Emerging Trends

YOUTH

Thoughts on Education, Technology, Sustainability and More

CENTRE FOR ESCALATION OF PEACE | CEP

Youth-The Emerging Trends:
Thoughts on Education, Technology, Sustainability and more

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CONTENTS

INTRODUCTION

Centre for Escalation of Peace takes the view that peace is not just the absence of war. Peace cannot be taken for granted; constant effort is required to enhance it as an anchor in a sea of rapid and far-reaching strategic and socio-economic change. As such, peace must not merely be sustained, but escalated through various strategies and tactics akin to the pursuit of victory during war.

Centre for Escalation of Peace invited young scholars to contribute their thoughts, ideas and experiences through original articles to be put together in the form of an e-book. Aptly titled *Youth - The Emerging Trends*, the e-book seeks to highlight various topics important to the youth and showcase how they think regarding these themes. The e-book contains twelve chosen articles by youth of varying ages and backgrounds - the youngest is in Grade 6 while the older ones range from those in college to those working in the education sector or the environmental sector. The focus of the articles are diverse, with recurring themes being education, technology, climate change and sustainability.

We hope you enjoy reading these articles as much as we enjoyed putting the book together. The aim in making this book accessible to anyone is the faith that those who wish to are able to utilize it for the betterment of society.

CLICK HERE TO GO BACK TO CONTENT PAGE

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I. ARTIFICIAL INTELLIGENCE IN EDUCATION AND ITS IMPACT

ANKIT KHANDELWAL

Abstract

In this paper, the brief Introduction of Artificial Intelligence (AI) has been discussed from the perspective of educational needs. As we all know, Artificial Intelligence (AI) is the branch of Science that studies the machines aimed at the stimulation of the human intelligence process. The field of Artificial Intelligence in education (AIED) has advanced significantly over the last twenty-five years. As we all have to work where Artificial Intelligence (AI) is the reality in the future, it is essential for our educational institutions to aim to use Artificial Intelligence along with its technologies in our education system. This paper provides an overview of research on AI applications along with its techniques and terminology in higher education through a proper and systematic review. This review paper combines articles with respect to the integration of Artificial Intelligence in education.

Keywords

Artificial Intelligence (AI), Machine Learning (ML), Artificial Intelligence in Education (AIED), Intelligent Tutoring System (ITS), Natural Language Processing (NLP).

Introduction

"Teachers will not be replaced by technology, but teachers who do not use technology will be replaced by those who do."

– Hari Krishna Arya

As of today, higher education is primarily connected with innovative technologies along with intelligent machines. That's why Artificial Intelligence (AI) provides us with new opportunities and a brilliant vision along with challenges for teaching and learning from the perspective of education. Artificial Intelligence makes every system more reliable and faster. Along with this, Artificial Intelligence provides new solutions and better vision to existing challenges or problems. Artificial Intelligence helps us by making our lives more efficient in such a way that we live happier, healthier and more productive lives.

The current review paper presents an overview of Artificial Intelligence (AI) along with its applications and technologies and terminologies from the perspective of educational needs. Moreover, Artificial Intelligence has the capability to make productive changes in educational institutions.

Artificial Intelligence in Education (AIED)

The term AI was born in 1956 at a workshop at Dartmouth College organised by John McCarthy in the USA. In this workshop, McCarthy used the term Artificial Intelligence for the first time.

According to Baker and Smith, the definition of AI is, "Computers which perform cognitive tasks, usually associated with human minds, particularly learning and problem solving." According to them AI is not a single terminology. It is an umbrella term for technologies and methods such as Machine Learning, Data Mining or Algorithms etc.

Today, in higher education, students face a lot of problems and challenges related to technologies for learning and teaching. Human-AI interaction is taken as a major solution that can assist us in the world of technology. AI can encourage us to continually enhance our learning and teaching practices with the help of relevant technologies. A wave of new opportunities has emerged in the field of education and research using AI in education (AIED). AI has enabled us (learners and teachers) to use technology more efficiently and effectively.

AI Techniques and Terminology

Artificial Intelligence (AI) plays a very crucial role in designing personal conversational, educational assistants who can offer teachers and learners impactful aid in education. The goal of Artificial Intelligence includes learning, reasoning and perceiving.

The top four techniques of Artificial Intelligence are:

1. Machine Learning
2. Natural Language Processing (NLP)
3. Automation and Robotics
4. Machine Vision

Machine Learning:

Machine Learning (ML) is an application or a subset of Artificial Intelligence (AI) that encourages or allows machines and technical equipment to learn from data without being programmed explicitly. Machine Learning (ML) extracts knowledge from the data. It enables the computers to generate predictions or make decisions using past or historical data or experiences. There are generally three types of Machine Learning (ML):

1. Supervised Learning
2. Unsupervised Learning
3. Reinforcement Learning

Natural Language Processing (NLP):

Natural Language Processing is a subset of Artificial Language that deals with the interaction between computers and humans using Natural Language. The main focus of NLP is to understand or learn the basic or natural human languages of human beings in a way that adds value to the process. Computers are able to read text, hear speech, or measure sentiments through only NLP.

Automation and Robotics:

Automation is a process of doing/performing those tasks, which are usually done by humans, by using computer software, physical machines or other technologies in an easier and more efficient manner.

Robotics is the process of creating, designing and using robots to perform tasks.

Machine Vision:

Machine Vision is a technology which provides imagined-based automation inspection and analysis. It is the capability of the computer to recognize the environment.

Some major Artificial Intelligence terminologies are:

a) Algorithms
b) Cluster
c) Deep Learning
d) Cognitive Science
e) Chatbots

As we have come across many techniques and terminologies of AI, many of them are very important in AIED as they play a vital role in the education field, from the very basic all the way to advanced levels. Some of them will be discussed or mentioned further in the next topic.

Applications of Artificial Intelligence in Education

1. The Learner Model:

It is a structured representation of knowledge, skills, experiences, and hurdles faced by the learner. It is also known

as the Student Model. The main focus of this model is to know the strengths and weaknesses of a learner.

2. The Domain Model:

   A domain model is a theoretical model that includes both data and behaviour. It is the depiction of meaningful real-world concepts that need to be designed in technology.

3. Intelligent Tutoring Systems:

   Intelligent Tutoring Systems are computer-based educational systems that yield instant customized instruction or feedback to learners or students.

4. The Pedagogy Model:

   The Pedagogy Model explains what productive and skilled teachers perform in their classrooms to encourage students in intellectually challenging work. It is the overview of a learning cycle.

Conclusion

This paper surveyed various applications along with technologies and terminologies of Artificial Intelligence in Education (AIED). The main aim of this review paper was to know the impact of Artificial Intelligence in the field of education. This paper presented an overview of the techniques such as Machine Learning, Machine Vision, and Robotics.

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CLICK HERE TO GO BACK TO CONTENT PAGE

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2. DISCUSSION OF THE POWER OF NOW BY ECKHART TOLLE, WITH SELECTED EXCERPTS

SHIKHAR NAYAK

The body that I am submitting this piece to was founded in the name of "The Escalation of Peace", and I can think of no one more dedicated to and impactful in the service of this very cause than the highly influential spiritual teacher and author, Eckhart Tolle. I will proceed to discuss his bestselling meta-guide to life, *The Power of Now* – and what better time to do it, than now. Or, after a brief parenthetical note.

(If my discussion of the book seems a tad uncritical, this is because in my nine years of reading and referring back to it, I have found no serious fault with it that was not later revealed to be a fault of my understanding at the time. It is after a number of these he-was-right-about-that moments that I was personally convinced of the impeccable wisdom of the author, and that I have written this.)

This unique spiritual book, and its author in his talks and online videos (which are all charming and captivating), give very helpful, and *wise* teachings, which are delivered in a manner that is quite free of dogmatism and cultishness. Far from coming down from a larger-than-life "guru" figure, these teachings come in a most ordinary guise. In both his usual attire and the spirit of the plainness of his words, the author prefers simple sweaters to ostentatious religious garb, or anything such.

But beneath their besweatered prose, these pages convey hard-hitting, transformative truths that, I can personally verify, could help a person pick themselves up from rock bottom, or, in less dire straits, simply deal more effectively with the challenges of everyday life, and make the most of their days.

This is how the book came about: one night at age twenty-nine, Tolle, then severely afflicted with anxiety and depression, woke up with a persistent thought: "I cannot live with myself any longer." This thought, needless to say, came out of a deep pessimism. However, Tolle then became aware of the peculiar duality of "I" and "myself" in this statement, as though there were two of the person, one who *lived* with the other. This led him to an epiphanic realization about the ultimate unreality of the mind-made sense of oneself, and the rest of his insights came to him subsequently. After his realization, Tolle states that, impressed by his aura of peace, "People would occasionally come up to me and say, 'I want what you have. Can you give it to me, or show me how to get it?' And I would say, 'You have it already. You just can't feel it, because your mind is making too much noise.' That answer later grew into the book [*The Power of Now*]."

The book is written in an accessible question-and-answer format, where Tolle compiles and addresses, in a logical sequence, the questions that people have asked him in seminars, meditation classes, and private counselling sessions over the years.

As we review these teachings, you may at times feel naturally inclined to stop reading, to pause and reflect, or just pause, and I encourage you to do so. To quote the introduction to *Stillness Speaks*, another of Eckhart Tolle's books, "It is always more helpful and more important to stop reading than to continue reading." While this dictum doesn't quite apply to last-minute studying, it works well for spiritual content.

At the outset of the book, Tolle points out that the greatest obstacle to experiencing inner peace is "identification with your mind, which causes thought to become compulsive." He goes on to say that "Not to be able to stop thinking is a dreadful affliction, but we don't realize this because almost everybody is suffering from it, so it is considered normal."

Tolle draws a distinction between our fundamental nature, and the thinking entity that we commonly call ourselves. He warns against confusing the two and reaching a state of life where instead of using our mind, our mind uses us. In the following passage, he illustrates this state of excessive mind-identification and compulsive thinking, while advocating the detached observation of our own thoughts: "It's almost as if you were possessed without knowing it, and so you take the possessing entity to be yourself. The beginning of freedom is the realization that you are not the possessing entity – the thinker. Knowing this enables you to observe the entity. The moment you start watching the thinker, a higher level of consciousness becomes activated." I would like to note that this kind of discussion of disentangling oneself from the

thinking entity in one's head might be received as strange or even worrying in the context of most of our daily conversations, but after a little while of mindfulness or meditation practice, i.e. of neutrally listening to the voice in one's head as a third party, one does inevitably discover that the mind has a mind of its own, so to speak, and that their thoughts do come and go unbidden.

Tolle includes emotions when he refers to the mind, and expresses the importance of watching our emotions as well as our thoughts. He explains how a feedback loop frequently forms between a negative emotion and the associated thoughts: "By dwelling mentally on the situation, event, or person that is the perceived cause of the emotion, the thought feeds energy to the emotion, which in turn energizes the thought pattern, and so on."

Besides watching our thoughts and emotions, another way to disengage from the mind stream is to "Become intensely conscious of the present moment. This is a deeply satisfying thing to do. In this way, you draw consciousness away from mind activity and create a gap of no-mind in which you are highly alert and aware but not thinking. This is the essence of meditation. In your everyday life, you can practice this by taking any routine activity that normally is only a means to an end and giving it your fullest attention, so that it becomes an end in itself." For example, walking up and down the stairs, washing your hands, or even breathing.

Tolle describes the remnant within us of emotional pains that we have experienced in the past, as functioning as though it were an entity in its own right, and figuratively terms it "the pain-body." The pain-body, he says, may be dormant 90 percent of the time, or in a deeply unhappy person, it may be active all the time. "Anything can trigger it, particularly if it resonates with a pain pattern from your past. When it is ready to awaken from its dormant stage, even a thought or an innocent remark made by someone close to you can activate it." The awakening pain-body can take the form of "irritation, impatience, a somber mood, a desire to hurt, anger, rage, depression, a need to have some drama in your relationship, and so on." Tolle tells us how, effectively, the pain-body doesn't want us to observe it directly and see it for what it is. The moment we observe it, feel it within us, and take our attention into it, our identification with it is broken. "Sustained conscious attention severs the link between the pain-body and your thought processes and brings about the process of transmutation. It is as if the pain becomes fuel for the flame of your consciousness, which then burns more brightly as a result."

Tolle brings our attention to the mind's typical preoccupation with time – past and future, and explains how in the time-dominated state of mind, we usually live as though we have one foot outside the present moment: "To be identified with your mind is to be trapped in time: the compulsion to live almost exclusively through memory and anticipation. This creates an endless preoccupation with past and future and an unwillingness to honour and acknowledge the present moment

and *allow it to be*. The compulsion arises because the past gives you an identity and the future holds the promise of salvation, of fulfilment in whatever form. Both are illusions." Outside of temporal thinking, the broader alternative to presence is of course thought and imagination in general, i.e. being, as we say, "in your head", or "somewhere else."

Speaking on the requirements for true personal progress, Tolle says, "Usually, the future is a replica of the past. Superficial changes are possible, but *real* transformation is rare and depends upon whether you can become present enough to dissolve the past by accessing the power of the Now. If your mind carries a heavy burden of past, you will experience more of the same. The past perpetuates itself through lack of presence. The quality of your consciousness at this moment is what shapes the future."

Accordingly, Tolle reminds us of the obvious but oft overlooked fact that the present moment is of the highest importance, since it is the only time when anything can be done, or indeed happen or exist. His suggestion is that we endeavour to inhabit it primarily: "The present moment is the most precious thing there is. It is all you ever have. The eternal present is the space within which your whole life unfolds. Life is now. Make the Now the primary focus of your life. Whereas before you dwelt in time and paid brief visits to the Now, have your dwelling place in the Now and pay brief visits to past and future when required to deal with the practical aspects of your life situation."

Tolle describes the opposite of presence and peaceful alertness as "unconsciousness", and highlights the importance of being watchful at moments when we are at risk of being swept up in it: "Intense presence is needed when certain situations trigger a reaction with a strong emotional charge, such as when your self-image is threatened, a challenge comes into your life that triggers fear, things 'go wrong', or an emotional complex from the past is brought up. In those instances, the tendency is for you to become 'unconscious.' The reaction or emotion takes you over – you 'become' it."

He differentiates between deep unconsciousness – "a state of more acute and obvious suffering or unhappiness, which often means that the pain-body has been triggered and that you have become identified with it", and ordinary unconsciousness, which he describes as "an almost continuous low level of unease, discontent, boredom, or nervousness – a kind of background static that is part of 'normal' living." He goes on to say that "Many people use alcohol, drugs, sex, food, work, television, or even shopping as anaesthetics in an unconscious attempt to remove the basic unease. When this happens, an activity that might be very enjoyable if used in moderation becomes imbued with a compulsive or addictive quality, and all that is ever achieved through it is extremely short-lived symptom relief."

Related to deep and ordinary unconsciousness, Tolle discusses the benefit of remaining present both in challenging circumstances, and when everything is going relatively smoothly: "In this way, you grow in

presence power. It generates an energy field in you and around you of a high vibrational frequency. No unconsciousness, no negativity, no discord or violence can enter that field and survive, just as darkness cannot survive in the presence of light."

Rather than giving all our attention away to the mind and the external world, Tolle suggests we practice keeping some of our attention in the body: "By all means focus on what you are doing, but feel the inner body at the same time whenever possible. Stay rooted within. Then observe how this changes your state of consciousness and the quality of what you are doing. If you keep your attention in the body as much as possible, you will be anchored in the Now. You won't lose yourself in the external world, and you won't lose yourself in your mind. Thoughts and emotions, fears and desires, may still be there to some extent, but they won't take you over."

This is particularly relevant, he says, when we are faced with upsetting situations: "Unless you stay present – and inhabiting your body is always an essential aspect of it – you will continue to be run by your mind. The script in your head that you learned a long time ago, the conditioning of your mind, will dictate your thinking and your behaviour. This is especially true when something 'goes wrong' or there is some loss or upset. Your conditioned reaction will then be involuntary, automatic, and predictable, fuelled by the one basic emotion that underlies the mind identified state of consciousness: fear. So when such challenges come, as they always do, make it a habit to go

within at once and focus as much as you can on the inner energy field of your body. This need not take long, just a few seconds." For when we find this difficult, Tolle recommends focusing just on the breath. As I like to say, "You can't go wrong with taking a breather."

Throughout his message, Tolle counsels us of the transformative power of *surrender*, i.e. the inner attitude of acceptance of what is, or nonresistance to what is. This does not mean taking on a defeatist attitude of inaction or ambivalence, which is what it might sound like, but is instead a purely *inner* phenomenon of accepting the present moment without reservation, rather than creating more suffering by opposing the flow of life. Saying an "inner yes", if you will – even when things go wrong: to what presents itself in this moment, quite apart from one's preferences or the action one takes in response.

I recommend this book and author to anyone, and especially to people who are turned off by spiritual "mumbo jumbo", as it were, but are simply drawn to and would like more: peace. This is due to the nature of Tolle's writing, which is very direct, and sidesteps any extraneous doctrine or reliance on systems of belief, but rather carries the simple ring of truth. This group would at most have to put up with some use of the phrases "energy" and "vibrational frequency", but even these are used only metaphorically and not as concepts that one need buy into – i.e. "nothing but signposts", as explained in the text.

Lastly, to my fellow young people: first, congratulations on having stuck it out this far into a written piece that is several times longer than even the most exhaustive Instagram caption. And secondly… I sincerely recommend reading this book, because the things in it are good things to know "early in the game" of life, and they set you up well to deal with the breakups, existential despair, overcooked Maggi, and the full all-you-can-take buffet of problems that comes your way from time to time, inevitably. Read it, or alternatively, listen; the audiobook is read quite soothingly by the author and I particularly recommend it.

P.S. This article is partly intended as a mini-handbook of sorts, so feel free to refer to it again. (But "The book was better.")

Shikhar Nayak is based in Gurugram. His interests include music, comedy, and spirituality. He did his degree in music at Colby College in the USA, with his primary interests in music theory and Western classical music of the romantic and modernist periods, although he says he also likes a good guitar solo, or a melodic door squeak. He hopes you enjoyed his article on a book and teaching that have been a constant companion to him since 2012.

CLICK HERE TO GO BACK TO CONTENT PAGE

Photo credit: The Royal Academy, Bhutan

3. EDUCATION DURING THE PANDEMIC

PEMA EUDEN & SANGAY YANGDEN JURMI

On the 6th of March 2020, the first Covid-19 case was confirmed in Bhutan. Following this news, on the 22nd of March 2020, all the students of The Royal Academy were sent back home. During this time, the students had their Learning Experiences through various online platforms. After five months, the grade 10 students came back on campus. Upon interacting with them, we learned that many students had valuable experiences at home that could be shared with others. Hence, collecting and sharing their experiences would be beneficial to others as well as themselves.

A group of students and teachers worked together to collect experiences from students across all grades. These experiences were collected in the form of pictures, videos, or text and embodied their daily lives at home after leaving The Royal Academy due to the pandemic. This was done in order to get a bigger and better picture of the kind of education the students were acquiring in a non-academic setting. We wanted to acknowledge the experiences and their learning apart from the online Learning Experiences. Since we have students from all over the country, we were able to receive diverse perspectives and experiences.

Jigme Om from Gasa, demonstrating hand-washing to some of her community members

Each student has had an individual experience and a unique thought process while going through that experience. However, one thing that came through in all of the experiences was the difficulty in adjusting to a different setting with various priorities. Students struggled to manage time between working at home, being with family and also committing to their Learning Experiences. Over time, most of them learned to cope up and adapt but some still struggled to do so due to many different factors.

Many individuals also realized that they are able to employ the Skills, Processes, and Watermarks that they have learned at The Royal Academy. Time management was a skill that resonated throughout the experiences. Tandin Dorji from Gasa shared this incident: “It was the

time for paddy cultivation in my village and our family was very busy for that, but at the same time Mr. Karma had conducted a mathematics test. I didn't request sir, as it was the first test after the lockdown and I thought everyone would be present. On that day, I was able to give time to both, which shows I had fulfilled some Watermarks like responsibility and Skills like time management."

Without teachers or timetables to remind them, individuals had to take ownership of their learning. Sangay Choden from Dagana explained, "Without teachers or friends around, my journey of learning took a different toll as I did not have them to depend on like usual days. It made me realize learning is something I can continue with or without them. My guardians did not push me for my learning because I was well aware of what is best for me." Tandin Wangmo from Paro wrote, "It has also helped me acquire values like integrity and trust. I could have easily cheated during our reviews and while doing our assignments but I learnt to be true to myself."

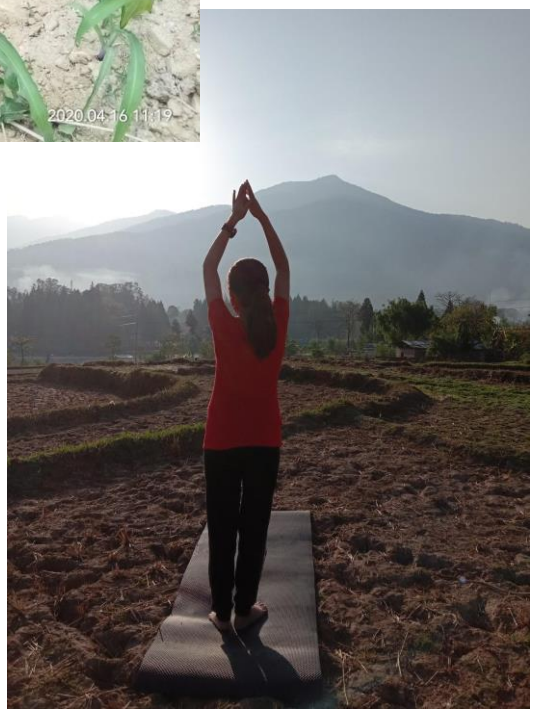
Ugyen Lhamo from Trongsa with her knitwork

Many students used this time to learn and develop different skills. They took online courses on various areas of study. Some of them even participated in online writing or quiz competitions. This Pandemic allowed some time for students to learn or improve their skills in areas of their interest. Pema Chodron worked on graphic designing, Ugyen Jigme Rangdrel on his coding skills while many others were able to read books. Dupthob learned how to skateboard in Thimphu while Usha Kiran Limboo made baskets out of waste with her mother in Dagana and Karma Deki helped her parents make handmade paper in Trashi Yangtse.

Basket woven from waste by Usha Kiran Limboo of Dagana

Kinzang Dorji from Trashi Yangtse shared his experience of working in the fields for most of the time and struggling to manage field work and online Learning Experiences. While he learned about agricultural work and realized the hardships that farmers go through to make a living, he made it a point to focus on the online Learning Experiences when he reached home. Through this journey, he learned that at the end, everything depends on himself. This realization is evident in many other students as well. They became aware of the responsibility to take matters into their own hands and being aware that the way forward depends on themselves.

Purna Bahadur from Dagana helping his family with field work



Kinley Zam from Punakha starting her day with yoga

This also gave time for individuals to think and introspect about themselves and about life. Jimi Pfinso from Thimphu wrote, "I observed and noticed many things I was not able to do which I need to work on as well. I found that I need to be consistent with my work as there were times I just shut down and was not able to cope with the workload. I also had times where I was not able to control my temper and frustration which I need to most definitely work on. Another thing I had difficulty doing was being consistent with anything I did at home. These mistakes I made were also very helpful as I am able to build on them and improve." Kinley Leksom from Thimphu wrote, "This experience brought learning to a whole new level where learners like me were reinforced to foster skills like being able to adapt to a new environment, being able to flow with life and its unpredictable changes and more importantly, knowing how to react and be part of the changing world." Pema Rinchen from Zhemgang shared that even though he was busy with agricultural work, he was able to understand that the theoretical concepts he has learned exist everywhere. He gave an example of knowing what to plant in certain soil due to the macronutrients present in the soil, which he learned in Biology. In this way, the students understood that their Domain knowledge was actually applicable in real life. They were able to relate one concept to another and realise that everything is interconnected.

Most of the students were able to connect and spend time with their families. It was probably the longest time in the past few years that they have been at home. They saw changes in their community and their

homes. As Chonga Lham, who spent her time in Tsirang, talked about how her brother had changed after getting employed and living away from home, “Physically he was my same old brother but the rest, I couldn't see any traces of him left. My innocent, easy going brother has become a man! I realised that when you go out of the home you grew up in and live on your own, you are forced to mature. Maturity changes everything.”

Monash Monger of Sarpang, building a fence around his flower garden

Majority of the students helped their parents with household chores. They learned how to cook and take care of their younger siblings. Even though they were busy with their own online Learning Experiences, they took the initiative to teach their younger relatives or neighbours. They were able to take the role of a teacher and they came to understand the difficulties and the challenges that came along with it. They were also able to take part in community events by participating in meetings, keeping their surroundings clean and educating people about the Pandemic.

Jatu Om from Samtse,
carrying grass for her cattle

Samten Choden of Bumthang,
carrying hay in her village

They were also able to connect with older members of the family and learn of their own origins and listen to local stories. The students felt a connection to their own roots that can rarely be felt any place other than their homes. As Kinley Zam from Punakha put it, “There are some things that we cannot learn from the online learning experiences. The community we live in holds rich cultures, values and origins of our existence. During this pandemic, my great-grandfather told us about the change in value of our currency over the decades.” Through such a simple conversation, she understood the value of money, about inevitable change and the economy of the world.

Through their experiences away from school, they were able to learn values and develop life skills. They found the joy in completing a day's work with a lot of difficulty but consequently, great satisfaction as well. There was a new sense of appreciation for those who had to do agricultural or manual work to make a living. Some came to know about the value of money through temporary jobs like working in construction or collecting cordyceps and learning the difficulties and appreciation that came along with the job. Sapna Bhujel from Samtse stated, “When we students are in school, we always want fancy things so we ask our parents to buy and send them to school. But during this pandemic when I experienced the difficulties of earning money by doing farm work, I clearly understood the quote, “Saying is easy, doing is hard. Be an example of a doer instead of a blabber."

Khandu Om from Chhukha milking her cow

Many have kept up with the news and realized how lucky we are to be Bhutanese. Their appreciation displays that they do not take anything for granted. The students have also recognized the effort that the teachers have put into their online Learning Experiences. They realized that this was just as new and beyond the comfort levels of the teachers. As Deki Choden of Grade 10 put it, "Some of our teachers also volunteered to go on duty as Desuups and not only that, they promised to continue their teaching through online platforms. From that I came to know the genuine love and care our teachers have upon us and I was deeply touched by such an act of kindness."

This time has been enriching not just for the students but also for the teachers. Teachers had suddenly been forced to transform their entire teaching-learning dynamics in a matter of days. Rather than seeing it as an obstacle, many teachers looked at it as an opportunity to incorporate technology and diverse experiences into lessons. In fact, teachers found the students' effort in such an unprecedented time to be inspiring. Ben Hunsdorfer, a teacher at The Royal Academy, shared, "Knowing that many of our students lacked the facilities to keep in regular contact with their teachers made me wonder how we could keep them engaged in their Five Areas of Development and Domain work. I also reflected on my own ability to create meaningful content for both my students and mentees. Nevertheless, over the months, I am proud of many students who have stepped up and taken leadership in connecting each other with their teachers and mentors."

Tashi Chenzom, another teacher shared that, "It was exciting and fun but frustrating at the same time, especially when I felt that the learning was not effective and stagnant. I really enjoyed exploring different apps and technology to make learning more effective, and I feel that we can achieve much more than what we have as we keep on learning and exploring to contextualize the current needs of every individual."

Bachu Chewang Pelden from Trongsa, cycling to stay fit

Kelzang Dorji from Tashigang, keeping himself physically fit

The year 2020 has unquestionably been a difficult and unparalleled time for the world, our country and individuals. Most of us have felt frustrated and disappointed. Many students expressed their frustration over not being able to attend online Learning Experiences regularly. However, difficult times often bring out the best in people. They were able to experience life outside The Royal Academy. Many students took on different roles: a student, a teacher and sometimes parents to their siblings, a farmer in the fields, and a learner throughout all their experiences. While writing these entries, they have looked back on their experiences and realized how much they have learned. They might not have felt it at the time but looking back at it now, they realize that it has helped them in one way or another. They have acquired knowledge, experiences, and connections that they might not have acquired elsewhere.

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4. ENHANCING STUDENTS' ATTENDANCE IN ONLINE CLASSES DURING THE COVID-19 PANDEMIC: LITERATURE REVIEW

DORJI WANGCHUK

Introduction

The history of Distance Education can be traced back to the 1800s. Indeed, Kentnor (2015) reveals that distance education began in the 1700s, a century earlier than what mainstream history books suggest. According to Kentnor (2015), distance education began with correspondence and the use of parcel post, which evolved "to radio, then to television, and finally to online education," (p. 22). The latest form of distance education is online education. It is referred to by various names such as e-learning, cyber school, blended learning, web-based learning, e-education, and distance education. Online education has grown in popularity in the 1990s owing to the internet and revolution in technology (Palvia et al., 2018). According to Qayyum and Zawacki-Richter (2019), eLearning would be mainstream by 2025. Consistently, Kentnor (2015) argues that eLearning is no longer a trend but mainstream.

Online learning is prevalent not only for higher education but also in the schools. According to Etherington (2008), numerous initiatives have been undertaken to introduce eLearning to primary school since the early 2000s in Australia. Moreover, Lu and Hao (2008) state that the

primary and secondary schools throughout China have achieved remarkable progress in the use of ICT since the beginning of the 21st century. In the *World Economic Forum,* Li and Lalani (2020) write, "Even before COVID-19, there was already high growth and adoption in education technology with global edtech investments reaching USD18.66 billion in 2019 and the overall market for online education projected to reach USD350 billion by 2025."

The COVID-19 pandemic has accelerated the process of adopting online education, which Li and Lanali (2020) describe as "the largest 'online movement' in the history of education." Over 1.6 billion learners were affected across 194 countries by April 2020 (UNESCO, 2020). OECD (2020) maintains that the sudden closure of schools led to adoption of online education on an unprecedented scale. Moreover, Dhawan (2020) argues, "Online teaching is no more an option, it is a necessity."

Despite online education being a desirable option, it involves numerous challenges. Online education is still in its initial phase in developing nations. For instance, online education in schools in Bhutan is novel. According to Kinley (2015), it was only since April 2011 that colleges in Bhutan made a serious effort to launch a Virtual Learning Environment (VLE). Choeda et al. (2016) state, "Though ICT integration has made its beginning, the status of ICT-integrated pedagogy in higher education in Bhutan is at an early stage and this is affected by low-speed internet connectivity and a lack of adequate

resources as well as training in ICT-integrated pedagogy," (p. 71). Similarly, Kotoua et al. (2014, p. 1407) mention that "In sub-Saharan Africa, Ghana is rated as one of the best countries for online education though the process is still in its infancy." Moreover, Kotoua et al. (2014, p. 1407) add, "The online education in Ghanian universities is still not perfect and most students prefer traditional systems to e-education." India is in no better condition. Dhawan (2020) finds a wide range of problems associated with eLearning including technical error and lack of interest from the learners.

Challenges of online education can be broadly categorized into two: a) challenges faced by those students without access to eLearning and b) the challenges faced by students with access to eLearning. Gabe et al. (2020) identify five subthemes under accessibility: learner special needs, lack of parent content knowledge or pedagogy, need for teacher communication, lack of access to technology hardware or internet quality, and lack of online resource organization. At a global scale, over 463 million, one-third of the world's school children are hindered by the challenges related to the first category (UNICEF, 2020).

Accessibility matters but challenges are not limited to it. The second category of challenge is associated with students who have access to the online learning platforms. The second challenge of eLearning is absenteeism and lack of participation and engagement in learning platforms in spite of having access to eLearning. Absenteeism in online classes, notwithstanding accessibility, indicates other challenges in

eLearning. It includes balancing responsibilities, learner motivation, and other academic-related issues such as curriculum, academic progress, assessment, and socio-economic status (Gabe et al., 2020). Other potential obstacles include misuse of technology, cost factor, technical errors, and problems with equipment (Valentine, 2002).

The challenges that fall under the first category (accessibility to eLearning) require collaborative efforts from various stakeholders such as parents, community, government and corporations. For instance, schools have a limited role when students lack access to technology and quality internet. Nonetheless, schools and teachers can play significant roles concerning the challenges that fall under the second category (absenteeism despite having access to online education). Literature explores the problems and suggests probable solutions to enhance students' attendance in online classes provided the learners have access to online education.

Defining 'Attendance' in Online Classes

There is no established definition of 'attendance' or 'engagement' for an online learning environment. The definitions of 'attendance' for online learning widely differ based on the nature of discipline, means of teaching, mode of assessment, and the features of online learning platforms. Some tutors take attendance at the beginning of the lessons, assign a task, and go offline whereas others prefer interactive lessons. Chambers, Scala, and English (2020) find that remote districts in the United States use a varied definition of 'attendance' that includes

submission of assignments, responding emails and phone calls, and face-to-face meeting at a place. Southern Arkansas University (2020) defines attendance in online courses in terms of participation in discussion forums and completion of online activities.

Assessing Problems of Absenteeism in School vs. Online Education

Chronic absenteeism in schools has attracted numerous researches. Malcolm et al. (2003) conducted a research involving fourteen secondary schools and found that the overall attendance ranged between 83% and 94%. In America alone, hundreds of thousands of students miss schools in a day (Baker, Sigmon, & Nugent, 2001).

Literature has explored and exposed numerous causes of chronic absenteeism in conventional class. Malcolm et al. (2003) and Zhang, Katsiyannis, Barrett, and Wilson (2007) categorize the causes of chronic absenteeism into four broad factors: a) school-related reasons b) personal factor c) home factor, and d) school factor. School-related reasons include bullying, boredom, dislike for teachers, and avoidance of tests, which is often accompanied by personal factors such as laziness and habit. The third reason, home factors include "parents putting a low value on education, disorganized lifestyles and inadequate parenting," (p. viii) while the school factors include curriculum, teaching strategies, peer pressure, and learning environment (Malcolm et al., 2003). Similarly, Barth (1984) points out three factors: individual, family, and school characteristics and McCluskey, Bynum and Patchin (2004) and Levine (1984) include the larger community as an influential

determinant of truancy among primary children. In particular, larger community refer to "the presence of delinquent peers, street gangs and interracial tensions," (McCluskey, Bynum & Patchin 2004, p. 216).

However, eLearning is different from conventional schooling and requires a separate study. Hardy and Boaz (1997) found that "compared to most face-to-face learning environments, distance learning requires students to be more focused, better time managers, and to be able to work independently and with group members," (p. 43). Moreover, the current practice of eLearning is different from other online courses, which Pace, Pettit and Barker (2020) argue as a 'crisis learning'. Hence, as argued by Toquero (2020), schools need to reorganize and identify innovative pedagogical methods and strategies during this emergency education.

During the massive revolution of online education in the early 2000s, Valentine (2002) cautioned on the lack of participation and engagement (in online platforms) unless learners possess certain traits such as "tolerance for ambiguity, a need for autonomy, and an ability to be flexible." Similarly, Valentine (2002) argued that not all students would prefer online learning and "not all subjects are best taught via this medium." Consistently, Rasmitadila et al. (2020) report the lack of students' participation as a major problem of eLearning in primary schools in Indonesia during the COVID-19 emergency education.

There are several reasons for the poor attendance and lack of participation for online learning. Fernando (2018) maintains the eLearning implies physical distance between tutors and students thereby depriving the children of immediate academic or technical support. Similarly, Isman et al. (2003) attribute the poor attendance for online learning to the lack of motivation "due to the lack of face-to-face contact with teachers and peers, cost, lack of faculty support are the required barriers that affect successful distance learning and education," (p. 13). It is valid for the ongoing emergency learning. In a research conducted in a private medical college in Pakistan, Abbasi et al. (2020) find that 77 percent of the students dislike eLearning and majority of the students are not ready for online education.

Measures to Enhance Students' Attendance in Online Education

Modern education has recognized parental support as the paramount factor that determines students' learning outcomes. In particular, researchers have found that parental involvement is an effective measure to help students reduce chronic absenteeism. For instance, Sheldon and Epstein (2004) concluded, "Schools need to take a comprehensive approach to involve families and the community in ways that help students reduce chronic absenteeism" (p. 52). Similarly, Malcolm et al. (2003), McCluskey et al. (2004), Sutphen et al. (2010) and Baker et al. (2001) recognize parental involvement and family-based intervention as a promising method of combating students' truancy. Moreover, parental involvement is a recurring theme in improving student participation and engagement in eLearning during the COVID-

pandemic (Rasmitadila et al., 2020; Garbe et al., 2020; Brossardi, et al., 2020; Chambers, Scala & English, 2020 & Jordan, 2020).

The second recurrent theme in the literature is tutors' communication with students, which Sutphen, Ford, and Flaherty (2010) and Zhang (2007) describe as "check and connect model." Dixson (2010) contend that the path to interactive eLearning is "about multiple ways of creating meaningful communication between students and with their instructor – it's all about connections" (p. 10). Similarly, Zhao et al. (2005) find that interaction between students and teachers is one of the key aspects of effective distance education. According to Isman et al. (2003), "communication between teacher and student is a vital element of successful distance education for providing to all participants to satisfy their needs" (p. 13). Effective communication enables teachers to assess students' challenges at home, academics, and personal issues (Garbe et al., 2020). In particular, Jordan (2020) identifies "effective messaging" as the principal means to reduce absenteeism in emergency education.

Thirdly, literature suggests that reinforcement, which is also termed as "incentive" plays a vital role in reducing truancy. For instance, Licht et al. (1991) found that tangible rewards such as fast-food coupons, movie tickets, or school supplies yield improvement among the students in special education. Baker et al. (2001) argue, "Students and families need both the incentive to attend school (the carrot) and meaningful consequences for chronic nonattendance (the stick)" (p. 13). Hence,

Jordan (2020) emphasizes on providing incentives (such as an attendance bulletin board for kindergartners) to combat chronic absenteeism during COVID-19 pandemic.

Fourth, collaboration among students is another potential strategy to improve participation and engagement in online forums. Literature suggests that a teacher can make online classes interactive by using "collaborative activities, group discussions, and other forms of student-student interaction" (Dixson 2010, p. 2). Similarly, Zhao et al. (2005) maintain that besides communication with tutors, interaction among students is also an effective means of engaging students in education. Moreover, Isman et al. (2003), Pace et al. (2020), and Rasmitadila et al. (2020) recognize collaboration and dynamic interactions among students as effective means of improving students' attendance for online classes. Thus, Dixson (2010, p. 10) concludes, "…when students readily identified multiple ways of interacting with other students as well as of communicating with instructors, they reported higher engagement in the course."

Finally, teacher presence and intervention strategies matter in enhancing students' participation in online platforms. Zhao et al. (2005) found that a live human instructor made a significant difference in the distance learning outcome. Zhao et al. (2005) concluded, "…when instructor involvement is low, the outcomes of distance education are not as positive as those of face-to-face education; when instructor involvement increases, distance education programs yield more

positive outcomes than face-to-face education" (p. 33). In addition, researchers have suggested that teachers should use a variety of methods to assist students from various backgrounds. Garbe et al. (2020) argue that teachers should "differentiate their practices" (p. 61) to cater to the needs of children from various backgrounds. Similarly, Rasmitadila et al. (2020) maintain that using "varied instructional methods will encourage more enthusiastic participation in online learning" (p. 103).

Conclusion

The history of Distance Education in the world is traced back as early as in the 1700s. The latest form of distance education is online education. Online education has made rapid progress since the 1990s owing to the internet and revolution in technology, and it is expected to be mainstream by 2025. The COVID-19 pandemic has further accelerated the process of adopting online education. Millions of learners were affected across 194 countries and the sudden closure of schools led to the adoption of online education on an unprecedented scale.

Nonetheless, eLearning involves numerous challenges, which is broadly categorized into two: a) challenges faced by those students without access to eLearning and b) the challenges faced by students with access to eLearning. The challenges that fall under the first category require collaborative efforts from various stakeholders such as parents, community, government and corporations. Regarding the

challenges that fall under the second category, schools and teachers can play significant roles.

Literature suggests at least five measures to enhance students' attendance in online classes provided they have access to eLearning. Parental involvement is the first practical measure. Secondly, tutors need to communicate with learners regularly. Third, literature suggests that reinforcement plays a vital role in reducing truancy. Then, collaboration among students is another potential strategy to improve participation and engagement in online forums. Finally, literature reveals that teacher presence and intervention strategies matter in enhancing students' participation in online platforms.

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5. ENVIRONMENT AND CLIMATE ISSUES

SHIVEN RAJ KANDOI

Imagine you are Planet Earth, what would you say to humans?

"My kids, you all know me as Mother Earth. It's been a long time since we last spoke, so today I wanted to say to all of you how I feel when you don't take care of me. I have done everything possible to nourish you, to make you strong and healthy. I am upset to have to say if each of you treat each other poorly how will we live happily ever after? Sometimes I feel that I am a garbage dump - filthy and dirty. I once handed you a clean, neat, healthy atmosphere to live in but you humans have littered

everywhere. Apart from that I'm so elated and proud of all the success and glory everyone has achieved in all walks of life. I agree that success comes at a cost. But let's try and minimize the harm.

All the industries you have created emit harmful gases that are choking me every now and then, and thus making it hard for me and all my plants and animals to breathe. These industries produce harmful gases that cause air pollution. They release infectious chemicals in my water that are killing the aquatic members of our family. The vehicles on the streets and the planes in the sky are making the environment polluted, thus difficult for me to sustain. You all are being carefree and discarding garbage here and there. More than 80% of global energy supply is by fossil fuels. Being careless regarding its harmful side effects is not only harming me but you as well. So, please think about it as it's already very late.

If I fall ill, who is going to take care of you and where will all of you live? Yesterday, the Doctor, Mr. Mercury told me I had a high fever. He said it was due to Global Warming. It is my earnest request to all of you to take precautions and safety measures or my condition might be irreversible in just a matter of a few years. I know there are a few organizations set up by you to help reduce it and I do appreciate it, but it is progressing very slowly.

Now, let me tell you a story of my dear friend, Miss Jupiter, who had a lot of kids. She was the biggest after all, and there were many living beings known as Jupitarians inhabiting her. They all had several achievements but totally neglected the harmful side effects of their activities. She soon began to fall ill because of all the smoke and dust. Her airways became clogged and choked because of the garbage left carelessly lying around. She fell so ill that her stomach became gassy. One day it was so unbearable for her to contain it that the gasses exploded and everyone inside it turned into dust. Today she is the most gaseous planet with hurricanes and volcanoes in our Solar System. All the damages done, destroyed her not only physically but mentally as well. Sun had to isolate her by laying bits of rocks in front of her so that she could not harm anyone. I am scared and don't want anything to happen to my kids, who are my future hope. This is the only planet that has life so don't ruin it. If you go back a 100 years you will understand the changes – that time the planet was not so hot; rather, it was much cooler and pleasant. With everyday increase in development, we should all not forget the importance of our environment and climate. If we don't

keep a check now then these successes and developments will go in vain. So we should all create a balance between progress and its consequences. Thus the remedy should be put in place immediately with greater pace just like our achievements. It's only by adopting this method that we all can survive and enjoy the happiness of life. We would be healthier and the environment merrier.

To stop this we should take the right moral decisions and precautions for the planet you call HOME. By practicing some corrective measures we can work hand in hand to clean the environment. We should use more solar energy and wind turbines, as they reduce the amount of electricity generated from fossil fuel. We should plant more trees. We should encourage recycling as it reduces air and water pollution. It saves energy and also reduces greenhouse gas emissions, which helps to maintain climate change, thus reducing the effects of Global warming. All of these efforts will result in a change of climate. And I am confident that you all will join hands together and bring forth a healthy and peaceful planet.

“I know everyone is upset with the recent pandemic but it was necessary for me to take a little stern step to reduce all the torture I have been going through in order to heal myself. Please start taking care of each other and your home and I wish nothing but the best for you. Stay safe, stay healthy and happy always with the entire family. Help me to sustain myself. So, let’s get started.I trust you and I know soon we will make a good change. And still if we do not open our eyes then I am sorry to say that we all will die soon, and I will be like one amongst other planets with no oxygen, no water and no life. So, let’s join our hands together and take a pledge to protect ourselves by protecting and taking care of your Planet Earth - your HOME.

Save the Earth… safe oneself!

Shiven Raj Kandoi is in Grade 6 in Shiv Nadar School, Faridabad. He enjoys writing about different topics. Reading books is one of his favourite pastimes. He keeps exploring new novels of various authors. He is inspired by J.K. Rowling, Ruskin Bond and others. He contributes articles and poems to his school magazines as well as other writing competitions. In the future he sees himself as a renowned novelist.

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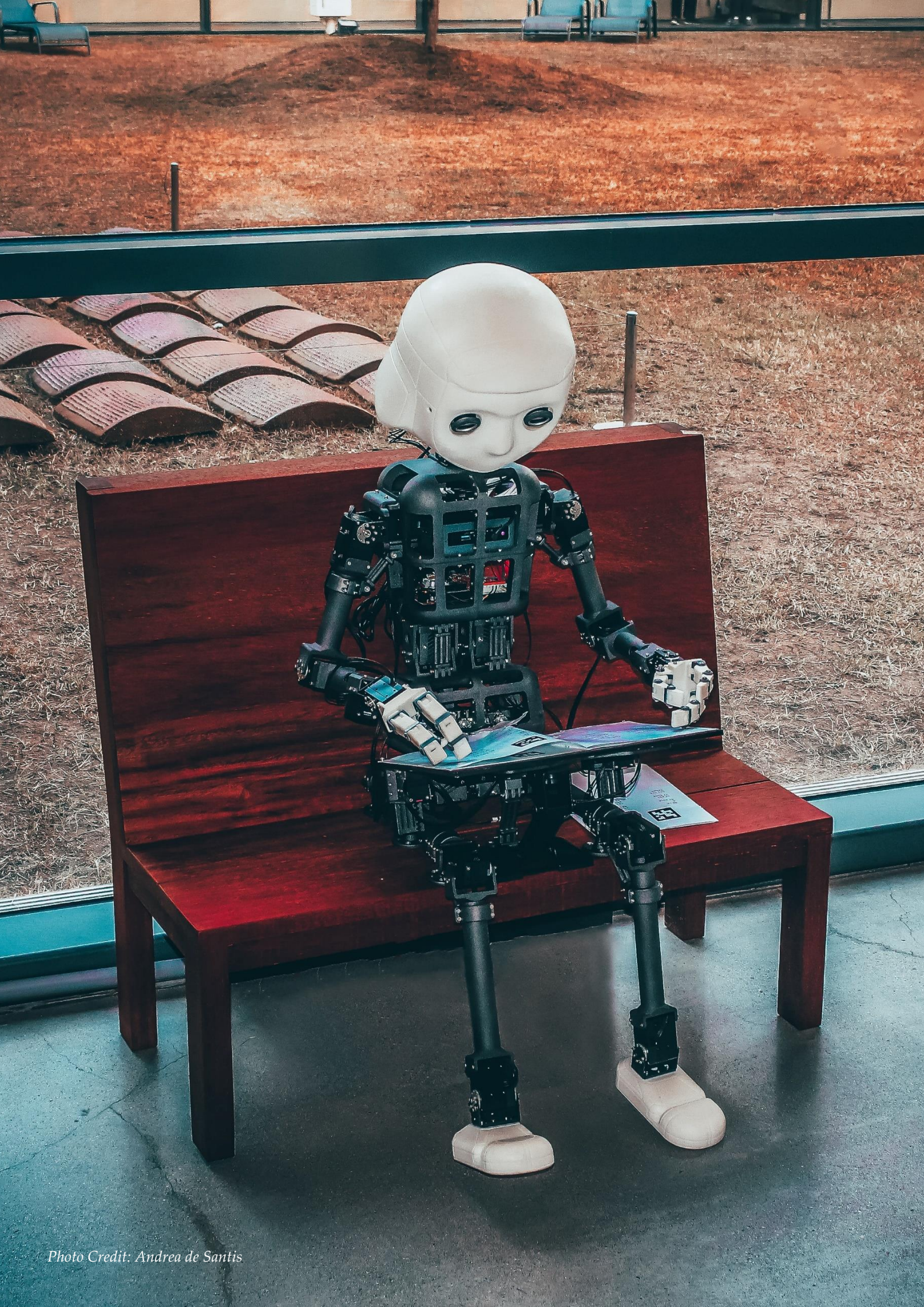

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6. EXAMINING THE SCOPE OF ARTIFICIAL INTELLIGENCE IN EDUCATION

ALYA JASSMER SARNA

Abstract

This literature review examines the role of artificial intelligence in Education. It seeks to understand the platform (e-Learning) through which artificial intelligence got the push it needed to enter the realm of education. It considers its evolution to present-day workings, its limitations, and its future scope.

Keywords: artificial intelligence, AI, education, smart-ed, knowledge space theory

Literature Review

Artificial intelligence (or AI) has been defined by IBM as the human-like intelligence exhibited by a computer, robot, or machine. As a term, it has been used with increasing frequency over the past few years. It allows computers and other machines to simulate the abilities of the human mind. Like humans, it learns with the aid of examples and experience, recognizes objects, comprehends, reacts to language, makes decisions, and helps solve problems. As computers and other technological devices have been made accessible to more people, they have begun to be used as tools to educate individuals. AI has therefore

had an opportunity to grow within this field and it continues to transform the way in which individuals learn and remember information. This literature review examines e-learning which allows AI to operate as a tool used in education. It also examines the varied roles AI takes on in order to teach learners.

E-Learning Paves the Way for AI in Education

In order to successfully grasp the way in which artificial intelligence functions within the world of education, it is important to understand how it came into being. Electronic learning or (e-learning) has helped pave the way for artificial intelligence to emerge within this field. During its conception, e-learning saw itself molded with the aid of varied behaviorist patterns applied to the development of teaching machines. Ravenscroft (2001), notes that Skinner's 1954 ideas of making use of operant conditioning via reinforcement schedules have helped shape programmed instruction. Skinner's teachings were based on a belief that behavior was learned with the aid of reinforcing consequences provided by the environment. Therefore, when e-learning came into being there was an emphasis on designing an external environment that helped shape behavior with the aid of learner-system interactions. Pask and Scott (1972) helped design a detailed system called CASTE (Course Assembly System and Tutorial Environment) which allowed learners to navigate the curriculum provided along with the types of material available for their learning. The most important feature of this system was the fact that the machine was taught to accommodate whichever learning style the learner decided to opt for.

Learners were thus able to choose and clearly state their strategy for learning. Gagné (1974) took this a step further by providing a methodology of task analysis. The relevance of this lies in the fact that it helped enhance conceptual and procedural knowledge.

Each of these steps helped hone e-learning so that it ultimately became possible to incorporate artificial intelligence into its realm.

Evolution of AI in Education

In the last century, artificial intelligence was understood to be "the belief that all that is essential to human intelligence can be formalized". (Dreyfus, 1974). While this still holds true today, the definition as established earlier is clearer in what it presently encompasses. AI in education is primarily focused on identifying what a learner is knowledgeable on and what they aren't aware of with the aid of testing. Personalized curricula are then provided to the learner keeping in mind their specific needs.

Knowledge space theory has been used with great frequency in order to train a number of AI learning platforms. Functioning as a set and order theoretical framework, it proposes mathematical formalisms. These are used to operationalize knowledge structures in a given domain. (Doignon and Falmagne, 1999). This theory operates on the idea that every knowledge domain can be viewed in terms of a set of domain problems or items. (Stahl and Hockemeyer, 2019). Mathematical language is therefore taken advantage of such that "knowledge points"

can be defined and tracked. These points are used to determine a learner's "knowledge state" pertaining to a given subject.

AI has been used in education to create solutions to help address issues humans may not be able to achieve with celerity and/or accuracy. These solutions range from providing speech recognition services, providing translations for different languages to helping with decision making. With the aid of AI, e-learning platforms can be enhanced with real-time questioning. They can be used to generate new learning material and allow for natural language processing. While e-learning has been a great help in making the same content accessible to a varied assortment of learners, it is not possible for a single instructor guiding these learners to always cater to their queries and doubts simultaneously. Artificial intelligence makes up for the instructor's shortcomings and is able to assess each learner's performance thus far and use it to evaluate their pattern of learning. Based on the information discerned, it helps customize the learning material provided such that it helps the learner perform better. AI also allows for learning to be done in a fun and engaging manner by creating tactical games. These games make it possible to absorb new material with greater ease. Moreover, learners tend to feel confident about learning a greater amount of information if it is presented in the form of games.

If we examine existing software that has made use of AI, it is extensive. Nuance for instance uses Dragon Speech Recognition software which helps students who struggle with writing. This software allows students

to express themselves and the software types it all down. Grammatical errors combined with typing speeds aren't an issue here since the software is intelligent enough to know what the speaker is saying. Adaptive learning technology is used by Knewton which makes use of an AI-based program called Alta. Alta's function lies in identifying gaps within a student's knowledge and accordingly provides them with relevant coursework such that they are on the right path required for college-level courses.

Conversational technology has also been incorporated by some companies like Cognii which makes AI-based products for education institutions. The virtual assistant it has developed is used to help guide students in open format responses. These are aimed at improving their critical thinking skills. One-on-one tutoring and real-time feedback are provided to students on a tailor-made basis.

Limitations of AI within Education

When considering the ethics of AI operating within the world of education, however, it is important to note that several algorithms presently used operate with biases. At times these biases are less likely to occur when humans replace the algorithm. Take, for instance, the automated tools used to score essays that are formally known as natural language processing (NLP) artificial intelligence systems. While their usage has increased to grade standardized tests in the United States, they are flawed as they have a bias against certain demographic groups. Research conducted by psychometricians and AI experts helped shed

light on this bias. This is owed to the fact that the algorithms in play don't inspect the standard of writing provided. Since they're fed with vast amounts of human-graded essays they seek to identify sequences that correspond with better or poorer grades.

The Future of AI and Education

It is important to bear in mind that while AI-operated education software and programs are helpful, they have a long way to go. Software designers of the same need to consider whether they want the AI they create for educational purposes to be AI-Led or AI-Assisted. Each of these has different ramifications to teaching styles incorporated. In the former, humans take a back seat and only step in if necessary. Conversely, AI-Assisted technology seeks to help educators and make their patterns and styles of teaching easier. AI-Assisted education is ultimately likely to fare better than AI-Led education as there are several aspects to teaching where humans perform better than computers. This includes being able to teach from experience, the ability to make cognitive and social connections, talking out loud, performing with their bodies, and improvising and making do with the resources available. (Selwyn, 2018).

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Alya Jassmer Sarna has studied qualitative research at a fairly in-depth level and has graduated with a Master's degree in Sociology from Columbia University. Her graduate thesis, which dealt with the sociology of morality and ethics in relation to the meditative practice of Vipassana, has critically shaped her understanding of how individuals understand success, what determines their actions and how they ultimately tackle life. She is passionate about art history, jigsaw puzzles, and learning new things. She presently writes articles for several financial institutions of repute and is currently interning with the Library of Congress (Washington, DC).

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7. INNOVATIVE CURRICULUM PEDAGOGY

POORVA NIKHIL MAINKAR

Today, in this 21st century, we are surrounded with new and upcoming technology which impacts our education system and its curriculum. Many western philosophers like Froebel, Montessori, Dewey and others focused on sensorial and practical activities like play, art, rhythm and rhyme movement and active participation. Whereas on the other side, Indian philosophes like M. K Gandhi, Tarabai Modak, Gijubhai Badheka and others focused on observations concerning young children and their findings about the child's interest in activities using different materials.

Besides India, other countries like Japan, Nepal, New Zealand, Australia, China, Solomon Islands, Thailand, and Pakistan have developed a new teaching method or pedagogy for their curriculum which is highly commendable. These countries not only develop a child's holistic development but also maintain developmentally appropriate practices.

In Australia, there's an approach called On Country Learning which aims to extend beyond forming connections with nature to foster a deeper cultural sense of belonging to, and responsibility for the land. Learning is extended and sustained when, in the following school term all children, both Aboriginal and on-Aboriginal, in the class are invited to attend the On Country Learning program. In India, we can take some

ideas from this making it possible for the local community's children to learn in the regional language. These skills will help them in the future which will be convenient for them as well as their parents.

In China, there's an approach called the Sinhuan Playgroup which aims to support preschoolers' cognitive, motor, social-emotional and literacy skills. It is also underpinned by a commitment to empowering parents and strengthening communities among migrant families, so that they can form support networks, build new lives in the city, and provide a positive environment for their young children. As compared to the Indian curriculum, we can adapt some skills to teach children in a developmentally appropriate curriculum instead of giving a monotonous and passive learning method.

In India, there's an approach called Opportunity and Freedom to Learn. Here, The ECML (Education for Children of Migrant Labor) centers aim to provide a stimulating learning environment and access to health and nutrition for the children's physical, mental and emotional well-being. Specifically, they aim to:

a. provide an accessible safe and stimulating learning environment to all children between 6 months and 14 years of age
b. use multilingual and multi-level teaching-learning processes/resources
c. cater for health and nutrition needs
d. advocate to and support parents to continue their children's education

In Japan, there's an approach called Play Makes Us Human. Kaede Kindergarten described here, all refer to the importance of teachers stepping back and allowing children to learn for themselves, in solving both social challenges (such as conflict) and cognitive challenges (such as problem solving). Teachers need to carefully observe children's interests, abilities and relationships with others in order to extend child-initiated ideas and actions and to determine when it is necessary to intervene. As compared to the Indian curriculum, young children are forced to learn in inflexible hours which affects a child's cognitive development as well as their potential skills which does not lead to holistic development.

In Nepal, there's an approach called Educate the Future. This approach results in facilitators feeling confident and parents' active engagement in their children's learning, as they can see the impact of attendance on their children's literacy and numeracy skills (skills which are valued by parents). As compared to the Indian curriculum, parents are not actively involved with the child's activities, mainly because they do not spend time with them, have high expectations from teachers or have their own thoughts about the curriculum.

In New Zealand, there's an approach called Te Puna Reo o Nga Kakano. In simpler words, **Te Wharki** is an interwoven mat. The Te Puna Reo pedagogical approach is based on an integration of contemporary early childhood practice with traditional (pre-colonization) Māori belief systems and practices. This integration relies heavily on building a

connection with nature and local landmarks, demonstrating respect for the environment and using old practices that ensure it is kept clean and healthy so it can be used as a resource in a reciprocal relationship between people, spiritual beings and the earth. The educational program is child-driven, meaning children are empowered to pursue their own interests and learning desires at their own rate, and according to their own capabilities. As compared to the Indian curriculum, migrant children are forced to learn in a language they are not familiar with so they are not able to grasp the concepts and it hinders their academic performance.

In Pakistan, there's an approach called Broad Class Listen to Learn which was designed as an outreach program to improve the quality, equity and inclusiveness of education. With the ultimate goal of improving school achievements, the approach aims to:

a. Improve attendance, especially among girls and those children in 'hard to reach' rural areas
b. Improve quality of teachers through several capacity building measures
c. Promote child centered practices at primary level in the target areas and reduce dropout
d. Improve the classroom learning environment and provision of learning materials
e. Sensitize parents, community and teachers to the importance of girls' education and health.

In Solomon Islands, there's an approach called A Play Based School Approach. An underpinning goal of the initiative has been to encourage parents to take ownership and access low-cost training opportunities in order to be able to provide enjoyable and constructive learning experiences for young children attending the Centers, despite resource constraints. As compared to the Indian curriculum, children and parents do not spend quality time together. Children take to learning passively and do not understand in the early years. They feel low and have adverse effects on academic performance.

In Thailand, there's an approach called Our Language and Way of Life: How Young Children at the Mae Tien ECD Centre. The major goal is to enhance children's enjoyment of learning, promoting inclusion of children from minority backgrounds into the mainstream education system. As compared to the Indian curriculum, special or handicapped children have separate schools for their academics as well as they are not really involved in the normal children's activities. On the contrary, normal children do not know and cannot adjust with them so there should be inclusive education for all the children in an education system. Here, I mentioned nine types of curriculum pedagogy approaches across the world so there are many more approaches. Overall, children need a developmentally appropriate curriculum to understand, participate and get holistic developmental growth. Most importantly, change comes gradually so parents as well as educators should give them time to grasp the concepts.

Due to COVID-19 pandemic, all schools went online and children are getting easily addicted to digital media so parents should use appropriate mediation practices to control them. Overall, curriculum planning and pedagogy are two different terms which are important for an educator.

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CLICK HERE TO GO BACK TO CONTENT PAGE

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8. IS THE FUTURE AT RISK FOR THE CURRENT GENERATION?

RIA SINGH

It surprises me now and then, how the world has changed in the past few decades. How did our world become digitally dependent, and how did technology rise from absolutely nothing to almost everything in the radius of our visions today? We are humans, or in scientific terms, Homo sapiens - the most sophisticated beings on this planet. On one hand, human beings are capable of discovery, research, invention and, as history has shown, it cannot be undermined. But on the other hand, these discoveries have also led to disasters - multiple calamities left unnoticed or seen as too common these days and have often been blamed on nature itself. Every day we feel the impact of these climate disasters. Some examples are Cyclones Idai and Kenneth, the Australian Bushfires, East African Droughts, South Asia Floods and Dry Corridor in Central America. Climate Change is often considered to be a result of human activities causing the Earth's surface to overheat, which is not to be feared but to be considered as the first step towards a positive change.

Climate Change today has become one of the major issues in the world. It causes alarm and adds a wave of panic to the minds and hearts of many. It has caused people to run away from the problem and to even forget about what is happening. Even after numerous attempts to solve the problem of Climate Change, the world as one, we have reached almost nowhere.

Today, instead of deliberating over the repercussions we need to take action because what we do today affects what happens tomorrow. It is not strange anymore that the whole world knows a thing or two about Climate Change, but what the problem today is that many of us continue to believe that Climate Change is no threat to life and, most importantly, to human existence. Many believe that lives claimed by disasters are natural but we need to acknowledge that these disasters are man-made.. Till date, it has been estimated that around 150,000 people die every year and the cause specified is none other than Climate Change.

Climate Change did not come to existence when humans started noticing it; it arrived way before. When deforestation increased, the levels of carbon emissions also went up correspondingly. Furthermore, when industrialization started, the burning of fossil fuels to run factories became such a necessary factor to becoming rich that people could not see the harm outside the rising profits and thus it became one of the major factors contributing to Climate Change. The average Global Temperature increase during industrialization was 0.7°C, while the current temperature increase is 1.16°C. There are always two ways to fight a battle and we should choose well. This battle isn't one against Climate Change; it is against thoughts that burden us, such as greed, and thoughts that make us want more than what we need. The world will always be full of problems which can and cannot be solved but it remains our sole duty to nature, to the earth, and to the people around us to contribute for the betterment of the environment.

"When solving problems, dig at the roots instead of just hacking at the leaves."

- Anthony J. D'Angelo

An issue only becomes a problem when you feel that you can't solve it, and solving a puzzle as big as Climate Change isn't an easy task. What we all need to understand is that no matter how big an issue is, all it takes is the willingness of the heart and the strategies of the mind, to stabilize the situation. It takes a lot of courage to stand in the middle of a crowd and to justify your thoughts, which is also the most difficult task when you feel like no one is by your side. But sometimes, these little actions can have some major reactions. The Global Climate Strike defines just what I need to say today. It all starts with the little gestures showing that you care and ends with others recognizing and supporting you for the greater good that may come about as a result. Greta Thunberg and many other environmental activists have led a strike globally to show people the harsh reality of the world today, and words are not enough to express my gratitude towards them.

The negative impact of Climate Change on plankton could lead to extinction of some of its species, further disrupting the marine food cycles, as planktons form the base for them. Also, a major report by *The Intergovernmental Panel on Climate Change* shows that there may be a possible rise in temperature between 1.4°C and 5.8°C by the end of the century which could lead to the extinction of many other species which are failing to adapt to habitat loss and temperature differences.

We are struggling to find some peace of thought, soul and mind while living amidst all the chaos in our lives. Making meaning of our existence doesn't necessarily mean that we have to do something for the better of others at all times. But sometimes all we need is to be left alone with nothing but our thoughts, for the realization to come into our lives and at the end to accept and not fear to live in the moment. Just like how a million pieces of broken glass, all different sizes, shapes and colours though each one unique, ends up as a beautiful single piece of art when put together, we need to focus on emphasising all facets of our mind - the ability to not only think and admire, but to recognize, reflect and realize. In terms of Climate Change, these are the 5R's we need to follow: reduce, reuse, recycle, repurpose and refuse.

In the words of Charles Darwin himself, *"It is not the strongest species that survives, nor the most intelligent that survives, it is the one that is most adaptable to change."*

The Darwinian Evolutionary Theory - "survival of the fittest"- suggests that only those who are best adjusted to their environment are most successful in the act of survival. Climate Change can be responded to in two ways - one being Mitigation and the other one Adaptation. The term Mitigation suggests that the sources of greenhouse gases need to be reduced, thereby reducing the carbon emissions. In current times there are several contributors to the total GHG Emissions which are as follows: industry, transportation, fuel combustions, electricity, and heat. One of the

surprising facts regarding GHG is that 4% of the total emissions are fugitive in nature. Emissions are also caused by basic activities like agriculture, land use change and waste. The most feasible solution available right now is to set up sustainable institutions, use sustainable energy and heavily cut down on the use of fossil fuels. Everything has its own perks but right now we need to focus on what positive change sustainability can provide. Sustainable Development can help save the earth while still continuing life for future generations; it can teach humans to be responsible for their own actions. Furthermore, sustainability can help the poorest and weakest in society by providing millions of job opportunities and, last but not the least, help us reflect on our past doings and their effects on the environment.

On the other hand, we have Adaptation which will prove to be beneficial, helping us to survive in conditions that lie ahead of us. Adaptation is both biological as well as behavioural but the main focus right now is to reduce human vulnerability to the harmful effects of climate change. For years humans have coped with the climate changes but also have succeeded in their deeds. The only problem is that unfortunately Climate Change cannot be stopped in an instant because it is nature's phenomenon but what can be done is to slow it down in order to restore the earth.

Change is the only constant yet change is neither good nor bad. But nature has provided us with an opportunity to make a positive change while we can, to make up for the damage done.

Well, they say I start where I am, so I go ahead and believe that maybe I am the beginning myself. As the saying goes, "You build yourself up at your lowest." We don't find ourselves, but instead we build ourselves up, build our voices and build our faiths, because at the end of the day you may not always know who you are but you can definitely focus on who you can become; how you treat others around you; how grateful you are; and how you show your appreciation for the environment by preventing any further damage from your side as an individual.

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5. Sustainability can help the poorest and weakest in the society by providing millions of job opportunities https://sustainabledevelopment.un.org/content/documents/1951Sustainable%20Consumption.pdf

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Ria Singh is a 17-year-old studying at Shiv Nadar School. She has been writing since 8th grade and has been actively participating in Inter/Intra School Competitions, Model United Nations Conferences and writing for the school magazine. She believes that even though tomorrow is not certain, we should do everything in our control to save our future.

CLICK HERE TO GO BACK TO CONTENT PAGE

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9. NEW CHALLENGES TO TEACHING AND LEARNING

KINLEY WANGMO

"Education is the most powerful weapon which you can use to change the world."

- Nelson Mandela

Education is the first step for people to gain the knowledge, critical thinking, empowerment and skills they need to make this world a better place. There are many ways we can make an impact on the world but there is no greater impact than spreading education and enabling people who, in turn, will empower and teach more people, thus spreading the movement. With the change in time and situation, classroom learning is gradually being replaced by online learning classes. Education was always important but the way it has been imparted has been changing over time.

The COVID-19 pandemic has resulted in schools shutting all across the world. After the detection of coronavirus in Bhutan, various steps were taken by the government to stop its spread. One of the strategies of the movement was to shut all schools across the country. It has been an extraordinary experience for the regular students to stay home and transform the home into a classroom. Before we used to follow our traditional methods of teaching and learning whereby our teacher always lectured us and we hardly used any technology or devices to

enhance our learning. With the unfolding of the COVID-19 crisis we had no other option but to adopt online learning platforms. Here the question arises whether online learning platforms really help our students. Online learning requires students to be hard workers and it requires self-motivation as well as support from family and parents. It is widely believed that online learning is a boon as students can learn from wherever they are effectively as it reduces time as compared to going to school.

However, classroom learning has been found more effective because of its interactive nature whereby face to face communication with teachers and peer to peer learning activities are possible. Moreover, strict schedules in the school keeps all the students on track with their studies. Students can not only learn from each other but also compete with one another which in turn boost their confidence and intelligence. Learners can assist one another so as to keep with the flow and continue gaining knowledge. Classroom learning is not costly and does not involve any disturbances or problems as the learning environment in the school is very friendly.

As the spread of coronavirus continues across the world, many questions remain unanswered - what is going to happen to those thousands of students whose schools and colleges have been affected by the pandemic? Moving teaching and learning online has starkly exposed deep inequities in the education system. A shocking number of students rely on school for food and a safe environment. There is also a digital

divide whereby children without devices or reliable internet connections are cut off from learning. Those who are from privileged backgrounds will find the tools they need through parents, tutors or their better resourced schools but for those from disadvantaged backgrounds will face multiple challenges. The use of online classes will not reach everyone and it's not just a matter of access to devices and other social media. For small children, they need to be supervised and given extra care while operating devices for learning online. For high school and university students it's not much of a problem as most find it comfortable to study online as the timings are flexible and the lessons are easy to access. However, it is not that easy for small children to learn on their own. It is easy for those whose parents or guardians are educated as they can teach their children and engage them in study related activities; however, for those whose parents are uneducated and can't make their children study, they face a difficult time.

Bhutanese students have been fortunate as the government of Bhutan has introduced e-learning lessons through BBS, radios and facilitated online learning by reducing the data charges for students and creating e-libraries so students can get access to materials for their learning purposes. For those who don't have facilities or devices to continue their studies, they were provided with some learning material from the government. Online learning focuses more on theory as theory lectures are easier to implement in an online learning environment than the practical lectures. After all, without a physical classroom and due to limited equipment, it is challenging for us to learn smoothly.

Implementing practical projects through online courses requires significantly more planning and resources compared to theoretical lessons.

Apart from those drawbacks, there are many advantages to online learning too. Online learning reduces time as compared to physically going to school. It can engage students in many activities and focuses on teaching at specific times whereby they can directly join classes just by staying wherever they are. Online learning boosts students' interest in learning with the use of new technology and innovations. In the 21st century, technology is leading the world and has a vital role in the education system through apps, videos and other learning and teaching techniques to attract learners and educators. Since every individual has diverse learning needs, students don't have to wait for others in the class to grasp that particular topic in online lessons as they learn at their own pace. Online education can also provide students with the chance to connect or interact with peers across nations or even with different continents. Moreover, students are exposed to knowledge shared by instructors around the world which cannot be learned in books. Thus, learning is no longer restricted within the walls of the classroom. Students no longer have to carry heavy backpacks from home to school and then back home.

As we all live in the 21st century, one must change and progress with the changing times. However, one should weigh the advantages and disadvantages before going for a change or before being part of

something new. For instance, when it comes to education one must be extra cautious. Despite online classes having advantages like less time consumption, offering distance learning and getting acquainted with technology through apps and networks, it has some drawbacks. Some prefer classroom learning as it is economical since it does not incur any extra cost and involves realistic interaction between teachers and students. One becomes more confident to learn and help learners understand better. After all, the goal of education is just not to reach the information but to make the students work on it and apply it in their own life for positive living.

Kinley Wangmo is a student of Dechencholing Higher Secondary School currently studying in the 12th grade. She is a Science student who aspires to become a doctor. She was born on 9th December 2002 and currently lives in Thimphu, Bhutan. As a child, she was active in cultural activities. She is a hardworking student. Hard work brought her fruitful results which made everyone proud of her. She loves reading books and writing short poems.

CLICK HERE TO GO BACK TO CONTENT PAGE

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10. THE ROLE OF NATURE IN EDUCATION AND LEARNING

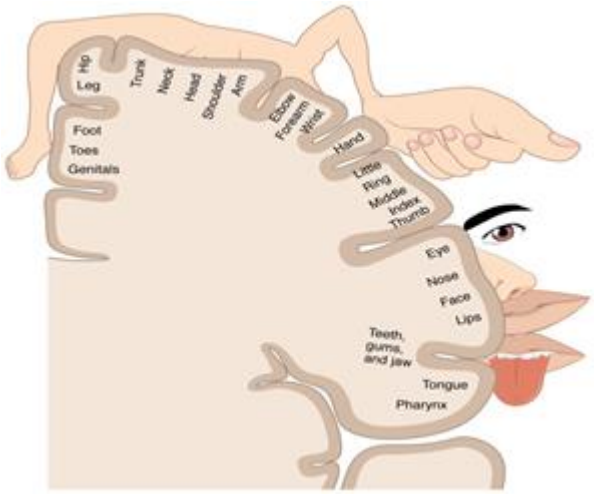
AKANKSHA BHILWADKAR

"No one will protect what they don't care about; and no one will care about what they have experienced."

- Sir David Attenborough

Humans have evolved from nature and we are always drawn to it. Be it a small plant in our house or a walk through grasslands, we always look for peace and contentment in nature. Children enjoy the most when they are in natural spaces and figure out ways to play with freedom and control. Digging, playing in the mud, splashing water, collecting leaves, and climbing trees has so much joy in itself. Unfortunately, children today have little or no access to these natural places due to various reasons. Schools have designed their syllabus to reinforce academics from a very early age and there is a decline in children's interaction with nature. We hardly see children playing in nature - picking flowers, climbing trees, manipulating natural objects to turn them into toys, and directing each other in outdoor games. It is understood that due to the pandemic, we all were restricted to our homes and had no option but to use the online medium even for children's schooling. But during the rest of the time, do children engage in playing or being in and/or observing nature? How does it really matter if children don't interact with nature? Humans have progressed by indirectly or directly using, altering, manipulating and processing natural elements. Children are credulous

and should be given opportunities to explore these natural elements in order to understand complex things in life. Children's fascinations towards stories that are set in nature and consisting of animal characters demonstrate instinctive feelings about nature (White, 2004). According to Taylor (2002) and Wells (2000), children who are in constant contact with nature score higher on tests of concentration and self-discipline. Natural environments lead to diverse imaginative and creative play which fosters language and collaborative skills. It improves awareness, reasoning, observational skills and thus cognitive development in children (White, 2004). Imagine one activity of climbing a tree. Even this one activity imparts so much learning. The child learns to adjust and move his/her body accordingly, overcomes obstacles, while on the way exploring different elements of the tree. There is a feeling of adventure which drives the child to keep climbing and finally when the child climbs up, there is a sense of positive achievement. All these feelings are going to help the child whenever he/she faces challenges in the future - to self-motivate, to go back and re-experience how it felt after climbing up the tree and how in spite of obstacles, he/she kept going.



Sensory Homunculus

Working with hands is another merit that nature adds to children's experiences. Humans have been actively using their hands to survive for thousands of years (Haas, 2019). Homunculus is a term used to explain relative space that human body parts occupy on the somatosensory cortex and motor cortex of the brain. Homunculus is a small representation of a man in which hands occupy the most number of sensory neurons. Handling leaves, sand, mud, stones and wood with bare hands induces the process of neuron firing which is responsible for storing and retrieving memory in the brain. There is also a link between "ripples", a high frequency brain activity, where many neurons are activated at once and the neural firing patterns are seen during learning and recall (Dr. Zaghloul, 2020). As Jean Piaget said, "For a child to understand something he must construct it for himself, he must reinvent it, if future individuals are to be formed who are capable of creativity and not simply repetition". Our brain chemistry actually changes when we work with our hands, for example, laying bricks or simply sweeping can create new neural pathways in our brains that can be only created by such an intense physically active environment. Tactile sensation, physicality of manipulating materials and reward of seeing a solid, tangible result upon completion of our work are some of the reasons why working with hands brings so much purpose and joy. Working with hands is also helpful in relieving stress and dealing with issues like anxiety, depression, panic attacks or PTSD (Chun, 2018).

Attention Restoration Theory explains how human encounter with nature lets them experience and engage in involuntary attention,

produces relaxation and promotes recovery from mental fatigue (Robin C. Moore, 2014). Mental health is another solid factor that needs to be highlighted when we talk about the value of nature-based experiences for children. There is a direct link between lack of nature contact in today's generation and some of the most disturbing childhood trends such as rise in obesity, attention disorders and depression, which is precisely known as Nature-Deficit Disorder (Richard Louv, 2016). Good health is not merely an absence of disease. Similarly, good mental health is not merely an absence of a disorder but involves experiencing peace, calmness, positivity and satisfaction in daily life. Nature provides opportunities for children to play and act according to their will without any compulsions, deadlines or rules. This state of mind where one feels free and possesses an inner calling to complete the task in spite of obstacles is very important to experience right from childhood. It is a strong preventive measure against mental health disorders. Many researchers suggest that contact with nature reduces stress, decreases symptoms of ADHD (Attention-Deficit Hyperactivity Disorder), protects against myopia and other measurable health benefits in children as well as adults (Robin C. Moore, 2014). Nature engagement is beneficial for the mental health of children as well as improves the brain functioning in children with special needs. Nature walking trails stimulate a child's sensory organs. Fredrick Douglass says, "It is easier to build strong children than to repair broken men" and hence we must strive to surround children with nature to build physically, mentally, socially and spiritually healthy individuals.

When children indulge in nature, an attitude of environmental awareness is inculcated in them. We are facing numerous environmental issues at an alarming level. Global warming is one such serious problem. Anthropocene is a term used to define today's modern era which is marked by frightening rates of species extinction, climate change, disrupted nitrogen cycles etc. (Robin C. Moore, 2014). There is an urgent need to address the relevance of nature-based experiences in this global and multidimensional challenge since the pandemic seems to be linked to the lack of connectedness between humans and nature and this dysfunctional relationship has contributed to the global crisis (Borelli, Gigli, Melotti, 2020). By letting children interact with nature we nurture a bond between humans and nature and make them understand the human dependency on it. Only conversation about conservation is not enough; we all must actually do something about it. By sensitizing children, we can build individuals who create sustainable methods of living which are beneficial for both humans and the environment. Richard Louv said, "Healing the broken bond between our young and nature is in our self-interest, not only because aesthetics or justice demands it, but also because our mental, physical and spiritual health depends on it." It is not expected that children learn about complicated environmental problems and solve them. But when they are simply introduced to nature and its various aspects, it keeps adding to their knowledge and experience and being which makes them form an appreciative and protective attitude towards nature. Conservation is not something that only naturalists or conservationists do. It is a practice

that we all need to bring into our lives and thus environmental and nature sensitivity plays a very important role in children's learning.

To make sense of all the above points, we need to define what exactly education means to us. Does it only mean to train our children in a certain set of skills? Is it only limited to making children earn money? According to Hannah Arendt, "Education is the point at which we decide whether or not we love the world enough to assume responsibility for it." We need to look at education as a scepter to empower our children to become strong individuals who flourish human life, economy, environment and humanity on this planet. Individuals who don't just look for possessions but who care about the effects of their actions on the planet, who think of broad benefits to the entire world along with applying their knowledge for the betterment at the grass root level. Rather than just limiting children to 3R's of learning (Reading, Writing and Arithmetic) learning through a nature-approach to education supports 6C's of intrinsic motivation viz. Curiosity, Choice, Content, Collaboration, Challenge and Context (Robin C. Moore, 2014). Letting children interact with and play in nature, will help them in overcoming problems about mental health, social anxiety, environmental problems and lack of adequacy and, in turn, will create individuals who are resilient and enlightened and look for happiness beyond the material pleasures in life. It will induce confidence and at the same time humbleness to understand that the earth belongs equally to all species and not just human beings.

Intellectual ability is what makes us unique from other species and nature has given us this ability to think and act accordingly such that it is in benefit of the entire planet. Nature based experiences and therapeutic programs have been proven to be effective in developing personal, social and ecological wellbeing and sensitivity, thereby playing a crucial role in reconnecting us with the environment, contributing to the exit of this social emergency and preventing future crisis (Borelli, Gigli, Melotti, 2020).

According to a survey by Natural England on childhood and nature, 87% of adults felt that they had more freedom to play outside than children have today. Safety, time, availability of space and now the pandemic are some of the reasons preventing children from playing outside. But even at homes, are children indulged in observing and playing around with at least plants in their own balconies? Do their hands ever get dirty with mud by planting saplings? Probably not! Children's habitat has been reduced to the house, to unrealistic toys, to screens. We think of ourselves as being outside nature, far from it and dominating it. "We are immersed in this strong and deep dichotomy that keeps humans and nature separate, a vision mainly due to our anthropocentrism and delirium of omnipotence" (Borelli, Gigli, Melotti, 2020). Schools should offer a variety of experiences and this "variety" comes from the natural world where children think, master emotions and work together. Irrespective of the intellectual level, emotional maturity or learning style, nature provides enriching experience for everyone (Sarah Wagner, 2019). To conclude, given the present trends

of our modern lives, it has become even more important to create opportunities for children to get closer to nature, to experience it, and to construct their own relationship with nature. Nature is an indispensable part of healthy human development and we owe it to our children to reclaim nature for them.

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Akanksha Bhilwadkar's love for nature and conservation has been nurtured through her several visits to forests of India since her childhood. For the last four years, she has worked with children and adults in the field of environmental conservation, sensitization about the value of nature. She is a graduate in Human Development. She has also done an introductory course in forest and wildlife management. She has completed post-graduation in Communication and Media Studies from SNDT Women's University.

CLICK HERE TO GO BACK TO CONTENT PAGE

Photo credit: Glenn Carstens

11. YOUTH AND TECHNOLOGY

AAYUSHMAN NAYAK

The youth is the technology-driven generation. In order to understand what this generation represents we first need to understand who the youth are. Based on my understanding the youth are boys or girls who were born between 1995 to 2005; they are not in the early teenage years.

Wherever I see young people, especially in parks, markets, cafes, restaurants, airports, stations, I find them busy with either mobile, tabs, or laptops. They are always busy chatting on social media, exchanging information, playing games, listening to music or talking on their mobile phones.

During my little research, I found a few pros and cons of this generation's lifestyle.

Pros –

a) Their requirements are the route towards technological development. We all know in the near future, technology will take over almost everything in our lives, and if this generation does not get accustomed to it then they might not be able to handle the future or might not be able to lead the technology-driven future.

b) This generation is able to work alongside artificial intelligence which is the need for the future.
c) This generation can maintain their relationship with many while sitting in a corner of their house.

Cons –

a) Spending too much time on a device affects the eyes and brain adversely and may damage one's health.
b) This generation is not active in outdoor sports and physical activities which is leading to reduction in their immune system.
c) Youngsters are so glued to their devices that they are not good at social interaction.
d) They are up to date with the latest technology but are not aware of what is happening with their own neighbours.

To sum up, I feel that this generation has the knowledge and capability to lead the world to a new age but they should also learn how to balance the use of technology with other important aspects of their lives and development.

Aayushman Nayak was born on 04.03.2011 in Kolkata. He presently studies in Shiv Nadar School, Faridabad. His hobbies are: Artificial Intelligence, singing, drawing, reading books, especially fiction (fantasy & adventure) genres, writing stories, poems, and articles.

CLICK HERE TO GO BACK TO CONTENT PAGE

Photo credit: Alexandre Debiève

12. YOUTH - THE EMERGING TRENDS

ANUVAB DUTTA

"The vigour of the youth triggers the extinguished flame of the frozen fire of a weary society to strive for development and become the next generation".

Parents may flounder while trying to help their children choose a career path and the related subjects they should study. However, the children remain inquisitive and question the world around them. Adults often don't understand this inquisitive nature. Children want to know "why is the universe a universe, and why is it not something else?" "Why are we human beings and not something else?" However, this level of enthusiasm dissipates with time as children go through rote learning and structured institutionalized instructions.

True education should encourage the youth to think, analyze, observe nature, and draw practical examples from life. Children should not be pressured to score high marks and be toppers of the school.

Children will one day grow into youngsters who are ready to face the world. They will go out into the world seeking careers in sustainable development sectors that call for inquisitive and challenging minds. Trade and sustainable development, the global economy's backbone needs upgradation and equilibrium to be maintained in order to

further proceed into the future with all men and women treated equally. At the same time, environmental resources should be conserved. This is sustainable trade and it requires many blueprints to be drafted before being beneficial to the nation's development. All these ideas will prepare the nation's youths for the complex and uncertain future.

It lies in the hands of the youth to take society forward. In order to do that they have to understand people's mindsets. They need to understand in what way they can be brought together, and how all of their needs can be satisfied with minimal compromise. When people share a common goal and work together for the betterment of society, the country will prosper. It is the youth who are capable of bringing this change and it is education that plays a central role in molding young minds.

Anuvab Dutta studies at St. Augustine's Day School in Barrackpore. He is in Class 9.

CLICK HERE TO GO BACK TO CONTENT PAGE

Centre for Escalation of Peace takes the view that peace is not just the absence of war. Peace cannot be taken for granted; constant effort is required to enhance it as an anchor in a sea of rapid and far-reaching strategic and socio-economic change. As such, peace must not merely be sustained, but escalated through various strategies and tactics akin to the pursuit of victory during war.

Centre for Escalation of Peace invited young scholars to contribute their thoughts, ideas and experiences through original articles to be put together in the form of an e-book. Aptly titled *Youth - The Emerging Trends*, the e-book seeks to highlight various topics important to the youth and showcase how they think regarding these themes. The e-book contains twelve chosen articles by youth of varying ages and backgrounds - the youngest is in Grade 6 while the older ones range from those in college to those working in the education sector or the environmental sector. The focus of the articles are diverse, with recurring themes being education, technology, climate change and sustainability.