Analysis on the Conditions of Online Teaching Methods

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ABSTRACT

In 2020, the eruption of the COVID-19 pandemic has caused billions of students out of school. Thus, online education became imperative and how to insure its quality came into spotlight. In this paper, attentions are focused on various aspects, such as targets, models and the efficiency of online teaching methods. By benefiting from previous theories and looking at survey' s reports, analyses are made and suggestions are put forward. Results came out that online education should combine with era backgrounds and make the best of advanced technologies while keep exploring the most appropriate mode.

Keywords: *Online teaching method, education theory, targets of education, teaching models, COVID-19 pandemic*

1. INTRODUCTION

With 91.3% of students being affected and 194 country-wide school closures, according to the data published by UNESCO by April, the eruption of the COVID-19 pandemic had caused havoc on the global education system[1]. That an unprecedented amount of learners dropping out of school is putting "Globalization of Education"and "Global Education", proposed by the International Commission on Education for the Twenty-first Century, at risk, even despite the fact that human have never actually reached that paradise. Online teaching, it seems, is the only channel to bridge this irreparable education chasm under the circumstance in which students are enforced to stay at home. Even though teachers together with students have already been fully acquainted with technological teaching facilities, relying solely on the latter unavoidably appears to be an enormous challenge as well as uncertainty.

In order to advance in Quality Education while maintaining the accomplishments on Sustainable Development Goal 4, it is significant at the time not only to concern about accesses, but the completion of online education and learning outcomes of online teaching methods as well. The traditional "chalk-and-talk" pattern accompanied by the "plug and play" method should not be simply replicated from live classrooms to screens in terms of online teaching[2]. This article tends to argue the necessity to trace back to the theories and ideologies of previous scholars and scientists so as to draw inspiration from the old wisdom. Focus is to be placed on three major dimensions and possible solutions to current issues confronted online teaching.

1.1. Targets of Education

1.1.1. The involvement of "development"

As Leonardo da Vinci once said, "theory is the officer, practice is the soldier". Apart from the teaching environment, explicit targets under the guidance of suitable theories are the core of qualified online education. In the 18th century, Jean-Jacques Rousseau brought up the idea of Naturalistic Education. It was stated in his theory that humans are born liberal and equal with uncontaminated minds, whereas the process of civilization inevitably became the breeding ground of evil. Rousseau advocated educating children to get back to nature, meanwhile gain further self-development through education. When it comes to the 19th century, Karl Marx tended to combine education with labour and production, which to certain degrees, had an obvious political overtone. As globalization accelerated, scientists from the 20th century gradually concentrated on more specific aspects, varying from the psychology of students themselves to the composition of information they shall get. Human is viewing education from much more comprehensive perspectives, but there is an extremely crucial part missing, which is the insight into development on teaching.

1.1.2. Times of development

Though Lev Vygotsky put forward this eminent concept of "Zone of Proximal Development" in the early 1930s, he simply suggested a way to promote children's advance based on analysis of their current intellectual level and potential. However, that "development" mentioned is still trapped in one tiny yet arduous "self-development" circle where the outer space is mistakenly neglected. In this extraordinarily advancing world, education should be more

about catching up with general pace and helping individuals coordinate accordingly while opening their horizon to the unpredictable future. Chan Korsakov, the leading figure of one of the three modern education theory schools, pointed that pedagogy should not focus on the yesterday of children's development but on the tomorrow of children's development. More importantly, the tomorrow of the globe must be taken into account. It is overwhelming at the mere thought of the labour market in 2050, when perhaps manual jobs are exclusively replaced by automated machinery and mental work is mostly taken over by super algorithms and AI. As for other fields, such as environment, politics, international relationships, global catastrophes and so on, what is unthinkably alarming is that few are able to tell the trends of the development in these areas. "If somebody describes the world of the mid-twenty-first century to you and it sounds like science fiction, it is probably false. But then again, if the world described to you doesn't sound like science fiction, it is certainly false[3]", Yuval Noah Harari commented the future quite ironically but accurately in his book. Thus, education is no longer simply playing the role of eliminating illiterates, it is as well the only weapon new generations got in the face of uncertain development of their futures. The most vital thing to be clarified is at what direction should the weapon aim.

1.1.3. Possible adjustment

Firstly, sustainability is the premise to the survival and livelihood of education.   Considering the frequency of the advent of recent natural disasters and man-made misfortunes, how to sustain education continuity without being dislocated by meaningless events is to be taken into consideration. The Incheon Declaration committed the importance of building a resilient education system with the ability to submit opportune emergency response[4]. Online teaching seems to be the only as well as most ideal way in response at presence. Additionally, how to sustain the quality of education via online measurements while maintaining its flexibility matters a lot. Take the North China University of Science and Technology for example, multiple means are used to ensure that students have constant feedback of courses. Teachers release information on Learning Through, an online learning platform, at the meantime sending messages in Wechat and QQ to get them across to the ones that have no qualified network[5]. Obviously, educators cannot focus barely on traditional teaching methods any longer. They need to be trained and equipped with the right tools when it comes to contemporary ways of teaching, for the development of education needs to match as it is of the times.
Secondly, the development of students themselves is the essential remedy to any issues occurred. Information is no longer of any basic in education at a time when all resources are accessible to every single individual. Ability to find information is what matters the most. As was emphasized in Learning: The Treasure Within, transformation have to be made from skills to

competencies[6]. For instance: competence in lifelong learning, since that's the only means of acquiring fundamental living skills in the near future; competency in integrating into the society, as Jacques Delors said in his report on 21st century's education that education was seen as an ideal way to fulfill people and build relationships between individuals, groups and nations[7]; competency in transforming the environment, as the youth shall be the master of the future and its development. Therefore, assisting students to keep pace with the development of times by developing their own essential abilities should be the primary element of the education target.

1.2. Teaching Model

1.2.1. Popular teaching models

Current teaching models can roughly be classified into two categories: examination-oriented education, with China and Southeast Asian countries as representatives, and discussion-oriented education, with western countries on its behalf. Human will have to learn how to coexist with the coronavirus, for the pandemic is likely to remain for decades, claimed the World Health Organization. Therefore, it is urgent for educators to figure out models for online-teaching, especially with 1.5 billion students throughout the world. There is no denial of the strengths of the two models above in genuine classrooms, yet copying them both in terms of online teaching tells a contrary story. For the examination-oriented model, seemingly the "lecture-given with message-received" pattern remains the same. However, the precious eye-contacts and the few interactions between members in the class, which to some extents are the only lively colour in the learning process, extinguished. Just as literature, education should not primarily consisted of experientialism and utilitarianism[8]. Or else it may turn students ultimately into a monotonous information-accumulating machine and lead to a total failure. For the discussion-oriented teaching model, enormous difficulties are to emerge when usual forms like collaborations, experiments, discussions, debates and so forth are mostly inaccessible. With a common sense to meet the requirements and respect the willing of every individuals, studying tends to be flexible and optional. Thus, self-discipline inevitably becomes the only confine students have when they are away from school, which may result in polarization. In sum, neither Eastern nor Western education model can necessarily be certain of ever positive outcomes as online teaching is involved.

1.2.2. Roles which parents play

Another factor that is worth of considerable attention is the cooperation between parents and schools, namely, the dependence educators have on parents in regard to online education. New generations are particularly good at

technologies since they are the ones witnessing the rise of the technological kingdom. Nevertheless, when it comes to kindergarten pupils and primary students who have not even learned all the basic characters they bound to confront yet, the situation gets worse off. As parents are the only helpers they have got at home, relying completely on them to attend classes, take notes and do schoolwork naturally became the only choice. It must be pointed out that adults are faced with the task of supporting the whole family. Online education should not become the burden or addition to their stress, rather, it is the duty of teachers and schools to develop kids' independence in support of work forces and free them from the trap of avoidable concerns.

1.2.3. The ideal model

Considering these issues from different aspects, possible scenarios are given as follows. Firstly, humans should not restrict themselves from unfamiliar thoughts or ideas, including teaching models. As for online education, the combination of flexibility and administration is the top choice. For instance, some schools offer students optional after-class homework to help some of them consolidate knowledge while uploading weekly compulsory test paper to supervise everyone's studying[9]. Jean Piaget, a famous child psychologist from Switzerland, suggested that children's development is necessarily the process and result of children's active construction. Under that point of view, conducting students to make the most of Internet resources is the wisest choice during this precious period of time. Students should be encouraged to dig into the fields they are interested in and given the freedom of choosing on their own with the help of the internet, apart from finishing regular school assessments. While teaching students in accordance of their aptitude, following certain properly set digital timetable is a way to insure that everyone is catching up. Testing systems are vital which can act as motivations, but they could be programmed in a more creative way, whose only purpose is to test whether students are truly improving, no matter in what facet. Secondly, schools should seize the opportunity to arouse parents' sense of responsibility for their children' s education. With limited resources and education background, some parents are struggling with assisting teachers with courses that require basic knowledge[10]. However, it is practicable for all parents to help the school in fields of labour, cooking and essential living skills. Among the three most common parenting approaches, known as dictatorship, indulgence and democracy, democracy and collaboration shall be advocated[11]. By involving parents in the process, problems solving which used to count solely on family-school communication can imperceptibly be dealt with simply through parents-children cooperation.

1.3. Teaching Effectiveness

1.3.1. Participation

As students around the world are being blocked from schools, billions of them have turned to online courses. "Information and communication technologies (ICTs) must be harnessed to strengthen education systems, quality and effective learning and more effective service provision", appealed the Incheon Declaration[4]. And there indeed are doubts on whether online teaching methods are really contributing. Considering the distance between teachers and students as well as sizes of classes, interactions seem pretty unapproachable. According to a research concerning 15 million senior students in Mianyang, China, only 5% of them are reported to be able to get frequent communications and contacts with other members[12]. This largely reduces students' sense of participation and even real participation in listening to lectures. For classes that do hold live streaming, however, the delay of videos and slow speed of Internets serve as distractions and interference to users. After all, In consideration of the fact that 20% of the students do not have qualified facilities, most teachers tended to give up teaching simultaneously. As a result, 30% of students are not or not fully satisfied with online teaching.

1.3.2. Psychological well-being

Apart from the diminution of vision, damage to psychological well-being acts as a even more insidious threat to all subjects involved, such as teachers, students and parents. For teachers, they are faced with multiple tasks which have to be finished ahead of schedule in order to prevent technical issues happening. A professor from University of Calgary complained that his campus was given as little as 48 hours to convert several weeks of remaining work into digital sphere[13]. Although collaborations among teachers may partly alleviate their overall workload, mental stress are unavoidably skyrocketing. From struggling to master all functions of online teaching platforms to devise novel ways to present the best forms of classes while worrying about their students' performances, teachers are truly unprecedentedly stressful and exhausted. For students, being isolated from the outside society can also cause them severe anxiety, regardless of the toughness in terms of their comprehension of courses. A research which involved 3512 middle school students in Sichuan province showed that 23.80% of them have symptoms of psychological problems during the COVID-19 outbreak. This figure rises to a staggering 53.19% when it comes to the percentage of students who face online education pessimistically[8]. The constructionism teaching theory emphasizes the significance for students to construct knowledge under different circumstances. While this is impossible, learning as well as mental problems are likely to occur.

1.3.3. Possible solutions

Most of the problems above can be roughly concluded as the result of the lack of social communication. Lev Vygotsky was aware that people's psychology is developed in activities and the process of interaction between people. His theory of cultural history of psychological development illustrated why environment is crucial to education. Therefore, two scenarios are brought up in this thesis.

Firstly, going back to the most simple and traditional method, group work. This does not necessarily mean getting together in one chatting window, rather, it is more about teamwork, division and cooperation. Once a student belongs to a specific group with a specific task to do, working on a part of the group's assessment would be a mission and duty for him or her instead of a burden, which can act as a motivation for participants and can improve the quality of their learning. Secondly, make the most of the development of 5G and VR to take up immersive learning method. Though this may seems like an approach to be implemented on a nationwide scale in the future, governments have already accelerated the generalization process. For instance, Chinese government has published the Notice on organizing and implementing new Infrastructure Construction projects (Broadband Network and 5G) in 2020, since the OMO(Online-Merge-Offline) mode is likely to last for decades to come and become a normalcy.

2. conclusion

In sum, how to make sure the quality of online education is the matter we must confront for there is no compromising on any aspects of it.

In the first place, educators need to bear it in mind that this is an era of changes. Helping students to develop necessary competences so as to keep up with the development of the world is far more crucial than accumulating knowledge. Leading new generations to keep a watchful eye on the advancement of the current age while foreseeing the future shall be taken seriously. Second of all, online education provide us with a chance to inspect the teaching modes we had more objectively. It is urgent to find a moderate pattern between the examination-oriented model and the discussion-oriented teaching model. For online teaching, this is the only path which can lead to students' improvement in both industriousness and activeness. Last but not least, 5G and VR technologies is carrying our illusions for the ideal online education efficiency. The conflict between scientism and humanism can be transformed into the breakthrough in online education, which can thoroughly change the status quo of having lack of participation and much depression. Human still has a long way to run in terms of online education, for that is bound to be a permanent method we would have to take advantage of.

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