TEACHER PERSPECTIVE ON ARTIFICIAL INTELLIGENCE AS A REPLACEMENT FOR TEACHERS IN FUTURE OF HIGHER EDUCATION

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Abstract

In present era, we are familiar with the words like chat gpt, Dall E, Bard, the artificial intelligence is being very common among students, research teachers, corporate workers and so on. There are views that in the upcoming era Artificial Intelligence can replace many professions. The present article discusses what would be the role of a teacher or human teacher can be replaced by artificial intelligence in future. Artificial intelligence and technology has become so accessible and more smart in the 21st century.

Now a days, world is moving towards the innovative technologies in almost all aspects in reference of high computational capabilities of intelligent devices. The U.S. Department of Education (Department) is committed to supporting the use of technology to improve teaching and learning process and to coperate innovation throughout educational systems. This report addresses the clear need for sharing knowledge and developing policies for "Artificial Intelligence," a rapidly advancing class of foundational capabilities which are increasingly embedded in all types of educational technology systems and are also available to the public. We will consider "educational technology" (edtech) to include both (a) technologies specifically designed for educational use, as well as (b) general technologies that are widely used.

These Artificial intelligence (AI) technologies are becoming an integral part of education and showing its caliber in education sector too. Recent placements technological advancements and the increasing speed of espousing new technologies in education are explored in order to prophecy the future nature of education in a world where Artificial Intelligence will be the part of schools, colleges and universities. During and after the COVID-19 pandemic, Artificial Intelligence is manifested as a miracle in education sector and making it more advance day by day. This paper aims to know the role of Artifical Intelligence in teaching-learning process with teachers perspective through the survey and if it will replace teachers in the classroom in future not just for academic purpose but for all other functions too, such as giving instructions, advising students, selecting study materials, notifying for important events, etc. The outcomes of this study show a significant difference between the perspectives of teachers towards the use of Artificial Intelligence in education sector, also the drawbacks, solutions and suggestions have been discussed in this paper.

Keywords: *Perspective, Artificial intelligence, education, teaching-learning process, replacement, espousing new technology.*

"A good teacher isn't someone who gives the answers out to their kids but is understanding of needs and challenges and gives tools to help other people succeed."

— Justin Trudeau

Educators don't need to worry about artificial intelligence taking over their jobs. While AI is becoming a valuable tool for educational professionals, there are many ways computers just can't replace the human touch in the classroom.

Machines can't replace the human touch that is necessary in our schools that can only be delivered by high-quality educators.

Instead of feeling scared of AI, teachers and educational professionals can look at it as a powerful tool for delivering better, more personalized learning experiences and lifting some of the enormous administrative burden currently placed on educators' shoulders.

1.0 INTRODUCTION:

Artificial Intelligence (AI) is the simulation of human intelligence processes such as learning, adapting, self correction, synthesizing and to solve complex problems by machines, especially by computer systems. At its simplest form, AI is the way in which computers can be made to copy the way humans think. AI will be a major new capability that allows innovation so that we will be able to do things we have never done before. AI is on its way to address labor shifts and displacements, military and cyber security concerns, in smart homes and cities, in weapons, auto pilots and there is no doubt that the technology will be progressive in the field of education

soon. AI has the potential to address some of the biggest challenges in education, innovative teaching-learning process, and accelerate progress in this field. In future, it will have powerful impacts on learning not only through direct support for students, but also by replacing or empowering educators to be more adaptive towards learner's needs and less consumed by routine, repetitive tasks.

Some of the Universities already started using AI, for instance Deakin University in Australia has applied IBM's supercomputer Watson as a solution to provide students with advices as an emerging form of artificial intelligence (Moles & Wishart, 2016). In India also many institutes are using supercomputers like HPC at IIT Delhi, PARAM Ishan at IIT Guwahati, PARAM SHIVAY at IIT BHU Varanasi, Sahasrat at IISc, etc for academic purpose, research, data processing and other activities. Georgia Institute of technology has used a teaching assistant Jill Watson (wasn't human) to solve the queries of students in a master's-level AI class. Not only did most students not realize that Jill was virtual, she was also among the most effective teaching assistants the class had seen, solving problems with 97% accuracy. In near future, there is a possibility of developing "Cyborgs" as a crossbreed of a human and a machine (currently a fictional character) for both teachers and learners in the world of education (Kelley et al., 2016). They will be involved in some human like processes and complicated tasks in teaching and learning.

1.1 Statement of the problem
The title for the present study hss been worded as below:
Teacher Perspective on Artifiial Interlligence as a Replacement for Teachers in Future of Higher Education

1.2 Defining the Key Words
"To define a problem means to put fence around it to separate it by careful distinction from like questions found in related sitations of need"[1]

– P.L. Whitney

Teacher
A person whose job is to teach, especially in a school or college. In present study, teacher whose teaching to college students.[2]

Perspective
Hearing about others' experiences often helps to put your own problems into perspective [makes them seem less important than you thought.**3**

Artificial intelligence,
Artificial intelligence (AI) refers to computer systems capable of performing complex tasks that historically only a human could do, such as reasoning, making decisions, or solving problems.

Artificial intelligence (AI) is the theory and development of computer systems capable of performing tasks that historically required human intelligence, such as recognizing speech, making decisions, and identifying patterns. AI is an umbrella term that encompasses a wide variety of technologies, including machine learning, deep learning, and natural language processing (NLP).

Although the term is commonly used to describe a range of different technologies in use today, many disagree on whether these actually constitute artificial intelligence. Instead, some argue that much of the technology used in the real world today actually constitutes highly advanced machine learning that is simply a first step towards true artificial intelligence, or "general artificial intelligence" (GAI).

Yet, despite the many philosophical disagreements over whether "true" intelligent machines actually exist, when most people use the term AI today, they're referring to a suite of machine learning-powered technologies, such as Chat GPT or computer vision, that enable machines to perform tasks that previously only humans can do like generating written content, steering a car, or analyzing data.

Education
Education. / (ˌɛdjʊˈkeɪʃən) / noun. the act or process of acquiring knowledge, esp systematically during childhood and adolescence. the knowledge or training acquired by this process: his education has been invaluable to him.[4]

Teaching Learning Process
The teaching-learning process, or the education process, has been defined as a systematic, sequential, planned course of action on the part of both the teacher and learner to achieve the outcomes of teaching and learning. Teaching Education in Values Through Games in Primary Education.[5]

Replacement of Teacher
Replacement Teacher means a Teacher employed for a Fixed Term, to replace a Permanent or Probationary Teacher beginning when a continuous absence is known to extend or has in fact extended into the next school year, but excludes an Occasional Teacher.[6]

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1.3 OBJECTIVES:

An objective is broader in scope than a goal and may consist of several individual goals. Objectives are a basic tools that under line all planning and strategic activities. Through the objectives, the researcher has described research and its more formal aspects.

-Which matter would be studied
- Which variables would be included
- The main section of the study
- Subtitle of the study.

Ø To study the teachers perspective towards Artificial Intelligence as a replacement of teachers in future in Higher Education.

Ø To study the percentage of teachers perspective towards Artificial Intelligence as a replacement of teachers in future in higher Education.

Ø To correlate the teachers perspective towards Artificial Intelligence as a replacement of teachers in future.

1.4 VARIABLES:

"Something that can have more than one value."[7]

- Dictionary of Education

"Variables is such a characteristic of a thing or a product which takes different values"[8]

- R. S. Patel

In the present study, variables are-
1. Independent Variables- 1. Gender 2. Zone - East Zone and West Zone
2. Dependent Variables- Perspective (Attitude scale)

1.5 HYPOTHESIS :

''Hypo.' means tentative or subject to be verified.' Before starting a real study, related to research, the researcher makes an assumption called as hypothesis. Without hypothesis an investigation is relatively aimless search. Hypothesisis particularly necessary in the search for the cause and effect relationship to help the researcher to collect the specific data without wasting the time and resource.

''Thesis' means statement about solution of a problem.'

"States that there is no relationship (or difference)between variables and that any relationship not a true one"8\

– L. G. Ray

Hypothesis is a tentative statements about the solution about a problem. It is the key to find out the solution of a problem that is to be verified. It is the base for planning and action in research to find out the truths. It gives direction to researcher, so it is called the heart of study.

Following will be null hypothesis for the present study :

H_{01}: There is no significant correlation between the mean score of Male and Female teachers perspective towards artificial intelligence as a replacement of teachers in future of Higher Education.

1.6 DELIMITATION OF THE STUDY:

According to Best and Kahn (1989), "Limitations are those conditions beyond the control
of the researcher that may place restriction on the conclusion of the study and their applications to other situations."9

Sukhia and Mehrotra (1966) states that,"A recognition of the limitations of the study helps
to focus attention of valid objectives and helps minimize the danger of over generalization."

This study is to be delimited as follows :

Ø The research has been conducted only on the college teachers of Ahmedabad district.

1,7 POPULATION:

According to Meredith D. Gall, Walter R. Borg, Joyce P. Gall, Population means the aggregate or the totality of objects or individuals, regarding which inferencesare to be made in a sampling study. It means all those people or documents etc. who are proposed to be covered under the scheme of study'.

According to R. S. Patel (2011), Population means "When data is to be collectedfrom any field the set or group of all units to be covered for data collection is called a population"

From the above definitions it is clear that the population inany educational research is the description of the elements that is to focus the study. The elements can be persons, organizations, objects etc. that is focus of the study. Thus, population means a group of

people, objects or individuals. It is a set of well defined group of people, objects and phenomena and includes all of its elements. The findings of the research are generally on this population. It includes the entire mass of observations, which is the parent group from

which a sample is to be formed. The sample observation provides

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only an estimate of the population characteristics. In most of the studies this population is finite and consists of elements whichconform to some designated set of specifications. These specification guides the researcher about the elements to be included or excluded from the population.

Ø The population of the present study has included College teachers of Ahmedabad district.

1.8 SAMPLE:

The representative proportion of the population is called a sample. To obtain a representative sample population, the researcher selects each unit in a specified way under the controlled condition.

Ø A sample size of 30 college teachers has been selected from the population by random sampling method.

1.9 RESEARCH METHODOLOGY:

It is essential to use appropriate method to find out the correct solutions of the problems. Various types of methods are employed for the educational research. Research is a purposeful, precise and systematic search for new knowledge, skills, attitude and value for the reinterpretation of existing knowledge, skills, attitude and values.

Research methodology involves the systematic procedures by which the researcher starts from the initial identification of the problem to its final conclusions. The role of the methodology is to carry on the research work in a scientific and valid manner. The method of research provides the tools and techniques by which the research problem is attacked. The methodology consists of procedures and techniques for conducting a study. Research procedures are of little value unless they are used properly. The tools and techniques will not get the work done. Research methodology involves such general activities as identifying problems, review of the literature, formulating hypothesis, procedure for testing hypothesis, measurement, data

collection, and analysis of data, interpreting results and drawing conclusions. Thus, research methodology consists of all general and specific activities of research.

According to M. Verma (2008),

"Method is only in the abstract as logical entitiesthat we can distinguish between matter and methods, in reality, they form an organic whole and matter determines method analogously as objective determines means and content and spirit determine style and form in literatures."

M. Verma has presented broad meaning of term method.

According to him matter is important for determining methods. The common types of matter may be of three types; hence all the methods can be classified under three heads-

1. Theoretical Problem- Survey, Experimental methods.
2. Factual Problem Historical, Case study and Genetic methods.
3. Application Problem- Action Research

Broudly (1963) stated that, "Method refers to the formal structure of the sequence of acts commonly denoted by instruction. The term method covers both strategy and tactics of

teaching and involves the choice of what is to be taught and the order in which it is to be taught."

George J. Moutay has classified research methods into three basic types: Survey, Historical and Experimental methods. The meaning and their further classification have been given as below:

(1) Survey method :

It is concerned with the present and attempts to determine the status of the phenomenon under investigation. This Method has been further classified in to following categories: (a) Descriptive

(b) Analytical (c) School survey (d) Genetic

Descriptive Survey is of following types:

• Survey testing method
• Questionnaire survey method
• Interview survey method

(2) Historical Method :

This method is concerned with the past and which attempts to trace the past as a means for seeing the present prospective.

(3) Experimental Method :

It is oriented towards the discovery of basic relationships among phenomenon as means of predicting and eventually, controlling their occurrence.

The selection of research method depends on the nature and type of the study. Descriptive research is concerned with the present attempts to determine the status of the phenomenon under investigation. It deploys the probability sampling and the parametric tests. Therefore the investigation has selected descriptive researchmethod which includes survey method which is found to be suitable for the present study.
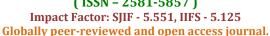
The present research is based on a survey method. Survey method is the one of the most common popular andwidely used method in applied social research. Survey is a technique

for gathering large amount of information from a large population in a relatively short duration, with the intent of employing data to justify current practices or to make more intelligent plans for improving them. The following are the main characteristics of the survey method of research:

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(1) The survey method gathers data from a relatively large number of cases at a particular time.
(2) It requires experts imaginative planning.
(3) It requires careful analysis and interpretation of the data gathered.
(4) It requires logical and skillful reporting of the findings.
(5) Surveys vary greatly in complexity.
(6) It provides information useful to the solution of local problems.
(7) It suggests the course of future development.
(8) It determines the present trends and solves current problems.
(9) It helps in fashioning many tools with which we do the research.
Following are advantages of Survey Method:
(1) Large amount of information is obtained from a large population.
(2) It yields accurate information within sampling error.
(3) It is relatively less expensive.
(4) The scope of survey research is very wide.
(5) The opinion of the experts can be obtained about the subject.
Surveys are used or applied to gather the following types of information.
o Data concerning existing status.
o Comparison of existing status with the established status.
o Means of improving the existing status while other are limited to one or two by these types.
Survey method deals with existing conditions or relationships, practices, beliefs, ideas, attitudes, influences and trends that are developing. Hence, considering all the aspects of survey method, the investigator found this topic appropriate for thepresent study.

1.10 RESEARCH TOOL:
After a research design has been selected and it is decided who will be included in the study, the next step is to identify ordevelop suitable tool for collection of the desired information. Tools are nothing but the instruments that help the researcher to gather data. A researcher generally requires many data gathering tools or techniques which may vary in their complexity, design, administration and interpretation. Each tool is appropriate for data collection of certain type of information. Selection of tool and its use plays a vital role in collection of data and depends upon the researcher study.
During research process any instrument use to collect data consistent with the objectives of the study is known as tool. Various tools are employed to collect quantitative as well as qualitative data in educational research. The researcher can either use the available tools or construct new tools, if need arises, for his research study.
While opinion comprises of ideas and views of an individual and it is easily amenable to change. Intimate contact is not necessary to measure opinion of individuals. A schedule prepared for ascertaining opinions of individuals is known as opinionnaire.
Mainly important tools which are used for data collection ineducation research are listed below:
Questionnaire, Checklist, Rating scale, Sociometry, Opinionnaire or attitude scale, Interview and Observation The tools can be standardized tests which are readily available. If the standardized tests are not available then such tests are to be created, which should be reliable and appropriate for the respective research study. A questionnaire has been constructed to gather the data.

1.11 DATA COLLE CTION:
Ø The data has been collected from college teachers through online Google form.

1.12 DAT1.11A ANALYSIS:
Ø The data has been analyzed by percentage of teachers responses and the correlation between the perspective of teachers through spearman's correlation coefficient.
Ø Following table is showing the percentage of teachers perspective towards AI.

Sr.	QUESTIONS	ST (DA%)	TE (DA%)	ST (MB%)	TE (MB%)	ST (A%)	TE (A%)	CORRE
1.	AI as future of education and will totally transform education system globaly.	3	24	13	13	84	63	0.366
2.	AI will have impact on teacher's profession.	0	19	10	10	90	71	0.438
3.	AI will totally replace teachers in classroom with teacher-bots.	15	81	17	10	68	9	-0.647
4.	AI will solve problems of students better than teachers any time.	33	62	24	29	43	9	-0.427
5.	AI will connect with students better than teachers.	84	81	13	9	3	10	0.682
6.	AI will enhance only academic growth of students rather than holistic growth.	20	19	17	14	63	67	0.577
7.	There will be always need of teachers along with AI in classroom.	7	5	13	0	80	95	0.605
8.	AI will help students in all the ways except attaching with them socially and emotionally.	20	24	20	19	60	57	0.515
9.	AI will make the student- teacher relationship weak.	13	19	17	9	70	72	0.517

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10. AI will evaluate students more accurate than teachers. 20 48 10 29 70 23 -0.448
OVER ALL CORRELATION 0.672 0.344 0.641
Here, ST = Students, TE= Teachers, DA= Disagree, MB= May be, A= Agree

1.13 RESEARCH FINDINGS:

Researcher has found that teachers were disagreed for the statements shows a significant strong positive views of 0.672, teachers were neutral for the statements shows a weak positive views of 0.344 of teachers were agreed for the statements shows a significant strong positive views of 0.641, p=0.033. Researcher rejected the null hypothesis as the perspective of teachers towards artificial intelligence is strong and positively correlated.

CONCLUSION

The present study describes the teachers perspective for Artificial Intelligence and how teachers see a classroom along with AI technology in future. AI will be a supporting system for teachers and perform all the academic activities to help students to improve their holistic development. Implementation of AI technologies will give so many opportunities in education field but it is a challenging task to replace teachers fully with AI in near future. There aresome drawbacks of AI which we have to overcome, such as expenses, maintenance, handling and it's not easy to implement it in each and every school, college and university. There will be always need of teachers in a classroom no matter how much we improve education system with new technologies.
It will be better to implement AI technology slowly and surely according to the need of teachers for which the present research is useful.

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