecting children and adolescents with disabilities from the pandemic COVID-19 and children with disabilities in Europe and Central Asia.

World Health Organization. (2020). Disability considerations during the COVID-19 outbreak.

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Journey from Traditional to Digital Education

Sukanya Roychoudhury

Introduction

The COVID-19 pandemic has forced us to change many things from our lifestyle. The global crisis brought on by the corona virus has pushed everyone into a digital world making a paradigm shift from face to face education to online education. It resulted in a shift from Brick to Click Method of teaching and learning, teacher dependency to parent dependency on the part of the students and also the role of family became more important and relevant than the role of the school in the education of the children.

Traditional Education

The teaching process which is based on the paper-based assignments and exams is known as the traditional method of education. Traditional education emphasizes direct instruction and lectures, seatwork and students learn through listening and observation.

The advantages of traditional education are–

- Two-way communication
- Increased discipline and punctuality
- Increase morality
- Giving them lots of examples to learn from students
- Provide encouragement and motivation
- It helps in creativity and initiative
- Create a sound competition among students
- It helps in reducing fear, the nervousness of a student

The disadvantages of traditional education are–

- Required fixed time and the physical classroom.
- Not good for jobholders.

Online/Digital Education

Online education in India has come a long way with the development of technology. India has been one of the nations that has developed at an exponential rate in terms of technology. With the population of more than 1.3 billion, the availability of high-speed internet and smart phones, India has the most number of technologically driven persons. The rise of the Internet has changed the way of life in India. By seeing the potential and immense popularity of digital technology in India, our Prime Minister has envisioned transforming our nation and creating opportunities for all citizens by harnessing digital technology through Digital India Initiatives.

Differences between Traditional and Digital Education

- In traditional education, teachers and students meet synchronously. Whereas, online education may be synchronous or asynchronous.
- In traditional education, teacher may rely on models, other manipulatives and lab equipment. In online education, access to models, other manipulatives and lab materials are largely limited to virtual reproductions.
- Students can immediately seek clarification of a concept or instructions that are unclear in traditional education. Whereas,

immediate clarification may be unavailable and student may therefore reinforce incorrect habits in digital education.

• In traditional education, disruptive behavior from one student can affect the whole class. In online education, disruptive behavior from one student need not affect the whole class.

• The personality of the teacher has a large impact on the class dynamic in traditional education. In online education, the personality of the teacher may have less of an impact on the class dynamic.

• Struggling learners may be overlooked when the majority is ready to move on in traditional education. While online education, students are more likely to be able to advance at their own pace.

• Traditional education is extremely costly while online education is affordable.

• Traditional education fosters competition while online education fosters personal growth and development.

• Online education is more flexible than traditional education.

Digital Initiatives during Lockdown

Even though digital education came into being long time back but it gained impetus only after the lockdown. Digital learning in India had an appreciable upsurge in the lockdown period. As the situation has forced the schools, colleges and universities to shut down and the students are at home; most institutions had come up with the idea of online classes for students to start their respective academic years instead of wasting time due to the delay in reopening of colleges and universities. 25% uptick in e-learning have been seen during this period. Research suggests that India's online education market is set to reach $1.96 billion with around 9.6 million users by 2021. As per Mary Chayko, a sociologist, while social isolation and physical distancing during the global COVID-19 pandemic is keeping us physically separated from friends and loved ones, technology is keeping us more connected than ever before.

There are different platforms used for online education specially during this period of crisis. Swayamprabha e-classes platform

basically telecast educational programmes 24x7 for the students to make their stay at home constructive during the nationwide lockdown. Everyday, students can access fresh content of 4 hours on its DTH channels which will further be repeated 5 more times a day, allowing students to choose time as per their convenience. This initiative has been launched in lieu of the classes being missed by the students due to Covid-19 outbreak. Through an interactive medium students can stay connected with their studies. This initiative of the government address concerns of the economically disadvantaged and those living in remote parts of India and do not have internet facilities. SWAYAM (study webs of active learning for young aspiring minds), an online learning platform attracted at least 50,000 new subscribers since the announcement of lockdown period in India. The minister said the number of users to these platforms has tripled in the one week. The growth has been seen after provision of free access to the best learning resources at SWAYAM. Earlier, the courses of SWAYAM were time bound for which registration was needed in advance. To use the lockdown period productively, students, parents and teachers used these platforms free of cost. IGNOU's Gyan Vani (105.6 FM Radio) and Gyan Darshan, which is a 24-hour educational channel offered the best of educational programmes for pre-school, primary, secondary and higher secondary students, college/university students. Most of the colleges, universities and school engaged in online classes through platforms like Skype, Zoom, Google Classroom, Google Hangout, Piazza for teachers to upload lectures and classnotes through Youtube, Whatsapp, sharing links of digital learning resources like SWAYAM, NPTEL providing access to online journals. About 50% to 65% of students in higher educational institutions like central universities, IITs, NITs, IISERs are participating in some form of e-learning. Education sector used various video calling apps for online classes. With such high demand, Zoom started popping up a lot. Other video calling apps used for online classes, webinars, conferences. Other apps are Google Meet, WebEx Meet , Microsoft Teams, Skype and Slack. Meet's daily usage has grown by 30 times, according to Google. Meet has added roughly 3 million new users everyday said a company user. Other learning platforms like Diksha, e-pathasala, NROER (National Repository of Open Educational Resources), NIOS (National Institute of Open Schooling) and other IT initiatives e-yantra (robotics

education), FOSSEE (open source software for education), virtual labs and spoken learning programmes have also been utilized during this lockdown period.

Skills Required for Online Education

Personal Skills: In the online environment, and particularly as a distance education student, it is beneficial to be an active learner who takes responsibility for their own learning, motivation and self-discipline.

*Literacy Skills***:** Studying online is dependent on strong reading and writing skills. Much subject content will be delivered by readings, and a lot of communication will be in written form. Help should also be taken to develop these skills.

Study Skills: Studying online requires many of the same skills as traditional face to face study. Things like time management, motivation, being clear of expectations and exam preparation skill remain important aspects of study.

General Computer Skills: Basic level of proficiency in computer use is needed to successfully study online. Necessary skills include word processing, file management, saving and printing.

Internet Skills: Being able to go to specific URLs, book marking, saving and printing web pages will be at important skills. More advanced skills such as web searching and website evaluation would also benefit most students.

Collaboration: Preparation to explore key concepts and specialized knowledge through online forum discussions with other students and the lectures.

These skills are required to induce interest and creativity in the learners and fulfill the desired knowledge outcomes.

Advantages

Use of different applications for online teaching-learning, conducting webinars and conferences have benefitted the students as well as the teachers. A huge number of student participation have been noticed in online learning as it is flexible in nature. This also helped many

teachers to upgrade their skill of digital literacy. Few more benefits of online education are that it can be accessed 24 hours a day everyday. Students are exposed to knowledge shared by instructors around the globe which be learned in books. It offers a lot of savings because there are no additional costs for transportation and accommodation. Students must be self-motivated which results in self-development.

Disadvantages

Major challenge is disparity in access-from electricity or internet connections to computers/smartphones. Secondly, technology literacy for both students and teachers. Thirdly, protecting students from misuse of technology. Fourthly, sustaining motivation in order to be connected with technological media. Fifthly, difficulty in evaluation and also sitting in front of laptops/smartphones can lead to several health issues.

Conclusion

In traditional education the physical presence in the classroom along with many students is enjoyable, thus this type of atmosphere develops more interaction in the class between teachers and students. Students get to know each other and through that they can expand their knowledge. After this crisis, moving back to the physical class is preferable as online classes can lead to severe eye problems resulting in long term health issues. Students of primary class will be adversely affected by this as they are too much involved in smart phones now-a-days. After completing online classes they even have to use a smart-phone just to get some entertainment like playing games or watching shows which will increase their duration of using mobile phones. Digital education is necessary but it can be an option, not the solution or the only option in future. A proper balance has to be maintained between the traditional and digital education otherwise only depending upon digital education in future will lead to more unemployment in the field of teaching and learning as institutions would recruit only few teachers. But as of now in this period of crisis, it is apparent that technological evaluation systems, touch screen paper corrections, digital books and smart boards have become the new reality. Government will have to think very seriously about allocating more money in the budget for technical education in schools for rural

students. Teachers need to overcome this challenge and be more accustomed with using technology and also instill motivation and interest in the students via digital education. They should also communicate well with the students. The students should also possess the skills needed for successful online education to bring the desired learning outcomes.

Thus, the entire world have seen what threat a virus can pose but we human beings are such adaptive creatures that we can adapt any new situation, adjust to it, educate and modify ourselves to make this world a better place to live in.

REFERENCES

Choudhary Richa. (April,2020). Covid-19 Pandemic: Impact and strategies for education sector in India, ET Government news.

Harwell Drew,. ((April,2020),). Everybody seems to be using Zoom, Washington post.

Shenoy V, Vijay N and Mahendher S. (2020). Covid-19 Lockdown Technology Adaption, Teaching, Learning, Students Engagement & Faculty Experience Mukt Shabd Journal.

https://telanganatoday.com/paradigm-shift-in-online-education-in-lockdown-times

https://www.hindustantimes.com/cities/e-learning-the-way-ahead-for-all-students-during-lockdown-say-ht-chandigarh-readers/story-biLEQBiER8gGhqsSXwh9mJ.html

https://www.indiatvnews.com/technology/apps-best-video-calling-meeting-apps-for-android-ios-pc-zoom-google-meet-more-608549

https://elearningindustry.com/5-advantages-of-online-learning-education-without-leaving-home

https://online.illinois.edu/articles/online-learning/item/2017/06/05/5-benefits-of-studying-online-(vs.-face-to-face-classroom)

https://elearningindustry.com/traditional-learning-vs-online-learning

https://www.easy-lms.com/knowledge-center/lms-knowledge-center/online-learning-vs-traditional-learning/item12530

https://fedena.com/blog/2019/10/smart-education-vs-traditional-education-system-which-is-better.html

17

Blended Learning as an Approach in Post Pandemic Era in India

Arnab Sarkar and Priyanka Biswas

Introduction

The huge transmission rate due to COVID-19 forced Indian Government to announce complete closure of education sectors. When it comes to higher education, the policymakers and educationists are trying to bridge the gap between students and curriculum transaction by moving to online education not only for teaching and learning but also for students' assessment. A study (Laird and Kuh, 2005) confirms that university students' response regarding information technology implies that majority of them use it. As such, going online is not a big challenge for many universities in the world. However, this is the high time to rethink about our secondary and higher secondary education too as according to UNICEF, school closure has affected 275 million school children in India. To reshape our current education system Blended learning that is a combination between face-to-face and online learning aided by ICT platforms (Aguilar 2012) must come for future generation learners to avoid this kind of uncertainty in education.

Objectives

The intension of the study is to reveal the challenges faced by the teachers and students to continue teaching learning process during this pandemic and also to explore how blended learning will act as a way forward in post pandemic era.

Methodology

The present study is qualitative as well as review based work. The supporting informationis taken from the books, research articles, reports from UNICEF and other related documents.

Challenges Faced by Teachers and Students in Pandemic Period

Online teaching has created a revolution in Indian higher education as most of the teachers at higher institutions have adapted technology successfully and become digital skilled to arrange virtual classes. Students' percentage of attendance is increasing in urban area. Many higher institutions have already been organized many webinars successfully. Whereas the school teachers and students, especially in rural area are facing multiple challenges during lockdown.

TEACHERS	STUDENTS
Loosing passion about their job asface-to-face interaction with the students kept them updated.	Facing uncertainty about examination.
Worrying about finishing whole syllabus in time.	Stressed regarding future admission.
	Absence of motivation.
Suffering from insufficient knowledge and skill to use e-learning platforms.	Missing assistance and cooperation by the friends and peers.
Feeling helpless as school does not provide technical support for online teaching learning.	Losing interest in learning and other usual enjoyable activities.
	Loosing self-confidence.
Experiencing difficulties as students are not able to access the e-learning system or do not have proper devices and internet connection.	Feeling disconnected from others.
	Suffering from no electricity or poor internet connection or costly broadband and data plans even after arranging online classes by some institutions.
Suffering from stress, anxiety and even burnout.	Experiencing difficulty in concentrating in online learning as face to face interaction becomes habit.

Table 1. Numerous difficulties faced by teachers and students

Blended Learning System as a Way to Satisfy Needs

The term 'blended learning' is not a new one. In 2003, the American Society for Training and Development identified blended learning as one of the top ten trends to emerge in the knowledge delivery industry. Cartner (2009) summarizing all of the definitions of blended learning describes it as a setting in teaching and learning circumstances where there is an effective merger of varied delivery platforms, models of teaching and learning approaches. Blended learning is thus a result of applying a strategic and systematic approach to the application of technology, combined with the best features of face to face interaction between teachers and students. This is actually blending the best of two learning environments. According to Sharma (2010) there are at least three requirements; more than one delivery mode, instructor-based training methods that are technologically enabled and traditional teaching approaches which are interactive, rich in content and facilitated by a teacher.

Planning for integrating face to face and online teaching considering the time span of the course, class size, network accessibility, school infrastructure to support technology.

Considering the previous blended learning experience of both the teachers and the students, improve the planning and designing for the next one.

Elements of a course such as content, resources, activities, assessment are designed and developed in order to ensure quality learning.

PLANNING

IMPROVING

DESIGNING

REVIEWING

IMPLIMENTING

On the basis of feedback, pedagogies, resources and delivery strategies, it should be reviewed and evaluated to check the effectiveness of blended learning design.

Implementing the blended learning design

Figure 1. Blended learning design process

Why Blended Learning?

• *Meets the demand of all*

Online teaching is dividing the students into two sections (privileged and unprivileged). A section of the society provides all the facilities to their children to continue teaching learning from home, the other section struggles hard to provide. Whereas some students prefer virtual classes, others want back the traditional one. If Government would take positive steps to implement blended learning in near future it would satisfy all by offering the blended facilities that is shown in Table 2. So, one can enjoy both the environments.

Areas	Traditional/face-to-face learning and teaching	Virtual/online teaching learning
Learning & Teaching	Classroom Lecture, Laboratory, Seminar/Workshop	Recorded Lecture, Webcast, Webinar, Virtual classroom by using different online platform
Resources	Textbook, Workbook, Reference book, Lecture Notes, Academic Calendar, Dictionary, Encyclopaedia,Library	E-book, Web link, Online self-paced activity, Online Calendar, Online study guide, Power Point Presentation, E-library
Teacher-student communication	Face to face consultation, Formal letter, Notice	Virtual consultation, Online chat, Email, Discussion forum
Individual activity	Reading and writing questions and answers	Online quiz, E-portfolio, Writing assignments using Wikipedia, blogs etc.
Group activity	Discussion, Debate, Quiz, Role Play, Project work, Any type of group work.	Discussion and debate using virtual classroom or discussion forum, Project work using Wikipedia or online material.
Assessment	Exam, Submission of projects and assignments, Observed performance, Face to face oral/ viva voice/ interview.	Submission of assessments or project works through Email, Online test, Viva voice/ interview through online platform.

Table 2. Blended environment in blended learning

• *Blended learning in relation with Bloom's Taxonomy*

Bloom's taxonomy was introduced to provide all the teachers a common design of teaching learning activities and assessment process has been recently revised to suit a blended learning environment (Churches, 2008). This revision suggests blended learning tasks regarding the particular objectives.

Level of learning	Types of blended learning activities
Creating (Designing, constructing, planning, producing, inventing)	Programming, filming, animating, video/blogging, mixing/re-mixing, web publishing, webcasting, directing or producing – used to create a film, presentation, story, program, projects, media product, graphic art, advertisement, model.
Evaluating (Checking, hypothesizing, critiquing, experimenting, judging, testing)	Debate or panel (using webcasting, web conferencing, online chat or discussion), investigating (online tools) and reporting (blog, wiki, presentation), persuasive speech (webcast, web document, mind mappresentation mode), commenting/moderating/reviewing/posting (discussion forums, blogs, wiki, chat room, twitter) as well as collaborating and networking.
Analysing (Comparing, organizing, deconstructing, interrogating, structuring)	Surveying/polling, using databases, relationship mind maps, online SWOT analysis, reporting (online charts, graphing, presentation or web publishing), mashing, meta-tagging.
Applying (Implementing, carrying out, using, executing, editing)	Simulation games or tasks, editing or developing shared documents (wiki, video and sound tools), interviews (e.g., making podcast), presentation or demonstration tasks (using web conferencing or online presentation tools), illustration (using the online graphic, creative tools).
Understanding (Interpreting, summarising, paraphrasing, classifying, explaining, comparing)	Building mind maps, blog journaling, wiki (simple page construction), categorizing and tagging, advanced internet (Boolean) searches, tagging with comments or annotations, discussion forums, show and tell (with audio, video webcasting).
Remembering (Recognising, listing, describing, identifying, retrieving, naming, locating)	Simple mind maps, flashcards, online quizzes, primary internet searches (fact-finding, defining), social bookmarking, Question& Answer discussion forums, chat presentations.

Table 3. Types of blended learning activities regarding Revised Bloom's Taxonomy table of higher order of thinking level (Bath & Bourke, 2010)

• *Motivation*

Enhancing student's motivation in teaching learning process is a challenge for teachers now. Students must enjoy learning. Using blended learning model the teachers can make learning happy and exciting in various ways. Besides using the textbooks, chalkboard, lecture method and question answer session they can combine it by audio & video lecture, e-book, online quiz and discussion forums. It can also gracefully support and enhance the role of the teachers.

- ***Continuity in education***

  Several scientists including Anthony Fauci, the director of US National Institute of Allergy and Infectious Diseases, have said the new type of Coronavirus may keep coming back every year. By adopting blended learning education sector will not be harmed even in this kind of pandemic or lockdown in a later time as teachers and students would become experienced in online mode of knowledge transaction. Thus, blended learning ensures no disruption in imparting education any more.

  There are six reasons behind choosing blended learning system: (1) pedagogical richness, (2) access to knowledge, (3) social interaction, (4) personal agency, (5) cost effectiveness, and (6) ease of revision. But among these, people chose blended learning mainly for three reasons such as (1) improved pedagogy as it offers active learning strategies, peer-to-peer learning strategies and learner centred strategies, (2) increases access/flexibility as it balances between flexible learning options and the face to face interactive experience and (3) increased cost effectiveness as it provides an opportunity for reaching a large in a short period of time with consistent, semi-personal content delivery (Graham, 2004).

Impact of Blended Learning on Teachers & Learners

- It provides a huge number of learning resources that can enrich the skill and competence level of both the teachers and students.

- It increases confidence.

- It enhances the scope of collaborative and cooperative learning which improves performance.

- Immediate feedback of assessment can be given to the learners.

- It rejects the time bound for teacher student interaction.

- Teachers act as facilitators, ready to offer help when needed.

Suggestions to Make Blended Learning Successful

Some points that need to be taken into consideration when adopting blended learning are institutions need to have well equipped ICT

Infrastructureas well as hardware and software support system to effectively continue teaching learning in online mode; teachers as well as students need proper devices and should have access to application software and online learning platforms; teachers also need to be trained to offer lessons in blending model as researches have shown limitations in their use of technology; lastly but primarily Government should take initiatives accordingly and support to reshape education for its betterment**.**

Conclusion

Technological expansion is on its peak point now and is also adopted throughout the whole world. Today's children, the digital natives or digital generation are exposed to technological gadgets like mobile phones and tablets from a very early age and tend to share a strong bonding with ICT and became digitally addicted (Wahab Ali, 2019). The majority of the students have mobile phones and access to internet and they use it for texting, using social media platform apart from talking. A high degree of acceptance towards ICT has already been seen. So, adding online media to traditional learning opens up new opportunities in education. However, moving towards online mode in blended learning may affect those students who are suffering from internet connectivity issue, poor economic condition, lack of infrastructure in schools etc. Government should take initiatives to meet requirements by proper planning and try to build blended learning system to avoid this kind of difficulties in education sector in post pandemic era. Transitioning to online education fully at a large scale in India is a very difficult task but blended leaning can be implemented which will ultimately pave the way for fully online mode of education in future if needed.

REFERENCES

Aguilar, J.A.M. (2012). Blended learning and the language teacher: a literature review. Colombian Applied Linguistics Journal, 14 (2), 163–180, ISSN 0123-4641

Ali, W. (2019). The Efficacy of Evolving Technology in Conceptualizing Pedagogy. Higher Education Studies, 9 (2), ISSN 1925-4741 E-ISSN 1925-475X

Bath, D., & Bourke, J. (2010). Getting Started With Blended Learning. Griffith Institute for Higher Education, ISBN 978-1-921760-24-2

Cahapay, M.B. (2020). Rethinking Education in the New Normal Post-COVID-19 Era: A Curriculum Studies Perspective. Aquademia, 4(1), ISSN 2542-4874 (Online). Retrieved from https://doi.org/10.29333/aquademia/8315

Cartner, H. (2009). Blended learning and the academic word lists. New Zealand Studies in Applied Linguistics, 15 (2), 30–40.

Gao, F.L., & Hutagalung, F. (2020). The trends of blended learning in South East Asia. Education and Information Technologies, 25, 659–663. Retrieved from https://doi.org/10.1007/s10639-020-10140-4

Graham, C.R. (2004). Blended Learning Systems: Definition, Current trends and future directions. Handbook of blended learning: Global Perspectives, local designs. San Francisco, CA: Pfeiffer Publishing.

Laird, T.F.N., & Kuh, G. D. (2005). Student Experiences with Information Technology and Their Relationship to Other Aspects of Student Engagement. Research in Higher Education, 46 (2), 211-233

Sari, I.F., Rahayu, A., Apriliandari, D. I., & Sulisworo, D.(2018). Blended Learning: Improving Student's Motivation in English Teaching Learning Process. International Journal of Languages' Education and Teaching, 6(1), 163-170. doi:10.18298/ijlet.2434

Sharma, P. (2010). Blended learning. ELT Journal, 64(4), 456–458. Retrieved from https://doi.org/10.1093/elt/ccq043

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Challenges and Opportunities from Face-to-Face Education to E-Platform during Covid-19 Pandemic

Wasim Mallick

Introduction

The word 'pandemic' is derived from the Greek word 'pan demos' wherein 'pan' means 'all' and 'demos' means 'people or population'. A pandemic is an epidemic which crosses international boundaries and affects all of the people. Other term used simultaneously is 'epidemic'. An epidemic 'epi' means 'upon' as explained by the WHO, is the regional outbreak of an illness that spreads unexpectedly. The Covid-19 disease was initially thought of as viral infection and first time on 31 December, 2019 World Health Organisation's China office heard the reports of an unknown virus (hence the name novel corona virus) behind large number of Pneumonia cases, in Wuhan city of Eastern China. While it is still unclear and studies are going on to find the exact source of Covid-19. Zhou, Yang, Wang et al., 2020 from the Wuhan Institute for Virology released a detailed paper showing that the new corona viruses' genetic makeup is 96 per cent identical to that of a corona virus found in bats. This disease which started as an epidemic mainly limited to China was declared as a pandemic on

11th March 2020 by the WHO. (Kazmi, Hasan, Talib, & Saxena, April 15, 2020)

First case was reported on 30 January in Kerala followed by 3 more cases by 03 February. Seeing worsening situation, Indian Prime Minister Narendra Modi asked for Janta Curfew to be observed on 22 March from 7am to 9 pm. On 24 March 2020, Prime Minister announced a nationwide lockdown in order to control the pandemic and contain the infection from spreading further. (The Telegraph, 28th March 2020) This lockdown has extended up to July 31, 2020 and during this period all the educational institutions remained in face-to-face mode, but learning can never be stopped. So the digital platform has occupied the place.

In this crisis of lockdown and Covid-19 pandemic this study wanted to know whether transitioning from face-to-face to digital platform may be challenging or also new vision of paradigm shift of teaching learning process in India.

Objective of this Study

1. To know about the transition of teaching learning situation from Face-to-Face to Digital Platform during Pandemic.

2. To understand the present situation of different E-Platform and their prospect in India.

3. To know about the challenges faced by teachers, students and all the stakeholders due to shift of teaching learning process from Face-to-Face to Digital Platform during Pandemic.

Methodology

This is a qualitative study in nature. A systematic review of different related literatures, articles, online surveys and information were qualitatively analysed to explore the findings.

Transition from Face-to Face to Digital Platform

The growth of technology has brought tremendous change in the almost every sphere of life. Technology has also impacted the process of education. The face-to-face education has experienced a remarkable change in the last 10 years. Although face-to-face education is still

considered the norm, but acceptance of online courses is increasing in the field of management and engineering. Some of the reasons for the exponential growth of online education is that it is instant, online, anywhere accessible, self-driven and on the go. (Aman Jindal & Dr. BPS Chahal, 2018)

While countries are at different points in their COVID-19 infection rates, worldwide there are currently more than 1.2 billion children in 186 countries affected by school closures due to the pandemic. The UNESCO estimates that about 32 crores students are affected in India, including those in schools and colleges. (UNESCO).

So in this situation there must be an alternative way of teaching learning process or technique and the gap is going to replace by the e-learning or digital platform. The infrastructure for online education in India–connectivity, platforms, and content, has been growing steadily since the 1990s. However, its spread is largely incumbent on Internet penetration through affordable data plans from the telecom sector. (Observer Research Foundation, 27th May, 2020)

As a result, education has changed dramatically, with the distinctive rise of e-learning whereby teaching is undertaken remotely and on digital platforms. Even before COVID-19, there was already high growth and adoption in education technology, with global investments reaching US$18.66 billion in 2019 and the overall market for online education projected to reach $350 billion by 2025. Whether it is language apps, virtual tutoring, video conferencing tools, or online learning software, there has been a significant surge in usage since COVID-19. (Li & Lalani 2020, World Economic Forum)

Some E-learning Platform

The online education market in India is to be highly impacted by the emergence of cloud computing. The cloud technology enables e-Learning companies in India save a significant amount of data, content, and information on a single platform. The e-Learning market in India is forecast be worth over $18 billion by 2022. The technology helps online course providers measure learner's preferences, failures, success, and behaviours, thereby obtaining actionable intelligence to improve course designs. Thus, rising awareness of analytics will push growth in the online education market in India. The online

education market size in India is set to grow by USD 14.33 billion during 2020-2024, registering an incredible CAGR of over 21% over next four years. (Technavio Blog, 20th May 2020)

The country offers significant opportunities to the educational content development companies in India by offering products or services based on digital platforms. Some of these digital platforms are–

1. *BYJU's:* A Bangalore-based e-learning app which has created a K12 learning smartphone app that offers highly effective, adaptive, and engaging learning programs. These programs not only serve school students but also train students for various competitive exams such as IIT-JEE, CAT, GRE, IAS and many more. (Technavio Blog, 20th May 2020)

2. *my CBSE guide:* This app has all the features a CBSE student will need. It has sample papers, mock tests. Video lessons, chapter wise questions, NCERT solutions for class 3-12. One of the best features of this app is it has quizzes which you can play with your friend while learning and it also provides a gamified learning solution. It is one of the best education apps in India for any CBSE students. (VdoCipher, 2020)

3. *Meritnation app:* This app is like a one-stop solution for the students of classes 6-12. Whether it comes to homework help, doubt clearing session, textbook solutions, video lessons, sample papers, mock test, easy revision notes for class 6-12, previous year board papers and even study material for national Olympiads as well. (VdoCipher, 2020)

4. *Vedantu:* It is India's one of the largest tutoring companies started by three IIT friends, which helps the student to learn online by providing them with some of the best-curated teachers. Vedantu's one of the best quality is that they have a very good quality of teachers available. It has both individual and group classes. This app is very interactive for both students and teachers because it has features like two-way audio, video and white boarding tools where both teachers and students are able to see, hear, write and interact in real-time. It has online classes for grades 6-12, competitive exams and co-curricular courses. (VdoCipher, 2020)

5. *Vidyakul:* This app is based on the mission to bridge the gap between tutors and students. This app helps students in meeting renowned teachers online. Vidyakul works to provide students, parents and teachers with a perfect online platform to solve all their problems related to learning and teaching online. (VdoCipher, 2020)

6. *Khan Academy:* This app is founded by an American Educator Salman Khan. This is a complete non-profit app and its sole purpose is to provide better learning tools to students. This app has more than 10,000 video lectures on different academic subjects majorly focused on Mathematics and science. They have partnered with institutions like NASA, MIT, the modern museum of art for specialized content to empower the learners outside the classrooms as well. (VdoCipher, 2020)

7. *Google Classroom:* It is a powerful and easy to use web app for seamlessly organizing the daily activities of students. Furthermore, this tool allows you to take online classes, distribute course materials, assign assessments, track students' progress, send feedback, etc. from anywhere at any time. (Colar Whistle, 3rd July 2020)

There are many other e-learning platforms such as UnfoldU, TED Mobile App, Duolingo Mobile App, Tencent Cassroom, Lark, DigiTalk, Kahoot, Zoom Education, Seesaw, Photomath, Socrative, Edmodo, Prezi, Thinglink, Scratch, Quizlet, Class Dojo, Storybird, Animoto, Educreation shave been a significant surge in usage since COVID-19.

Opportunities of E-learning

1. *Effectiveness of Online Learning*–For those who do have access to the right technology, there is evidence that learning online can be more effective in a number of ways. Some research shows that on average, students retain 25-60% more material when learning online compared to only 8-10% in a classroom. This is mostly due to the students being able to learn faster online; e-learning requires 40-60% less time to learn than in a traditional classroom setting because students can learn at their own pace, going back and re-reading, skipping, or accelerating through concepts as they choose.

According to BYJU's Mrinal Mohit, "Studies have shown that children extensively use their senses to learn, making learning fun and effective through use of technology is crucial and over a period, we have observed that clever integration of games has demonstrated higher engagement and increased motivation towards learning especially among younger students, making them truly fall in love with learning".

2.   This new learning is more interesting, personalized and enjoyable. A massive open online course (MOOC) is an online course aimed at unlimited participation and open access via the web.

3.   Allows innovative methods of teaching with the help of technology and online tools.

4.   Allows reaching out to a large number of students across geographies.

5.   Especially useful for distance learning.

6.   The ability to learn using different online tools and methods.

7.   No disruption in learning because of the pandemic.

8.   Listening to recorded and live conversations and working at their own speed.

Challenges of E-learning

1.   ***Insufficient Electricity*–**Mission Antyodaya, a nationwide survey of villages conducted by the Ministry of Rural Development in 2017-18, showed that 16% of India's households received one to eight hours of electricity daily, 33% received 9-12 hours, and only 47% received more than 12 hours a day.

2.   ***Insufficient Digital Infrastructure*–**While a computer would be preferable for online classes, a smartphone could also serve the purpose. However, the phone might be convenient for apps, but not for carrying out lengthy assignments or research. While 24% Indians own a smartphone, only 11% of households possess any type of computer, which could include desktop computers, laptops, notebooks, netbooks, palmtops or tablets.

3. **Insufficient Internet Connection in India**–According to the report of World Economic Forum, only 15 percent of the households have access to the Internet, and mobile broadband remains accessible to very few i.e. only 5.5 subscriptions for every 100 people. Further, currently reach of broadband is just about 600 corridors, largely in and around the top 50 to 100 Indian cities, leaving rural areas with poor connectivity. According to National Sample Survey, 2017-18 "only 24% of Indian households have an internet facility. While 66% of India's population lives in villages, only a little over 15% of rural households have access to internet services. For urban households, the proportion is 42%. Among the poorest 20% households, only 2.7% have access to a computer and 8.9% to internet facilities. In case of the top 20% households, the proportions are 27.6% and 50.5%."

The difference is apparent across states too. For example, the proportion of households with access to a computer varies from 4.6% in Bihar to 23.5% in Kerala and 35% in Delhi. The proportion is less than 20% for Odisha, Andhra Pradesh, Assam, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh and West Bengal. (Kundu, 5th May 2020)

4. **Distracted Concentration**–"Nevertheless, the effectiveness of online learning varies amongst age groups. The general consensus on children, especially younger ones, is that a structured environment is required, because kids are more easily distracted." according to Dowson Tong, Senior Executive Vice President of Tencent and President of its Cloud and Smart Industries Group.

5. Online teaching takes time and practice.

6. There is little consensus on how students can be evaluated in a fair manner.

7. Inability to have a face-to-face connect with students and facilitate free conversations, discussions, and mentoring.

8. Inability to reach all students because of technological limitations.

9. Lack of free flowing conversations, debates, and discussions.

10. Technological difficulties related to weak devices or access to the internet.

11. Getting used to learning and being evaluated online.

12. Poverty and lack of Government policies to implement E-learning.

13. Inadequate skill and proper training for e-curriculum transaction.

14. Poor e-evaluation, and feedback systems.

15. Less motivation, anxiety and fear about digital platform faced by both teachers and students in India.

Discussion

In the present study, the researcher wanted to know about the transition of teaching learning situation from Face-to Face to Digital Platform as well as the present situation of different E-Platform and their prospect in India during pandemic. One of the important findings of this study was the online education market size in India would be USD 14.33 billion during 2020-2024, registering an incredible CAGR of over 21% over next four years and the online learning software such as BYJU'S a Bangalore based technology, my CBSEguide, Meritnation app, Vedantu, Khan Academy, Google Classroom, UnfoldU, TED Mobile App, Duolingo Mobile App, Tencent Cassroom, Lark, DigiTalk, Kahoot, Zoom Education, Seesaw, Photomath, Socrative, Edmodo, Prezi, Thinglink, Scratch, Quizlet, Class Dojo, Storybird, Animoto there has been a significant surge in usage since COVID-19. ColarWhistle (2020) mentioned about highly increasing top 15 Interactive E-Learning Web App for online classes that support present phenomenon of the study. VdoCipher (2020) also supported the findings of the study.

The other finding area of this research were opportunities of online learning such as effectiveness of online learning, more interest in e-learning, personalized and enjoyable, innovative methods of teaching, useful for distance learning among the large students, recorded and live conversations. Jindal and Chahal (2018) showed the opportunities of online learning that satisfy the present study.

At the same time digital platform faced different new challenges like insufficient electricity, insufficient digital infrastructure,

insufficient internet connection, distracted concentration, lack of free flowing conversations, debates and discussions, poverty and lack of government policies, poor e-evaluation and feedback systems, inadequate skill and proper training for e-curriculum transaction, less motivation, anxiety and fear about digital platform. Farooqui (2020) and Observer Research Foundation (2020) data has also supported the above findings of the study.

Conclusion

From the above discussion it is eminent that online mode of education has good future in India and many eminent digital platforms have significantly invested in it. As a result some stakeholders of this country are benefitted by this new online mode of education but there are some serious challenges which have been discussed in the above. Although the problems are online mode transactional from the transition of face-to-face to distal platform during COVID-19 pandemic, this is the paradigm shift or new changes of education in India. Finally this study suggests that government should implement some policies about online mode of education to look into the matter during this pandemic and post-pandemic situation to explore its full potential.

REFERENCES

Farooqui, S. (2020, May 1). Education in the time of Covid-19: How institutions and students are coping. *Business World*, New Delhi. Retrieved from https://www. business-standard.com/article/education/education-in-the-time-of-covid-19-how-institutions-and-students-are coping-120043001575_1.html

Jindal, A., & Chahal, B.P.S. (2018). Challenges and Opportunities for Online Education in India.

Pramana Research Journal, 8(4), 99-105.Retrieved from https://www.pramanaresearch.org/gallery/prj_c_ap_12.pdf

Kazmi, S.S.H., Hasan, K., Talib, S. & Saxena, S. (2020, April 15). COVID-19 and Lockdwon: A Study on the Impact on Mental Health. *SSRN*. Retrieved from https://ssrn.com/abstract=3577515

Kundu, P. (2020, May 5). Indian education can't go online–only 8% of homes with young members have computer with net link. *Scroll.in*. Retrieved from https://scroll.in/article/960939/indian-education-cant-

go-online-only-8-of-homes-with-school-children-have-computer-with-net-link

Last, J. M. (Ed.). (2001). Practice. In *A dictionary of epidemiology.* New York: Oxford University Press.

Li, C. & Lalani, F. (2020, April 29). The COVID-19 pandemic has changed education forever- this is how. *World Economic Forum.* Retrieved from https: //www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning/Samuel, P. (2020, May 01). 15 Top Interactive E-Learning Web Apps for Online Classroom.

Colorwhistle. [Blog post]. Retrieved from https://colorwhistle.com/top-e-learning-web-apps/Singh, S. (2020, February 3). Top 21 education apps in India for online learning. *VdoCipher.* [Blog post]. Retrieved fromhttps://www.vdocipher.com/blog/2020/02/education-apps-india-2020/

Wadia, L.C. (2020, May 27). Online school education in India during COVID-19/The student, parent, teacher experience: Learnings, opportunities and challenges.*Observer Research Foundation.* Retrived from https://www.orfonline.org/research/online-school-education-in-india-during-covid-19-66517/

Wallen, J. (2020, March 28). 40,000 Indians quarantined after 'super spreader' ignores government advice. *The Telegraph.* Retrieved from https://www.telegraph.co.uk/news/2020/03/28/40000-quarantined-punjab-super-spreader-ignores-government-advice/

Yan, S., & Wallen, J. (2020, April 7). China confirms human-to-human spread of deadly new virus as WHO mulls declaring global health emergency.*The Daily Telegraph*. Retrieved From https:// www.telegraph.co.uk/global-health/science-and-disease/indian-teacher-china-believed-first-foreigner-have-contracted/

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Digital Learning Teaching: Issues and Challenges

Dr. Satyapriya Behera and Dolly Sarkar

Introduction

E-Learning is an abbreviation of the term electronic learning. The learning facilitated by the use of any electronic media or means like microphones and listening devices or audio and video-tapes can be termed as e-learning. In this sense, e-learning may call for the services of the advanced electronic information and communication media and means like CD-ROMs and DVDs, teleconferencing, video-conferencing and computer based conferencing, e-mail, live chart, surfing on the Internet and web browsing, On-line reference libraries, videogame-style simulation, customized e-learning courses, and Web blogs. Identified in this way, e-learning may be taken as an electronically carried out learning facilitated and supported by the use of advanced learning technology particularly calling for the services of computers, networking and multimedia. A contemporary author, Rosenberg (2001) tried to define the term e-learning in the following words: "e-learning refers to the use of the Internet technologies to deliver a broad array of solutions that enhance knowledge and

performance." Rosenberg claims that e-learning is based on three fundamental criteria:

- E-learning is networked, instant updating, storage and retrieval, distribution and sharing of information is therefore possible.

- E-learning is delivered to the end-user via a computer using standard internet technologies.

- E-learning focuses on the broadcast view of learning: learning solutions going beyond the traditional paradigms of training.

"E-learning provides the potential to provide the right information to the right people at the right times and places using the right medium"

Features of E-Learning in the Light of New Challenges of Teaching

- E-learning is dynamic and today in the era of globalization, it helps in availing the online experts, best sources and quick approaches in a single mouse click.

- E-learning is individual i.e. centred across the learner and personalized to the individual.

- E-learning operates in real time that is available for 24×7 days.

- E-learning is comprehensive.

- It is network assisted and often learning is done within the fraction of time.

- Blend of learning methods such as–virtual classroom, simulation, community and even a classroom.

- E-learning is blended mode Chalk-and-board has long ruled the classrooms.

- Interactive Digital Content more emphasis on demand learning.

Futures of E-Learning for Teaching
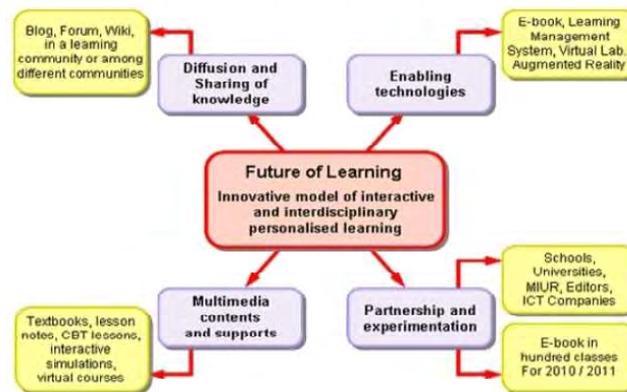
E-Teaching during Covid-19 Pandemic

*   E-teaching is the appreciation of live teaching with streaming lectures, whiteboards, downloadable slide sets and discussion forum.

*   E-teaching is an automation of an existing teacher-centered educational approach.

*   The real work is in creating content and learning management systems that support e-learning.

E-Teachers

*   E-teachers are teachers who work in an internet environment in both regular and virtual classroom situations.

*   They build new concepts of working in time and space.

*   They find new learning resources as they interact with information, materials and ideas with their students and colleagues.

E-Teaching Strategies Good Learning Process

E-Lecturing

E-Discussion Forum

E-Mentoring

E-Tutoring

E-Access Network Resources

E-Structured Group Activity

E-Quality Learning Simulation

E-Informal Peer Interaction

E-Connected Education

E-Learning Objects

E-Learning Resources

E-Social Networking

Competencies for Online Teaching

- Subject Expertise.
- Orientation and Hands on Experience on e-Resources
  (a) Searching
  (b) Creation
- Computer Hardware Knowledge: Webcam and Micro phones
- Software Knowledge: Synchronous (Zoom or WebEx), Asynchronous (Moodle/Google Classroom), YouTube and Google Drive.

Different Approaches to E-Learning

Synchronous E-Learning

Synchronous learning means learning and teaching takes place in real time (same time) while the trainer and learners are physically separated from each other. It is included like as:

Blended Learning

- Blended learning combines e-learning tools with traditional classroom learning to ensure maximum effectiveness.
  - It offers to
  - Face to face interaction thereby leading to social benefits.

- Personalized system of instruction which requires minimum interaction.

- Improved retention and reinforcement through follow-up mechanism on the web.

- Highly flexible based on the learning style and the level of audience.

Virtual Classroom: Virtual classroom duplicates the features of a real classroom online. Participants interact with each other and instructor's online, instant messaging, chat, audio and video conferencing etc.

Blended Method: Most companies prefer to use a mix of both synchronous and asynchronous e-learning methods according to their requirement. It is an amalgamation of synchronous and asynchronous learning methods.

Example Includes

- Listening to a live radio broadcast

- Watching live a television broadcast

- Audio/video conferencing

- Internet telephony

- Online lectures

- Two-way live satellite broadcast

Asynchronous E-learning

- Asynchronous learning is the fact that the trainer prepares the courseware material before the course takes place. The learner is free to decide when he wants to study the courseware.

- In other words Asynchronous e-learning where people are not online at the same time and interaction does not occur without a time delay, allowing people to participate on their schedules. It is also included:

  - **Courses**: The clear advantage of a self-paced course is convenience. Participants can get the training they need at any time.

- • This can include just-in-time training where a participant gets exactly the training he or she needs to perform a task.
- • **Discussion Groups:** A discussion group is a gathering of conversations that occur over time. They are also called message boards, bulletin boards and discussion forums. Discussion groups can be used to support a group of participants taking the same class or can be used to support participants performing related tasks. A discussion group is a very competent way to supply expert answers to a large group people. A single answer to a common question can help many.

Example Includes

- • Self paced courses taken via Internet or CD-ROM
- • Videotaped classes
- • Stored audio/video Web presentations or seminars
- • Recorded audio tapes
- • Q & A mentoring
- • Reading e-mail message

Building an E-Learning Culture in Teaching
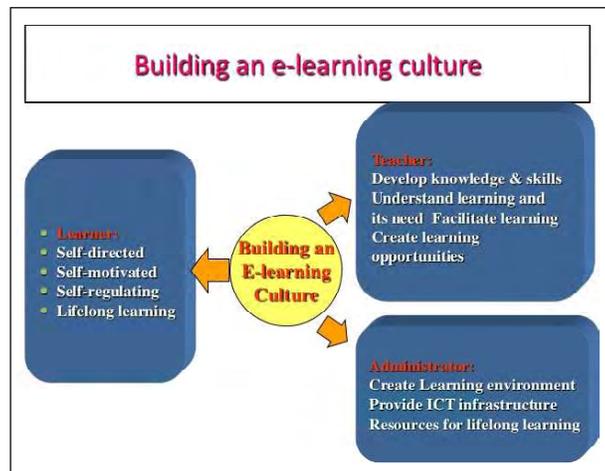
Presentation Tools for E-learning Teaching

E-Learning Tools: Scope of E-mail

- Every teacher & student should have an e-mail account
- Communicate with students
- Communicate with parents
- Students can submit assignment
- Can have attachments
- Create a paperless environment
- Simple but effective
- Efficient and cost effective

E-Learning Tools: Audio Chat

- Synchronous communication tool
- Communicate with students
- Communicate with parents
- More students participate
- Collaborative learning.

E-Learning Tools: Online Forum

- Asynchronous discussion forum
- Teacher can create discussion groups
- Teacher could post a question and request students to comment
- Students can post their comments
- Can encourage community participation
- Collaborative learning can be fostered
- Feedback from diverse culture.

E-Learning Tools: Web

- Wide range of materials available
- Teacher will need to narrow down

- It is a resource centre
- Sharing of resources
- Supported by images, audio, simulation and multimedia.

E-Learning Tools: Video Conference

- Can conduct a live lecture
- Communication with students
- Communication with parents
- Support by audio, chat and whiteboard
- Support sharing of applications
- Can be recorded and later be used for on demand lectures
- Demo...

Tools: Learning Management System (LMS)

- Management of content
- Tracking students
- Administrative features
- Integration with various tools such as chat, forum, e-mail, etc.
- Reporting
- Demo... of Multimedia Learning System (MMLS)

Open Source Software: e-front

It is an open source e-learning platform to assist with the creation of online learning communities while offering various opportunities for collaboration and interaction through an icon-based user interface. The platform offers tools for content creation, tests building, assignments management, reporting, internal messaging, forum, chat, surveys etc.

Open Source e-Learning Applications

Open source refers to a program in which the source code (programming language) is available to the general public for use and /or modification from its original and redistribution.

Moodle

Modular Object-Oriented Dynamic Learning Environment is a free source e-learning software platform and modular design allowing any developer to create additional modules and features. Many Universities and colleges use it in their daily teaching and learning. It is free source software (i.e.) the developer can make modification based on their needs.

Dokeos

Dokeos is an open source online learning software. It provides all the features needed for e-learning and blended learning management: From Authoring to Reporting.

Claroline

Claroline is an open source of e-learning and e-working platform allowing teaches to build effective online courses and to manage learning and collaborative activities on the web.

ILIAS Learning Management

ILIAS is a powerful Open Source Learning Management System for developing and realizing web-based e-learning. The software was developed to reduce the cost of new media in education and further training and to ensure the maximum level of customer influence in the implementation of the software.

SAKAI Project

The Sakai CLE is a free, community source, educational software platform distributed under the Educational Community License (a type of open source license). The Sakai CLE is used for teaching, research and collaboration.

OLAT

OLAT is free software and is open source Learning Management System that supports any kind of online learning, teaching, and tutoring with few educational restrictions.

Impacts of E-Learning on Teaching Learning Process

- Improves efficiency both in learning and teaching
- Increases motivation
- Deepens understanding
- Promotes collaborate learning
- Gives new approach to learning and working
- Provides new ways interacting
- Paves way for personality development
- Increases social skills
- Creates interest in learning
- Helpful for self-evaluation
- Wide reach and consistent
- User convenient
- Flexible and rich medium for students
- Useful tool to address students with different learning and cognitive styles
- Self-pacing for slow and quick, learners, reduces stress and increases satisfaction.

Advantages of E-Learning

- Class work can be scheduled around personal and professional work
- Reduces travel cost and time to and from school
- Learners may have the option to select learning materials that meets their level of knowledge and interest
- Learners can study wherever they have access to a computer and Internet
- Self-paced learning modules allow learners to work at their own pace

- Flexibility to join discussions in the bulletin board threaded discussion areas at any hour, or visit with classmates and instructors remotely in chat rooms

- Different learning styles are addressed and facilitation of learning occurs through varied activities

- Development of computer and Internet skills that are transferable to other facets of learner's lives

- Successfully completing online or computer-based courses builds self-knowledge and self-confidence and encourages students to take responsibility for their learning.

Disadvantages of E-learning

- Unmotivated learners or those with poor study habits may fall behind

- Lack of familiar structure and routine may take getting used to

- Students may feel isolated or miss social interaction

- Instructor may not always be available on demand

- Slow or unreliable Internet connections can be frustrating

- Managing learning software can involve a learning curve

- Some courses such as traditional hands-on courses can be difficult to simulate.

Conclusion

In view of this, we are confident that e-learning is here to stay and will play an important role in democratizing education and contributing towards generating knowledge workers. In this way e-learning is not intended to replace conventional methods and learning in classroom. Its aim is to create an augmented learning environment where technology is used to deliver a combined range of teaching and learning techniques aimed at maximizing the individual's participation and achieving the goals in the learning and teaching process as a greener world.

REFERENCES

Joe Pulichino–"Current Trends in e-Learning"-Research Report, March 2005

Mark W. Brodsky–"E-Learning Trends Today and Beyond", May 2003

E-Learning, www.nextwavemultimedia.com/html/profile.html.

Garrison, G. Randy, and Anderson, Terry. (2003). *E- Learning in the 21st Century: A Framework for Research and Practice.* London: Rutledge, Taylor & Francis Group.

NCERT (1970). *Education and National Development.* Report of the Education Commission (1964-66). New Delhi, NCERT.

NCTE (2010). *National curriculum framework on teacher education.* New Delhi, NCTE.

National Policy on Information and Communication Technology (ICT) in School Education (2012) retrieved from http://www.education. nic.in/secedu/ict.pdf.

Sarkar (2012) the Role of Information and Communication Technology (ICT) in Higher Education for the 21st Century. The Science Probe, 1 (1), ; 30-41.

Robin D. Morris, (2011). Web 3.0: Implications for Online Learning, Tech Trends, 55 (1)

Sharma, R.A. (2009): *Essential of Pedagogical Analysis and Critical Pedagogy,* R.Lall Book Deport, Meerut (U.P.)

20

Acclimatisation in E-Teaching and Learning: Issues and Challenges

Amrita Datta

Introduction

E-Learning–E-learning is an umbrella term which means learning with the help of a computer, smart phone, laptop or tablet, usually connected to a network, providing learners the opportunity to learn anywhere and at anytime. According to Learning Circuit Glossary, "e-learning term covers a wide set of applications and processes such as web-based learning, computer-based learning, virtual classroom, digital collaboration etc. It includes the delivery of contents via Internet/Extranet, audio and Video tape, satellite communication etc".

E-Teaching–According to Wikipedia, e-teaching promotes the use of electronic media, educational technology, and information and communication technologies (ICT) to facilitate learning and all-round education. E-teaching is an necessary prerequisite for e-learning, specifically in any educational framework. The roles of teachers/facilitators/mentors in an online environment are considerably different from their traditional roles in a normal face-to-face classroom situation.

Acclimatisation–According to Wikipedia "Acclimatization or acclimatisation is the process in which an individual organism adjusts to a change in its environment, allowing it to maintain performance across a range of environmental conditions. Acclimatization occurs in a short period of time, and within the organism's lifetime". It may impressed that this pandemic crisis has forced the teaching learning sector to acclimatise themselves to this paradigm shift from face-to-face teaching-learning to online teaching-learning.

Technological Upsurge–In the wake of Covid-19 pandemic the Indian education scenario has confronted a paradigm shift from classroom teaching to online teaching learning which has led to a upsurge in the regular usage of technology. A huge number of video calling apps and medias are being now used on a regular basis for online classes in education, dance, yoga, meditation etc. and also in numerous webinars. This associated with the profound use of technological infrastructures like laptops, desktops, bluetooth speakers, head phones, powerbanks, tripods, smartphones and led to a technological upsurge.

What are the Guiding Factors of E-Learning?

E-learning is just another form of education and it is expected that e-learning should be as good as a face-to-face teaching-learning experience.

Characteristics of E-Learning

- Learning facilitated and supported through the use of ICTs
- Learning is accomplished over Internet
- E-learning is the convergence of learning and the Internet
- E-learning is the delivery of content via electronic media
- A process that facilitates education using a network
- Learning activities based on electronic format
- Software created to teach the user new skills and methods.

Teaching, Teacher and Technology

It is universally consented that teaching methodologies can be augmented by teachers with the usage of Information and

Communication Technology. The contribution of the teacher in the total teaching-learning process is undeniable. Various commissions and committees have repeatedly stressed upon the climacteric role played by the teachers even in online teaching and learning. Very popular remark by Kothari Commission in India was made way back in 1964 stating that 'no people can rise above the level of its teachers'. As said by Kothari Commission in 1988, "The "message" of the teacher to the students is not merely to impart knowledge content of books which is largely information fast getting out of date but more than that it should be inspiration, by his/her example, towards the process of character building and the use of knowledge for welfare of the community. The total message to the students, and to the community, is the total life of the teacher." Thus, a teacher plays a much more essential role rather than just disseminating the knowledge content of the curriculum.

The Role of a Teacher in the World of Technology

In this current era access to information is a pretty simple and easy process in the light of knowledge explosion and diversified enhancement of information technology. Information is now at our finger tips (Just say "Hey Google'' or "Alexa" and you are ready to go). Even a minor, a child can easily access any type of information from the internet if he\she has access to a smartphone. Here comes the supreme role of a teacher as a facilitator, as guide and as a mentor to arrange the abundant amount of information and manipulate those information to the learner's optimal convenience. In this technologically complex world the contribution of the teacher becomes quite significant to make the tech savvy learners learn how to assess the multifarious information critically, how to differentiate real knowledge from advertisement, realise the legit and the ethical affairs in respect to usage and access to statistics. "With the onset and proliferation of Information and Communication Technology (ICT), there is a growing demand that it be included in school education. It has become more of a fashion statement to have computers or multimedia in schools, the result being that in spite of its potential to make learning liberating, its implementation is often not more than cosmetic. It is also often touted as a panacea for shortage of teachers. These are detrimental to the learning of the child. Teacher education

needs to orient and sensitize the teacher to distinguish between critically useful, developmentally appropriate and the detrimental use of ICT. In a way, ICT can be imaginatively drawn upon for professional development and academic support of the pre-service and in-service teachers." (National Curriculum Framework on Teacher Education, 2010). With the steady customisation of learning, onus lies on teachers for orchestrating the dissemination of knowledge along with maximum utilisation of resources.. "There is an urgent need to develop and deploy a large variety of applications, software tools, media and interactive devices in order to promote creative, aesthetic, analytical and problem solving abilities and sensitivities in students and teachers". (National Policy on ICT in School Education, 2012).

Teachers need to reconsider the basic presumptions of education, redesign and reorient the strategies used in the teaching–learning procedure in a far more ingenious manner with the use of technology. E-learning instils conviction among learners and teachers and also it gives them reliance and credence in a more effective and efficient learning.

Challenges Encountered by Teachers and Learners in E-Teaching

A huge number of teachers being born after the mid 19th century face the shackles of being a digital migrant. The process of acclimatisation is surely tough and hazardous. On top of it, meeting the demands of the society is like a 'bone in throat'. The challenge for educators is to create meaningful learning experiences in which students are instructed methods to apply their gained knowledge to solve real-scenario issues. This Covid-19 pandemic has furthermore thrust upon the teachers the enormous burden of imparting education to all the sects of learners, ranging from primary to higher education, the medium being online. Thus without any physiological preparation, any mental, emotional or psychological readiness, the educators have to acclimatise themselves with this unanticipated and unexpected paradigm shift in the teaching learning process. The researcher have collected some of the first hand experiences confronted by teachers and learners from various quarters about the e-teaching challenges that they have encountered during these 3 month lockdown phase in

our country. The review of all those first hand accounts are appended herewith.

The Real Scenario-is Acclimatisation Easy Enough?

As it can be delineated from the numerous experiences faced by the teachers and the learners on whom the online teaching learning has been thrust upon suddenly that the issues are miscellaneous which are summed up below.

- No/poor/less digital education.
- Sudden shift to online teaching has caused stress and chaos at the preliminary stage among the students, teachers and parents.
- No mental readiness has led to haphazard classes.
- Poor infrastructure at home.
- It is not possible to create e-content in a smart phone.
- There is not enough internet support to conduct online classes.
- Most of the teachers do not have the option of WiFi or routers.
- Extremely low bandwidth and poor or unstable internet connection.
- Disruption in the overall education process.
- E-teaching doesn't offer any kind of human interaction.
- Problems regarding online security.
- Adaptability struggle.
- Less social skill and very low scope of social skill development.
- No scope for proper evaluation.
- Technical glitches which are not understood by most of the teachers.
- Commitment to proper time management.
- Time needed to explain via online is much more than face-to-face class.
- After a significant time it becomes monotonous and stressful.

- It is hard to observe all students in an informal manner.

- Due to excessive pressure on smart phones, there is a continuous problem of crashing.

- There is the continuous problem of casual attitude among students which makes effective teaching difficult.

- Sometimes it becomes impossible to teach or explain with the tremendous amount of background noise.

- The multiple number of apps and continuous use of internal storage slows down the smartphones, tablets and also the computer.

- The online marketing apps are not delivering necessary infrastructures in containment zones and there is a huge lag in delivery time which again makes effective teaching learning a serious problem.

- E-teaching facilities are not the same in various zones of our country which again is a barrier in effective teaching.

- Poor connectivity is forcing teachers to repeat the same things over and over again which cause physiological problems like headache.

- Excessive pressure on eyes due to continuous exposure to computer or smartphones.

- Sometimes teaching becomes one sided due to the passive attitude among students and also due to connectivity issues.

- In case of higher education students are not always ready to use certain LMS due to security issues which poses a serious problem.

- It becomes extremely difficult to properly assess the hand written assignments submitted by the students via the online platforms through phone and tablets.

- Extra expenses for data, headphones, powerbanks, external hard disks.

- Going live often invades the privacy of the teachers. It is not always possible in every household to form a teaching corner.

• Preparation of online class is added stress to added household work.

• Teachers miss the comfort and known zone of face-to-face classroom teaching.

• Most of the institutions are not providing any technical support. Thus the teachers have to do, know, learn, apply everything on their own and that too within a handful of days which means insufficient learning.

Challenges Faced by Learners

• Not being surrounded by teachers and classmates, the motivation wanes.

• Unavailability of books and content makes it difficult to acquire knowledge. Browsing internet for relevant materials doesn't always give positive results.

• No proper feedback from teachers makes it difficult to assess progress.

• All the students cannot be attended by a teacher everyday which creates a discord among classmates.

• Poor Connectivity, Low Bandwidth, Exhaustion of mobile data, slow internet, unavailability of Wifi or LAN connection all makes e-learning difficult in the current scenario.

• Creates a feeling of isolation mostly among the younger students.

• Less scope of proper doubt clearance.

• Students do not always avail proper or complete information as most of them have to depend on student coordinators.

• Poor attendance of students due to the general feeling that e-learning is not as effective as face-to-face learning.

Other than these there are innumerable issues encountered by teachers and learners on a daily basis caused due to online teaching. So it may be said that acclimatisation is posing as a serious problem but inspite of all the hurdles, the teaching community is trying their heart and soul to adapt, accommodate and adjust to this unprecedented situation and to ensure effective delivery of lessons, content and

fulfilling all the curricular and the co-curricular needs of the learners. The learners on the other hand are also putting in major efforts in order to acclimatise themselves with this scenario. Braving all the odd the teachers and the learners are grappling with the numerous issues, the uncertainty, the hesitations of invasion of privacy, the security issues the disruptions due to slow connectivity, unstable internet connections and other myriad and multitudinous affairs that are posing as a daily stumbling block which is deterrent to a smooth Online Teaching Learning experience.

Conclusion

To conclude it may be said that all the hindrances and the hiccups are forcing the teaching community to learn and adopt and thus acclimatise themselves to tech-oriented applications and methods for an enhanced, smooth and upgraded teaching learning environment.

REFERENCES

DOI https://doi.org/10.7821/naer.2018.7.298 http://dx.doi.org/10.19085/ journal.sijmas 030201

Islam, et al. (2015). *Journal of Education and Training Studies,* 3 (5)

Laurillard, D. (2005). E-learning in higher education. In *Changing Higher Education: The Development of Learning and Teaching.* https:// doi.org/10.4324/9780203479292

Islam, N., Beer, M., & Slack, F. (2015). E-Learning Challenges Faced by Academics in Higher Education: A Literature Review. *Journal of Education and Training Studies*, *3*(5). https://doi.org/10.11114/ jets.v3i5.947

Oliver, J. (2019). https://doi.org/10.1017/CBO9781107415324.004

Singh G. Scholedge. (2016). Challenges for Teachers in the Era of E-learning in India. International Journal of Multidisciplinary & Allied Studies, 3 (2); 14

Tavangarian D, Leypold, M, Nölting K, et al. (2004). Is e-Learning the solution for Individual Learning? *Electronic Journal of E-Learning*, 2 (2), 273-280.

21

Stress of the Teacher and Well-Being Strategies Amidst New-Normal Stage in Covid-19

Debashis Kayal

Introduction

The Covid-19 pandemic is having a profound effect on our education system (Walker, 2020). Effective responses in education are dependent upon teachers as the front-line workers in classrooms as well as whole education system in the nation. Navigating what may be the "new normal" brought on by the Covid-19 pandemic has left the teachers grappling with unknowns. From worrying about his own health and safety as well as their family members' well-being, adapting to a new work situation and online teaching environment or job loss, juggling new family schedules, experiencing isolation from friends and loved ones–all of these changes in lifestyle came so rapidly and without any warning that it's not surprising teacher are experiencing an increase in stress, depression and anxiety (Shimalla, 2020). When teachers don't have the resources they need and especially when sustained job demands are high, teachers experience chronic stress and eventually burnout.

Teachers who are burned out are less effective as teachers, have less supportive relationships with students and in turn, the students they teach have lower academic and social outcomes (Sokal, Babb, & Lesley, 2020). The burnout feeling among teachers which is a low and stressed state of the mind could be contagious (Mishra, 2020). Only when a teacher knows how to support their own mental well-being, will they are able to provide a supportive learning environment. In this crucial time when teachers are facing the challenges of the impact of Covid-19 not just in their teaching learning process but in their daily lives, it is important that they have needed well-being strategies to support their mental, emotional, and physical wellness. We need to start talking about teachers well-being.

Objective of the Study

The objective of the study is to explore the various aspect of stress of the teacher amidst new-normal stage in Covid-19 and to find out the teachers well-being strategies to cope with stress.

Stress and Well-Being

Stress is a normal response of the body and mind towards the situations which seem difficult to manage. Sometimes, there are situations which are too difficult to be handled in the routine way. In order to adjust with such situations our body and mind have to work extra; and as a result certain responses take place in our body and mind. These responses which occur within our body and mind to tackle the difficult situations are called 'stress' response. Stress is the psycho-physiological responses which take place in the person to tackle a difficult situation which is called 'stressor'. From Yogic perspective, stress can be seen as a mental state of unhappiness and emotional instability (National Council for Teacher Education [NCTE], 2015). We face many difficult situations which are perceived as a threat to our well-being and survival.

According to Centers for Disease Control and Prevention (CDC, 2018) well-being integrates mental health (mind) and physical health (body) resulting in more holistic approaches to disease prevention and health promotion. Mental Health Foundation (2015) mentioned the description of well-being by The New Economics Foundation

thus–''Well-being can be understood as how people feel and how they function, both on a personal and a social level and how they evaluate their lives as a whole" (p. 1). Well-being emerges from our thoughts, actions and experiences–most of which we have control over. For example, when we think positive, we tend to have greater emotional well-being. When we pursue meaningful relationships, we tend to have better social well-being. And when we lose our job, worried for losing it or just hate it and also feeling difficulties to new work situation, we tend to have lower workplace well-being. Well-being is the experience of health, happiness, and prosperity (Davis, 2019). It includes having good mental health, high life satisfaction, a sense of meaning or purpose and ability to manage stress. If we remains in stress for long time, not only our body and mind become weak and dysfunctional but also our physical, emotional, mental and social well-being are seriously hampered. To build our overall well-being we need to cope and manage stress.

New-Normal Stage in Covid-19

We may have to live in the "new normal" for a very long time. Covid-19 is a lot more contagious and infectious and is not really associated with a certain lifestyle. Therefore, our level of adaptation and the changes we have to make in our lives is much higher. These adaptations and changes are considered our "new normal" (YLM, 2020). It is very challenging to protect mental well-being in new normal stage of Covid-19. This pandemic requires teachers lead the way in adapting to a new "normal" at home and in their virtual classroom. Teachers are searching a new way of living and going about their lives, work and interactions with other people amidst new-normal stage in Covid-19.

Stress of the Teacher

Teachers are living with lot of chronic stress in their life due to unforeseen impact of Covid-19 pandemic. The various aspects of the teachers stress are disclosed in the following way:

(i) ***Health and Safety****:* Like all of the people the teachers are facing lot of challenges to protect their own health and also the health of their family members and loved ones. They have worried

concerning the health and safety related issues undoubtedly. They want to keep safe of their family members specially child and older person. The socio-emotional and mental health impacts of Covid-19 generate lot of mental stress, anxiety and feeling of uncertainty to the teachers for that.

(ii) *Techno-stress:* Technology stress (Techno Stress) can be defined as a modern disease of adaptation caused by an inability to cope with new computer technologies in a healthy manner. Clear symptoms of techno stress include inability to concentrate on a single issue, increased irritability and feeling of loss of control (Raja Zirwatul Aida, Azlina & Siti Balqis, 2007). In new normal stage of the Covid-19, teacher experiences techno-stress when they cannot adapt to or cope with information technologies in a healthy manner and also when they have failed to use properly technological device in digital teaching learning process. Many teachers mental well-being is hampered due to this techno stress.

(iii) *New Challenging Work Environment:* The exceptional nature of the current situation is reflected in the remarkable rate at which technology and distance and virtual learning have been embraced to mitigate the impacts of school closures as well as in the capacity of virtual strategies to tackle education challenges. Teachers and educational institutions have been creative in adopting a variety of technology-based strategies as alternatives to the traditional classroom, providing lessons through videoconferencing and online learning platforms and sharing learning materials and worksheets through school-based intranets and messaging platforms (International Labour Organization [ILO], 2020). But all of the teachers are not comfortable in this new challenging work environment. Due to lack knowledge and skills regarding technology based education many teachers have stressed too much in the new normal stage of Covid-19.

(iv) *Job Loss:* Job loss is the most severe immediate impact of Covid-19 crisis while lower economic growth and rise in inequality would be the long-term effects, according to a survey by the Indian Society of Labour Economics (ISLE) (The Economics Times, 2020). The teachers of various private teachers training colleges, engineering colleges, degree colleges and also some

private schools already have started to loss their job. The factor of job loss is hardly impact on the teachers of private educational institutions.They are feeling very depressed and stressed from the fear of job loss.

(v) *Termination and Cut-off or Closed Salary:* The termination and cut-off or closed salaryof an employee brings further deepen the crisis and will have not only weaken their financial condition, but also hamper their mental strength to combat this pandemic. The teachers of private educational institution already have been suffering due to the effect of termination and cut-off or closed salary. It has created lot of mental stress to the teachers.

(vi) *Students Need and Satisfaction:* If students need is fulfilled and they have satisfied in their learning, then teachers will be satisfied. But many students can't adjust or adopt with digital learning. Most of the students of remote areas have not involved within online teaching learning process amidst new-normal stage in Covid-19. Lot of students is not satisfied in "new normal" online teaching learning process. It is one of the hardest stressor to the teachers.

(vii) *Inequities in Access to Learning:* The emphasis on virtual learning can exacerbate existing inequalities in education, particularly in developing contexts, marginalized communities and rural settings, where access to technology and reliable internet connections may be limited. Even within schools, inequalities such as those related to persons with disabilities or family income can hinder access to distance learning (ILO, 2020). Many teachers can't accept these inequalities in access to learning. They are feeling hopeless and stressed for that.

(viii)*Knowledge and Training:* Virtual learning in new normal stage of Covid-19 requires adequate knowledge and training of the teachers for smooth access to technology in learning. In this crisis period, greater attention needs to be paid to how technology and learning may be effectively integrated by the teachers. Teachers have needed sufficient knowledge and training for that. But they have not it. That is why lack of sufficient knowledge and training to virtual learning engenders mental stress of the teachers.

Well-Being Strategies

This is the crucial time amidst new-normal stage in Covid-19 where teachers need some self-care strategies that improve their overall well-being, which will also positively impact on the students as well as on teaching learning environment. The various well-being strategies of the teachers for coping with stress are as follows:

(i) ***Online Counselling:*** Online counseling is the transmission of therapeutic interventions in World Wide Web in which the computer-mediated communication technologies is facilitated as a medium of communication between a trained professional counselor and client. There are several terms used for online counseling including online or Internet therapy, e-counseling, e-therapy, cyber therapy, e-mail therapy, web counseling, Internet counseling, cyber counseling, synchronous single-session counseling, and therapy-e-mail (Li, Lau, Jaladin, & Abdullah, 2013). In respect of present crucial situation teachers are mentally and emotionally disturbed. They feel helpless and very insecure in their daily life. Here online counselling will may very effective for them where they have experienced and spend the days with the effect of lockdown, social isolation, new challenging work environment, fear for job loss and financial uncertainty. Online counseling is its potential for increased accessibility mental health services. Though, in our country it is very difficult and challengeable to access online counselling by all of the teachers of remote areas and also those who are not comfortable in use of technological device, but all of the educational institution should try to arrange online counselling for teachers both individually and or with the help of state government. Here Central and State Government's role is very essential. Government should frame some policies for online counselling of teachers.

(ii) ***Yoga:*** Yoga can play an important role to construct our mental health and well-being. It can immensely help to prevent and maintain mental health and well-being of the teachers concerning the negative impact of Covid-19. Here we will focus only three yogic practices which help to strengthen and relax the body and the mind of the teachers.

(a) **Asana:** Asanas are good for body and mind. The most effective asanas for this purpose are Hastottanasana, Padahastasana, Trikonasana, Ustrasana, Ardha-matsyendrasana, Sarvangasana, Matsyasana, Bhuja Egasana and Savasana. These asanas strengthen the glands and regulate their functions. By doing so, these asanas enable the body to effectively deal with the mental stress. Additionally, the relaxing asanas like Makrasana and Savasana give the required rest to body and mind and help to reduce the impact of emotional difficulties (NCTE, 2015).

(b) **Pranayama:** Pranayama is a Yogic practice which is very effective for coping with mental stress. It has a calming effect on body and mind. Pranayama is a breathing technique by which Prana (vital life force) is controlled and regulated. Pranayama is not merely a physiological respiratory process, rather it is psycho-physical in nature. It works on body and minds both. Pranayama maintains a harmony between body and mind. It helps to develop balance between parasympathetic and sympathetic nervous systems of the body, brings emotional control and pacifies the mind (NCTE, 2015).

(c) **Meditation:** Meditation is a well-known Yogic practice which is suited to various purposes. In meditation, we practice to withdraw our attention from different objects or ideas of the mundane world and focus it on a single idea/object instrumentally for some time. The meditation is practiced in a comfortable and relaxed sitting position. In that position the attention is focused on a particular part of body or on the breathing or on an idea for some time. There are variety of meditation techniques which have been designed to induce relaxation in body and mind (NCTE, 2015). Meditation will be very effective for protecting mental health and well-being of the teachers in respect of the adverse impact of Covid-19.

(iii) **Build in Regular Exercise:** Exercise is one of the best ways to reduce stress and improve our overall quality of life. Teachers should walk or do whatever exercise they feel comfortable with.

Physical activity plays a key role in reducing and preventing the effects of stress. Teacher need to exercise regularly.

(iv) ***Practice Deep Breathing Exercises:*** Imagine your stomach like a balloon, and inhale deeply and slowly, inflating that balloon. As you slowly exhale, think of the word "relax" and let it permeate your entire being, from the top of your head to the bottom of your feet. Let your stress be "released" from your feet (Boon, 2020). This deep breathing exercises will be very effective for teachers well-being.

(v) ***Connect to Others:*** Sometimes when you are feeling depressed, stressed, anxious, confused or unable to cope, you should talk to people who can help. Always connect to your friends, family and loved ones. Try to talk at most to the person whom you trust indeed. It may be one of the best well-being strategy of the teacher amidst new normal stage in Covid-19.

(vi) ***Be a 'Kid' Sometimes:*** Do what you enjoyed doing when you were a child. Draw, paint, dance, read, play music, even play with play-dough. Express yourself without worrying about maintaining the image of who you are 'supposed' to be. Just relax and enjoy yourself. We all have a little child in us and it's a good idea to allow that child within to come out and play from time to time (Boon, 2020). Teacher may adopt sometimes this well-being strategy.

(vii) ***Work-Life Balance:*** A good work-life balance is essential to staying healthy, focused, and stress free. But Covid-19 requires teachers go along the journey in adapting and adjusting to a new "normal" in their daily personal life at home, in their social life at society and also in their online teaching learning process. According to Walker (2020), "Teachers should imagine what a work-life balance would look like. What would it feel like? What would you prioritize? What activities or events would you implement that bring you joy?" and "Teachers must give themselves permission to take a break and be happy. The relationship you have with yourself is the most important. When we have a healthy relationship with ourselves, our relationships with others are also healthy, in and outside the classroom" (para. 12).

To achieve that balance between personal life and a teaching life, Walker (2020) suggests these strategies:

Collaborate: Build collaborative relationships at work to support not only your academic and professional needs but also your emotional and personal needs.

Give Yourself a Break: One thing that is hard to do as a teacher is to accept the fact that it will have to be good enough. We tend to strive for perfection, but we must learn to train ourselves to just stop and give ourselves a break on all levels.

Disconnect: As a teacher, your job is never done. But it's important to practice disconnecting from work after work hours are over.

Adopt Healthy Habits: Commit to do something good for your body every day-whether it's yoga, stretching, or meditation. Fuel yourself with healthy foods and snacks. Get plenty of sleep, and rest so your body can rejuvenate and refresh.

(viii)Acquisition of Knowledge and Skills: When online teaching or lack of adequate knowledge of virtual classroom is a stressor to the teachers, they may try to acquire knowledge and skills for that through attaining various online courses of MOOC platform and also participating various online workshop & Faculty Development Programme in the Webinars. It will help them to be confident in their online teaching and after acquiring such knowledge and skills, undoubtedly they fell better in their new work environment.

Conclusion

Under the circumstances of the Covid-19 pandemic, teachers mind is covered distinctly by unpleasant feelings and mental stress. The sudden ongoing crisis of Covid-19 has forced many teachers into virtual classrooms. They have unprepared for the demands and expectations of this new reality. The various well-being strategies may help the teacher to overcome this pandemic with coping stress. Educational institutions should provide an e-training course for teachers on how to manage online classrooms and use technology.

Government needs to design and implement the well-being policy of the teacher amidst new-normal stage in Covid-19.

REFERENCES

Boon, E. (2020). *20 Tips to Cope With Stress*. Retrieved from https://www.healthxchange.sg/wellness/mental-health/tips-cope-stress

Centers for Disease Control and Prevention. (2018). *Well-Being Concepts*. Retrieved from https://www.cdc.gov/hrqol/wellbeing.htm

Davis, T. (2019). *What is Well-Being? Definition, Types, and Well-Being Skills*. Retrieved from https://www.psychologytoday.com/us/blog/click-here-happiness/201901/what-is-well-being-definition-types-and-well-being-skills

International Labour Organization. (2020). *COVID-19 and the education sector*. Retrieved from https://www.ilo.org/wcmsp5/groups/public/—ed_dialogue/—sector/documents/briefingnote/wcms_742025.pdf

Li, P., Lau., Jaladin, R. A., & Abdullah, H. S. (2013). Understanding the two sides of online counseling and their ethical and legal ramifications. *Procedia-Social and Behavioral Sciences*. https://pdf.sciencedirectassets.com/277811/1-s2.0-S1877042813X00357/1-s2.0-S1877042813038986/main.pdf?X-Amz-Security-Token=IQoJb3JpZ2luX2VjEAEaCXVzLWVhc3QtMSJHMEUCIQCExeN5mAYVHaJ6IxcPF6Hsj5ydHTa%2FJBLEZXMWPD4IFwIgJ%2BGbkB2LdxiYeUgA7i13IZWmidTqGUAc5Yj4ISXbjiEqtAMIehADGgwwNTkwMDM1NDY4NjUiDAisxKuZ5ZQ2%2FXCQYCqRA15N%2FRhrpeOuJW%2FhOR%2BvyafTJVi7Bzk8p0lxkuRxWSoQS19kT3T8ie82EkH9ytztWb%2BDpR3FxNi5j50BIO0Ent2qS0prVA%2BGMPdYluH8L3VQEhwcO6Nu9fZMXATyeZmoAkF86gOgPGwQcc3HTSbXFPROElIjW4SN%2FqWQpEi6vnv36kVAmWRxyQDU1Y8IDrPyQwUuaxjIc4rHNNTlEx8va4aDAFfLUPcw%2FgwacET%20BukDq5YtkBVsKK6Am%2BiluzTm%2Fmkk44J3DLRUOJ3SJIfxtMSCp2c%2B97HyARg8Of53zm%2Bt8OLfAsgGIGuO8Li4mpO4QK5LGx56J%2BULX4cGDddJ40q%2Fx6V%2BDwPlpM%2BxxGecyjc6eRHWYO%2BT7glcE7 g M3ulyhxelBpNsTxLIeQOkLM%2FOQ%2B0VLSWHHUtbRfXHMv4ofk0q45DyIS0uMo8q2oixLFiUoaIi25sxhKeRPnTvo35CLtrn%2BcPFt3fp7%2FB3rOsMBncSuLinqk9UcPP8yDEDhon3mZ9XYBIICZkV4r 0cSMNKFlPcFOusB9uBSWESHArUZJl1Vie3%2FolVTKnWdUOW%2Ftj6uUGA%2Fgd%2FXGoykJ9RAxfKEJCqlsiXlXn6YBjF8u%2FgyBdwdO52JHiV9bLMAxUq1kfm8cAVO4jpdK3sbMgTYE%2FFHKB41z0jB1P3ZvUqEB4etnXiOK1UcnJZ%2F9Aqi%2B0LkknSzJXPktVC1vWCfGjteP5M5ARpsnkjU

M4Dkq73lZqBd7k5VnKT9cM0vd%2F9fpoQxltOMvOAEoXX
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obPSnGlzpH%2BRGaK5l%2FfPc9gYHwfgpqoRNOfQ%3D%3D&X-
Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Date=2020061
3T175953Z&X-Amz-SignedHeaders=host&X-Amz-Expires=300&X-
Amz-Credential=ASIAQ3PHCVTYVIPKF2FL%2F20200613%2Fus-
east-1%2Fs3%2Faws4_request&X-Amz-Signature=dade141e103
58496cf4ebb559d94e4d354c226939f41c7a1669f3d3be15a50f6&ha
sh=e45bed66456db175ca29f248e8a3cdba87786126c9035fadfee
fd3959e70c0eb&host=6804943591013ac2b2430a89b27
0f6af2c76d8dfd086a07176afe7c76c2c61&pii=S1877042813038986&
tid=spdf-5ccf9b95-372d-44c7-96dd-5cf4ac7a5cc7&sid=82b8
04443d7b814e2f8b29530cda4b186801gxrqb&type=client

Mental Health Foundation. (2015, April 7). What is well-being, how can we measure it and how can we support people to improve it? [Blog post]. Retrieved from https://www.mentalhealth.org.uk/blog/what-wellbeing-how-can-we-measure-it-and-how-can-we-support-people-improve-it#:~:text=Wellbeing%20is%20defined%20by%20the,moment%2Dto%2Dmoment%20happiness.

Mishra, I. (2020). *We Need To Start Talking About Teachers' Mental Health*. Retrieved from https://thebastion.co.in/politics-and/why-ignoring-teachers-mental-health-leads-to-a-poor-education/

National Council for Teacher Education. (2015). *Yoga Education Master of Education Programme*. New Delhi, NCTE.

National Council of Educational Research & Training. (2015). *Yoga A Healthy Way of Living*. New Delhi, NCERT.

Raja Zirwatul Aida, R.I., Azlina, A.B., & Siti Balqis, M.N. (2007). Techno Stress: A Study Among Academic and Non Academic Staff. *Ergonomics and Health Aspects of Work with Computers*, *4566*(), 118-124.https://doi.org/10.1007/978-3-540-73333-1_15

Shimalla, A. (2020). *UCF Alumnae Teach Coping Skills during COVID-19 Pandemic*. Retrieved from https://www.ucf.edu/news/ucf-alumnae-teach-coping-skills-during-covid-19-pandemic/

Sokal, L., Babb, J. & Lesley, E.T. (2020). *How to prevent teacher burnout during the coronavirus pandemic*. Retrieved from https://theconversation.com/how-to-prevent-teacher-burnout-during-the-coronavirus-pandemic-139353

Speyer, C. & Zack, J. (2015). Online counselling: Beyond the pros and cons. *Research Gate*. https://www.researchgate.net/publication/265

565618_ Online_counselling_Beyond_the_pros_and_cons/link/
562e9b6008aef25a24444e9a/download

The Economics Times. (2020). *Job loss most severe immediate impact
of COVID-19: Survey*. Retrieved from https://economictimes.
indiatimes. com/jobs/job-loss-most-severe-immediate-impact-of-
covid-19-survey/articleshow/76323649.cms

Walker, K. (2020). *Strategies to Support Teacher Well-Being and
Retention Amid the COVID-19 Pandemic*. Retrieved from https://
www. waldenu.edu/online-masters-programs/master-of-arts-in-
teaching/resource/strategies-to-support-teacher-well-being-and-
retention-amid-the-covid-19-pandemic

Y.L.M. (2020). Covid-19: *What does the 'new normal' mean?*. Retrieved
from https://www.thestar.com.my/lifestyle/health/2020/05/21/covid-
19-what-does-the-039new-normal039-mean

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Covid-19 in the Context of Socio-Political and Economic Perspectives in India: Challenges and Prospects

Sukanya Ghosh

Introduction

Corona virus disease or Covid-19 pandemic is a global health crisis. The outbreak of the disease first took place in Wuhan, China in December, 2019. Spreading rapidly across nations, the disease which has been caused by Severe Acute Respiratory Syndrome Corona virus 2 (SARS-Cov-2) has severely impacted not only the social and political aspects of different states but the resultant "lockdown" in one country after another has made them economically vulnerable too. The UN's Framework for the Immediate Socio-Economic Response to the Covid-19 Crisis stated that, "The Covid-19 pandemic is far more than a health crisis: it is affecting societies and economies at their core". In this scenario, a change in the geo-political stands will surely have its way resulting in a major global disorder. Again since a country's political power depends largely on its, the pandemic will certainly usher in a change in many equations and future trends among nations in several ways as it is leaving no economies unaffected.

Global Perspective (USA and China)

The outbreak of COVID-19 has a detrimental effect in the global standing of both United States of America and China. As per Kevin Rudd, the former Prime Minister of Australia, "neither a new Pan Sinica nor a renewed Pan Americana will rise from the ruins. Rather both will be weakened at home and abroad. And the result will be a slow but steady drift towards international anarchy across everything from international security and trade to pandemic management."

USA

USA has been most badly hit with Covid-19 as it is witnessing the largest number of infected and death. Amidst this, USA's economic conditions have also suffered a severe blow and unemployment has reached its height. These, in turn, raise the possibility of the equation between India and USA getting badly affected. It is quite likely that in such a situation, USA might come down heavily on its immigration work visa. There is already mounting pressure on Donald Trump, the President of USA to close work avenues for outsiders and restrict those opportunities to the locals only.

Severe downturn in Indian economy may also have negative impact on the trade connections between India and USA with respect to arms deals, oil, aviation etc. However, the ray of hope regarding the economic ties between India and USA still being operative, is kept active by the recent investment of $5.7 billion in India's Reliance Jio by US based Facebook amidst this pandemic.

China

The global pandemic has dealt a severe blow to China's economy. China's mis-steps on Covid-19 coupled with the fact that the virus actually originated and started spreading from there, have antagonised several countries. Many have accused China for starting a bio-war and all these have contributed in weakening China's global position. There is now every possibility that there will be a decline in foreign investment, manufacturing and export markets for China. Donald Trump, President of USA, has already threatened to take steps against China and has withdrawn support for World Health Organization as he felt that it was acting as an ally of China in this regard. Japan,

European Union along with others have also expressed their intention of shifting their economic interests elsewhere from China. All these will surely have a toll on China's economy and this in turn will have a bearing on China's political and security policy as they share a close link.

In the face of this global antagonism there is every chance that China may try to diversify the attention of its citizens by adopting an assertive technique against India regarding its external security environment. Such moves are already evident firstly in China's positioning of tanks in the Ladakh region and subsequent outbreak of a semi-war in the region.

India and Regional Organizations

Amidst the scenario where the whole world is likely to face recession, regional organizations which have been established to foster cooperation among states within a restrictive geographical or geopolitical boundary, might be very effective in handling the common challenge.

ASEAN

Association of South East Asian Nations (ASEAN), established in 1967 with its headquarter in Jakarta, Indonesia, is an association of 10 countries (Brunei, Cambodia, Indonesia, Laos, Malaysia, Mayanmar, Phillipines, Singapore, Thailand and Vietnam) of South East Asia. The aim of ASEAN is to accelerate economic growth, social and cultural development and to promote peace and stability in the region.

India launched the 'Look East' policy in 1992 under the leadership of the then Prime Minister of India, P.V. Narasimha Rao. The end of Cold War and the subsequent collapse of Soviet Union prompted India to adopt the policy and plug into the dynamic South East Asian region. This 'Look East' policy was upgraded to 'Act East' policy in 2014 under the Prime Ministership of Narendra Modi. The 'Act East' policy has more focus on implementation of projects of mutual understanding.

In the face of the recent developments and the subsequent turn of events triggered by Covid-19, it is time that India takes a fresh

look at its dealings with ASEAN and try to re-cultivate its extensive economic and strategic relations with the nations of South-East Asia. This might prove to be a counterweight to the strategic influence of the People's Republic of China in the region as well.

SAARC

South Asian Association for Regional Cooperation (SAARC) is a regional intergovernmental organization and geopolitical union of states in South Asia. Founded in Bangladesh on 8th December, 1985, with headquarter in Kathmandu (Nepal), its members include Afganisthan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. The last SAARC summit (19th) was a scheduled diplomatic conference, which was supposed to be held in Islamabad on November, 2016. It, however, got cancelled in the aftermath of Uri terrorist attack as India first boycotted the summit and later Bangladesh, Afganisthan, Bhutan, Sri Lanka and Maldives also pulled themselves out of it.

One positive act with respect to SAARC, in the midst of this pandemic is that on 15th March, 2020, the SAARC leaders (except Pakistan) met through video conference to look into the possibilities of a joint action regarding the disease. It was indeed a positive step to reactivate the SAARC process by holding the first summit since 2014 and creating a C19 emergency fund where India has pledged to donate $10m.

Apart from these, our Prime Minister, Narendra Modi has also utilised the NAM (Non-Aligned Movement) platform for projecting India's 'diplomatic outreach and humanitarian response'.

G20 countries also in an online summit have pledged to invest over US $15 trillion to deal with the economic and social impact of Covid-19.

India's Diplomatic Role

India needs to endorse a policy of strategic partnership and policy flexibility that would ensure India's rise in this scenario. India should consider China's weakened global position as 'a blessing in disguise' to attract more investments. True that Uttar Pradesh is forming an

economic task force on one hand and on another a pool of land is being readied for companies that are thinking of moving their business out of China. But these won't suffice. Following are some of the steps that India needs to take up or have already taken up in order to quickly grasp the changed economic and strategic paradigms of international relations–

• India needs to have large ports and highways, skilled and semi skilled cheap labour and be integrated with major global supply chains.

• India should accelerate its 'Act East' and Indo-Pacific policies.

• India should identify key manufacturing outputs as national security priorities.

• India has provided online training to health-care professionals and shared its medical expertise with smaller neighbours.

• Have ensured medical supplies to over 123 countries including 59 members of NAM.

• Despatched consignments of anti-malarial drug hydroxi chloroquine all over the world both developed and developing countries alike.

• Send teams of military doctors to Nepal, Maldives and Kuwait.

• Extended support in lifting the stranded people from different parts of the world. As per Prof. Harsh V Pant and Paras Ratna, "India's rapid development of C17 Hercules transport aircraft indicates a growing response projection capability and a matching apetite to take on the responsibility of regional leadership".

Findings

After qualitatively analysing all the available sources of informations, data and observations, following findings may be inferred–

1. Global pandemic Covid-19 originated in Wuhan, China in December 2019, which was intentionally or unintentionally suppressed but allowed to be spread globally by the callous attitude of the authority in PRC to gain economic advantage over other global competitors.

2. There has been clear evidence that indicates that there have been widespread research on viruses in the laboratories of PRC, which may or may not have been planned, for developing bio weapons in the future.

3. Global conspiracy of PRC is evident to gain socio-economic advantage over other competitive countries as not a single major city in China got affected by Covid-19.

4. Political courtesy was totally ignored which is not only evident in the case of the spread of this pandemic, but also from various examples of geopolitical aggression of PRC over India, Taiwan, Tibet, Nepal, Vietnam among others.

5. Furthermore, the study of the present pandemic situation unearthed lots of issues regarding the public anger, dissatisfaction, frustration over the government of PRC over the exploitation of labour class from low socio-economic background as they are forced to produce more at a very low wage and are thus subjective to severe exploitation of labour class from low socio-economic background as they are forced to produce more at a very low wage and are thus subjective to severe exploitation.

Conclusion

India has been diplomatic indeed and is skilfully stitching its strategic partnerships amidst this Covid-19 pandemic situation. India has to remain focussed on its objectives without letting domestic or any sort of international political compulsions come in its way. This may certainly propel India's rise.

REFERENCES

https://www.undp.org

https://papers.ssrn.com

www.ijemr.net

www.ipsnews.net

https://www.imf.org

https://hbr.org

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Secondary Teacher Education in India and UK: A Comparative Analysis

Palash Naiya

Introduction

Education is the most important building blocks for a nation, serving as an instrument of economic and social development. Teacher Education is an integral component of the educational system. Teacher Education is a complete professional function that takes place in Pre-service education, induction programme, In-service programme, staff development and continuing education. Goal of Teacher Education largely depends on national goal of development set for the country. This field has been accorded special emphasis on the face of recent social, economic, political and technological advances, particularly the challenges post by information and communication technology and the growing rate of knowledge. Teacher Education is not mere pedagogy or acquisition of a training qualification, but it refers to the totally or educational inputs which contribute to the preparation of a person for a teaching positions in schools. Teacher Education must become more sensitive to the emerging demands from the school system. The Teacher Education has to be considered as an integral part of system of education. Hence education is potent instrumentation

for bridging about may desired changes in the society and teachers are to play a crucial role in the Nobel venture, human rights can be achieved and sustained mostly through education and training. In this context comparative study is necessary to develop our society as well as our country.

Objectives of the Study

The study is based on the following objectives whereas education system, structure, assessment procedure, evaluation system to be imparted. Now a day's situation has changed so we are looking forward in modern trend in Teacher education. The following objectives of Secondary Teacher Education as below.

1. To discuss objectives of Secondary Teacher Education of India and UK and to make a comparative study.

2. To illustrate and narrate the Organizational Pattern of India and UK Secondary Teacher Education System and to make a comparative analysis.

3. To evaluate comparatively the Status of Secondary Teacher Education System at present in India and UK.

4. To develop skills and competencies for using teaching methods, techniques and teaching aids in the classroom.

5. To develop the abilities to deal with the problems of classroom teaching by using action research.

6. To develop the right type attitudes and feelings for national integration and international understanding.

7. To separate objectives of teacher education for pre-primary, primary, school and college teachers.

Review of Related Literature

This paper evolve tried to review related literature to determine the recent development of Secondary Teacher Education in India and UK. Here few survey reports to justify the reason for taking his research problems as original like: The researcher has gone through a number of literatures on Teacher Education Programme in different countries to find out the actual knowledge gap about the research

problem. After reviewing literature the researcher found that so many research works had already been done on Secondary Teacher Education in India and UK has yet been observed by the researcher. So the researchers decided to select the topic her study as given below: "SECONDARY TEACHER EDUCATION SYSTEM IN INDIA AND UK: A COMPARATIVE ANALYSIS".

Methodology

The study was carried out India and UK based comparative analysis. The researcher followed the document based analytical research methodology. Many secondary data were collected from The British Deputy High Commission (Embassy of UK, Kolkata) and Department of Higher Education, Government of West Bengal. In this methodology of research, the researcher browsed different books, magazines, journals, researcher paper etc., to explore the finding of these work. The researcher used as a background material the modern published books written by several authors in India and UK. The materials were collected from the study of Library of the Department of Education, Central Library of Kalyani University, Journal Section of National Library, Kolkata and Library of JNP College of Education. The study was based on the basis of following research questions:

1. What are the objectives of Secondary Teacher Education in India and UK?

2. Are there any resemblances between organizational pattern of Secondary Teacher Education in India and UK?

3. How much opportunity does the Secondary Teacher Education systems of the two countries?

Objectives of Secondary Teacher Education in India and UK

The nature and aims of Education of a country are conditioned by their social needs, ideas and aspirations. The case of UK is not expectations to this. Therefore in order to understand nature and objectives of Teacher Education in UK, we have to understand its culture, civilization and changes that have taken place in its social, political and vocational traditions.

Objectives of Secondary Teacher Education in India: In the beginning individual's effort played a major role in the development of Teacher Training in our country. At first activities was given to the training of primary school teacher for this purpose Dr. Kane (M. Abbaskhas, Modern comparative education) established a normal school at Srirampur. After this a teachers training centre in 1819 Thomas Murre open a central school in Madras for training of teachers. The Hertzog Committee 1919 and the Calcutta University Commission of 1918-1919 for the emphasized the importance of Teacher training in their reports. In free India Radhakrishnan Commission, L.S. Mudaliar Commission and D.S. Kothari Commission gave valuable suggestion in the field of Teacher Education. In 1995 established of an autonomous body NCTE has a new milestone of a teacher education in India. Teacher education in India developed through the mode of Pre-service and In-service. All the teacher education institutions, should meet the norms and standards developed by NCTE for quality control. Major objectives are:

1. Teacher should be professionally equipped to counsel, guided and monitor the student skillfully and sympathetically and construct knowledge, skills and values that are expected from them.

2. Reorganization and Incorporation of content come methodology courses in teacher education programmed which should enrich teacher's professional skills in addition to the formal University/ institutional degreed in their respective subjects to teachings.

3. Provision of In-service, Pre-service and continuing teacher education programme and alternative mechanism of distance modes of education for regular refreshment of teacher's content knowledge and pedagogical skill.

4. Developing linkage among the sister institutions and universities to break isolation among teachers fraternities.

Objectives of Secondary Teacher Education in UK: In England the standard of school education is sufficiently high but the teacher education want to further raise their standard. Robbins Committee report and the James report reflected new era of teacher education. In early period monitorial system make expertise teachers. Under the

system, a manner of senior pupils, called 'monitors', were first taught a number of elementary facts or words to be spelt by heart. Now a days most of these training centre's were 'Institutes of Educations' while the remaining were known as, "School Education" while the institutes of educations were under the direct control of their respective universities, the school or education functioned under Ministry of Education. The professional model of teacher competences (section 2) has provided the basis for teacher education since the start of the 1996-97 academic year, and the arrangements for early professional development (the third stage of teacher education) commenced in 1998-99. The teacher education courses had grown very sensitive to the energizing needs of the changing times efforts to strike a balance between theory and practice. New courses like QTS, PGCE etc. Major objectives are:

1. To provide the theoretical awareness of teaching philosophical, psychological and economic foundation of education.

2. To develop the abilities to deal with the problems of classroom teaching by using action research.

3. To develop the right type attitudes and feelings for national integration and international understanding.

4. To provide separate objectives of teacher education for Pre-primary, Primary, School and College teachers.

   Comparative Analysis: The objectives of teacher education in India is very wide and specific. The basic aims of teacher education in India are to prepare good human beings, skillful human resources, responsible citizen and improving teaching learning system where as the aims and objectives of teacher educations in UK are more specific, systematic in nature; more emphasis has been given in around development of teacher. In UK more emphasis has been given to enhance their qualities of life development of skill and competencies for using teacher methods technique and teaching aids. As well as the development of social, political, philosophical responsibility of individuals and to prepare separate teacher education programme for vocational teacher. Through the teacher education India trying to moderate the future generation keeping the traditional, spirituals values and morality impact.

Organizational Pattern of Secondary Teacher Education in India and UK: Structure, Curriculum, Assessment and Evaluation System of Secondary Teacher Education in India

Structure: NCERT, SCERT, National Institute of Education and Regional Institute of Education are the major, principle research development institutions in all the states of our country. They brought significant improvement in the curriculum and text book of school as well as teacher education. Now a days National Council of Teacher Education (NCTE) deals with all the phenomenon of teacher education such as Internship, practice of teaching, practical activities and supplementary educational activities, faculty improvements programme, and research work. At present District Institute of Education and Training (DIET) and IASE are given the responsibilities of providing perspective training and In-service training at primary level of elementary school teachers and for personnel employed in non-formal and Adult-Continuing educational programmes. In India, there is one lecture for foundation courses; six lectures for methodology course are required for 100 students in near about 1:7.

Curriculum: India has one of the largest systems of Teacher Education in the world. Besides the Universities developments and their affiliated colleges Government, Government aided institution, Private and Self-financing institutions, Open and Distance universities are engaged in Teacher Education. The revamping education curriculum has set up become need of the hour the orientation has to be towards risible shifts from information based constructivist orientation. The design and practice of current teacher education programmes is based on certain assumption, which impede the progress of ideas and the professional personnel growth of the teacher. Language proficiency of the Student-Teacher adequate and therefore need to be concern those who educated teachers. The medium of language of curriculum must be in English or any regional language. Existing programmes of teacher educating treat knowledge, embedded in the prescribed school curriculum of different states as well as whole country. Drafted curriculum frame work for secondary teacher education 33 providing the first hand experiences of teaching to a student teacher, but also for providing an opportunity to perform the multiple roles of a teachers. It may be mention in this regards that the

Acharya Rammurti Committee (1990), a review of the NPE 1986 has observed that an internship model (teacher education) is firmly based on the primary value of actual field experience in a realistic situation, on the development of teaching skills by practice over a period of time.

Assessment and Evaluation System: A glaring weakness of existing teacher education practices in the restricted scope of evaluation of student teaches audits excessively quantitative nature it is continued to measurement of namely cognitive learning through annual/terminal/semester test skill measurement is limited to a specified number of lessons. The qualitative dimensions of teacher education other professional capacities, altitudes and values remain outside the preview of evaluation. Evaluation of teacher education needs to be objective and comprehensive to cover the developing dimensions in the teacher trainees covering the conceptual, pedagogical aspects, attitudes, habit and capabilities in a teacher incorporating both the qualitative and quantitative dimension. These include: engagement with children in their contexts, school curriculum, text book process of learning and knowledge, psychological, professional development, understanding institutional arrangement, policy perspective, and pedagogy and curriculum assessment should covered understanding of the process of child development nature of student thinking.

Table 1: Short Evaluation Formed for Evaluation

Sl. No	Form of Evaluation	Marks
1.	The knowledge about topic	5
2.	Appropriate use of Audio- Visual aid used	5
2.a)	Principle of Audio –Visual aid used	2
2.b)	Appropriateness	1
2.c)	Neatness	1
2.d)	Clarity	1
3.	Adequate international from journal activities	5
4.	Organization of content	5
5.	Interaction with the students	5
6.	Feedback of the students	5
7.	Discussion of the references myself	5
8.	Class room management	5

Source: The author compiled trough based on evaluation effectiveness.

Structure, Curriculum, Assessment and Evaluation System of Secondary Teacher Education in UK

Structure: The teacher education degree programme of secondary school teachers (subject teachers) includes one major subject (at least 120 ECTS) plus a Master's thesis in their own academic discipline. Additionally they must complete one or two minor subjects comprising at least 60 ECTS in one subject. It also considers the role of the school in local community and the degree of school choice. Eight English educations has five sectors: Pre-school, Primary schooling, Secondary schooling (includes sixth from colleges), further education colleges and higher education institutions. The majority of schools are maintained by the state but there are also independent fee-paying schools. All maintained schools are formed a governing body whose constitution is specified in the Instrument of Government. The management and funding of schools under the Department for Children Schools (England) regulation 2002/2003, schools standards and Frameworks Act 1998. Schools are mainly funded through local authorities and local authorities receive a grant from central government. The governing body is also responsible for taking a strategic view in relation to school improvement as well as financial planning, infrastructure development. The school admission code (DCSF, 2010) supports the strengthened framework that ensure all school adopt fair and lawful admission practices.

Curriculum: The current National Curriculum came into place under the Education Act 2002 and includes the programmes of study and attainment targets for each subject and key stage. In recent curriculum offered into four key stages (KS):

- Key stage 1: Ages 5-7 (years 1-2)
- Key stage 2: Ages 7-11 (years 3-6)
- Key stage 3: Ages 11-14 (years 7-9)
- Key stage 4: Ages 14-16 (years 10-11)

The core subjects as Key stages 1 & 2 are: English, Math and Science; the foundation subjects are: ICT, Design and Technology, history, geography, art, music and physical education and religious education on demand of local inhabitants. At the Key stage 3, core subjects are English, Math and Science; foundation subjects are Design

and technology, ICT, history, geography, foreign language, art, music, physical education and citizenship. At key stage 4, core subjects are: English, ICT, math, science, citizenship, physical education and religious education and careers education and sex education are the compulsory (education.gov.uk).

Assessment and Evaluation System: The most common exam for post compulsory education is General Certificate of Education Advanced-level (A-level) for two years. Advance Subsidiary (AS-level) qualification for first year of post-compulsory education. At key stage 1 & 2 test sets are conducted by external agency appointed by the Qualification and Curriculum Authority (QCA). Key stage 3 test are no longer compulsory but tests are available to schools who wish to use them. In teacher education student teacher complete the second and the final stage of their training with the second state examination. The examination committee is the chaired by a representative of school inspector from the state education ministry. Other member of the examination committee include the head of the seminar, two subject mentors, the head teacher of the school involved and one teacher whom the student chooses. This include Pre-examination grade, Thesis grade, Oral examination grade, Grade for lesson plans and observed lessons in two subjects.

Comparative Analysis: In National Council of Teacher Education is statuary body which regulates courses in teacher education in India whereas the Ministry of Education and Higher Educations are responsible for the design of the Teacher Education in UK. Student-Teacher ratio in India is approximately 1:7 in each training colleges. Whereas the ratio in UK is 1:23. India and UK both are more emphasis in the context of Theoretical and Practical dimension. Medium of instruction in India are Mother tongue or Regional language and English. In UK are teaching medium of Instruction are mainly English and regional language and also foreign Language. Course duration of Teacher Education is generally two years now NCTE has proposed four years integrated in India. But UK Teacher Training course duration is 6 to 7 years of all type school.

Discussions

The major findings are these paper tries to analysis the objectives of Secondary Teacher Education in India and UK. In the both countries aims and objectives are systematic and specific nature where, desire

to trained the student for democratic citizenship, moral development, development of leadership qualities and to develop true patriotism. There has dissimilarities in organizational pattern of secondary teacher education such as curriculum construction, student teacher ratio, medium of instruction, course duration, assessment and evaluation system etc.

Suggestions for Betterment of Indian Secondary Teacher Education System

In our country the role and responsibility of teachers and their professional competence in the matter of comprehensive development of education. Some necessary suggestions are

1. To enhance the institutional capacity available at present for ensuring the adequate supply of trained teacher for all levels of school education.

2. To utilize all possible kinds of institution including universities, teachers training institution in private sector, college of secondary teacher education and IASE.

3. To envision a comprehensive model of teacher education, utilizing the Chattopadhya Commission report and updating its perspective and ensuring that progress toward a new, comprehensive model is parallel by necessary modification in policies or teacher recruitment development and services condition including an emoluments.

4. Programme of TEIs should focus on education of children with special need in the teacher educations programme at different levels. Qualified faculty should be appointed in the RIEs, DIETs, and SCERTs for catering the needs of children.

Conclusion

Any comparative study riches the poor one in a different aspects and help to know what are necessary to add or subtract or replace. The need is for every teacher is to be transparent, accountable for the effectiveness of what happens in the class situation. The study shows that the system of Secondary Teacher Education in UK is much better than India. Consequently, a suggestion list is prescribed in this era. Hopefully, it riches Indian Secondary Teacher Education in an optimal way.

REFERENCES

Abell, S, K. & Pizzini, E, L. (1992). The effect of a problem solving in-service program on the classroom behaviors and attitudes of middle school science teachers. Journal of Research in Science Teaching, 29(7), 649-667.

Aggarwal, J, C. (1995). Education Policy in India. Shipra Publication, New Delhi.

Aggarwal, J, C. and Aggarwal, S, P. (1992). Educational Planning in India with a Slant to Educational Financing and Administration**.** Concept Publishing Company, New Delhi.

Anderson, J R, Greeno, J G, Reader, L M, & Simon, H A, (2000). Perspectives on learning, thinking, and activity**.** Educational Researcher, 29, 11-13.

Assessment, Evaluation and Curriculum in UK, from: http://news. bbc. co.uk/1/hi/7232661.stm, retrieved on 10th June, 2020.

Assessment for Learning Strategy from: http://www. standards. dfes. gov.uk/secondary/keystage3/repub/englishpubs/ass_eng/, retrieved on 16th June, 2020.

Barnard, H, C. (1955). A Short History of English Education: From 1760 to 1944. London, University of London Press Ltd.

Behn, R. (2001). Rethinking democratic accountability. Washington, The Brookings Institute.

Bichard, M. (2004). The Bichard Inquiry Report. London Stationary Office.

Chaube, S, P. (2003). Comparative Education.Vikas Publishing House Pvt. Ltd, Mumbai.

Carr, W. & Hartnett, A. (1996). Education and the struggle for democracy, The Politic of Educational Ideas. Great Britain, Open University Press.

Educational Policy and Structures in England in UK from: http:// publications. teachernet. gov. uk/e Odering Download/Primary % 20 and % 20 Secondary % 20 School % Admission.pdf, retrieved on 11th June, 2020.

Purkait, B, R. (2001). Milestones in modern Indian Education. New Central Book Agency, Kolkata.

Sharma, Y, K. (2006). Comparative Education: A Comparative Study of Educational Systems. Kanishka Publication, New Delhi-110002.

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