Artificial intelligence Powered Education in India

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Abstract - Artificial intelligence (AI) can be utilized in numerous exercises in Education Systems, for example, evaluating, in school, reviewing schoolwork and tests for courses can be monotonous work, instructors find that evaluating takes up a lot of time, that could be utilized to cooperate with students, get ready for class, or work on proficient turn of events, educators can robotize reviewing for a wide range of different decision and fill-in-the-clear testing. Computer based intelligence can call attention to places where online courses need to improve, when countless students are found to present an off-base response to a schoolwork task, the framework cautions the instructor and presents future students a modified message that offers indications to the right answer. Students can get extra help from Al guides, while human mentors can offer that machines can't, few coaching programs dependent on man-made reasoning exist and can help students through essential science, composing, and different subjects, Al projects can show students basics, however so far aren't perfect for helping students learn high-end thinking and inventiveness. Computerized reasoning can offer input about the achievement of the course all in all, it can support educators and students to create courses that are redone to their requirements, students will get all the essential information, few schools are utilizing AI frameworks to screen students' progress and to alarm teachers when there may be an issue with syllabus execution. Simulated intelligence based frameworks have changed how we connect with data, They can be rather than schools offer scientific aptitudes that students consistently need, intelligent framework helps find and use data in schools and the scholarly community also, it can assist students with improving learning, and possibly a substitute for genuine world mentoring, Teachers will enhance AI exercises, help students who are struggling to cope up, AI can offer human communication and hands- on encounters for students. Educationists recommending our system need a disruptive technological intervention. An intervention that will make education a holistic and accessible to everyone. Bringing Artificial Intelligence to the classrooms in India might just be the solution that we have been looking for. Starting from e-commerce to healthcare and now education, irrespective of sector, the intervention of AI has increased by manyfold.Artificial Intelligence is defined as the capability of a machine to mimic intelligent human behavior. We may just imagine using AI to track the performance of an individual student based on his previous grades, participation, and performances. Therefore, this technology has been taken seriously to literally fix the many loopholes in the education sector across the globe. In a nutshell the whole idea is to develop software that creates individual lesson plans for students based on their performance and learning curve. Seeing this growing scenario of AI intervention in Indian Education system, and promise for future for the Education Industry provided the required ground for this research. In this paper an empirical has been done to find relationship between gender and awareness about Al interventionin Education in India, the perception that AI Intervention will disrupt the Education system of India and the perception that AI Intervention will improve the personalization and interactivity in the Education system of India.

Keywords - Education, AI in Education, Recent technology in Education, AI in Indian Education Systems

INTRODUCTION

Straight from e-commerce to health care to education, in each sector, AI interventions have been many-folded. Artificial Intelligence is defined as the ability of a machine to simulate the work of an intelligent person. Machine learning technology that compliments our

products based on our previous purchases. Now, consider using the same technology to track each student's performance based on his or her previous grades, participation, and performance. These programs help us not only to obtain information but also to improve our ability to make decisions. This technology is also known as machine learning that is

used in certain areas to track important educational issues. The Andhra Pradesh government has done a similar experiment with 17 districts and one of them is Visakhapatnam. An app based on machine learning technology that collects and analyzes student data related to various capabilities such as academic performance, reason for dropout, quality, and teacher skills, social census, gender, etc. The program received similar patterns of speculation as potential students. The national government has received a list of hundreds of thousands of students who may drop out of school for the 2018-2019 academic year (blog.epravesh.com,2020).Such assessments evidence of AI that serves as a contribution to the planning of the education system and helps institutions to make better decisions. Using AI on such a large scale can definitely help us fix the problems in the current system. The rapid advancement oftechnology, such as artificial intelligence and robotics, has impacted all industries, including education. Teachers' jobs will never be at risk ofor may being replaced by robots - instead artificial intelligence programs can teach lessons or maths, the more complex knowledge transmission of social and emotional skills will always be the domain of humans (GetSmarter Blog, 2019). It is a matter of fact that there is a huge dearth of quality teachers in India. Lots of articles in the mainstream media have repeatedly highlighted that students in India are denied of good quality education. Al can be a boon and solution to this problem (K. Naveen Kumar, Research Scholar, Rabindranath Tagore University and Assistant Professor, Villa Marie Degree College for Women, Somajiguda, Hyderabad).

The reason for this is adaptability of AI systems to Individual student learning and grasping abilities. Even though we try our level best but a teacher per classroom is never enough to fulfill the needs of all 60 students. In this situation, empowering students with AI systems in schools and smart classrooms or at their convenience in homes may be the solution to solve the problem of quality issue and inaccessibility at one go. Teachers have a lot to multitask their responsibilities such as evaluating, grading, question paper setting, preparing mark sheets and monitoring the performance of every student. If these tasks are made easy for them, then they can focus more on course development, teaching quality and skill development. Al systems can help teachers in all these tasks, turning these tasks into not only automated but also intelligent one. As Al systems getting into places, it will be lot easier for teachers to focus on students rather than monotonous administrative tasks. India has always be forefront in promotingthe policy of Education for all (K. Naveen Kumar, Research Scholar, Rabindranath Tagore University and Assistant Professor, Villa Marie Degree College for Women, Somajiguda, Hyderabad).

These AI-enabled programs will make global classes more accessible. It will not only empower students but also teachers in improving themselves now. Such programs can be the basis for home education according to 'new normal' after COVID-19 outbreak. Students living in the remotest parts of India will be

able to learn the way it is taught in an urban area. Remote Proctoring is a new technology that can help simplify the process of monitoring testers. Students can appear to be tested from any local / home class. The system is able to enable such tests remotely using remote proctoring. It uses a webcam attached to a computer program to authorize remote readers. Many educational institutions, Corporates; universities have begun using this technology to simplify the Remote Proctoring. Physical Answer chart testing is one of the most painful areas for universities or educational institutions (edu.google.com, 2020).

LITERATURE REVIEW

An Al system can also take action with technologies such as expert systems and simulation engines or to perform an action in the physical world. The biggest impact is also seen in the state of services in the education sector. In the context of developing countries in particular, levels of education and demographics play a critical role in the development and radical transformation of the developed economy. The global education system is in full swing and the results of advanced technology have created some surprises in this field (R.RENUKA, LECTURER, and DEPARTMENT OF COMPUER SCIENCE ST. ANN'S COLLEGE FOR WOMEN 2022). From Artificial Intelligence and Machine Learning to automation and digital production, the global learning sector was among the most technologically advanced components. decades, changes in people's lives have been thought about with the advent of Al and technology, and now they can actually see anyone close to them. In India, the value of an advanced education system is being enhanced by a growing number of youngpeople (M.MARIA LAVANYA LECTURER, DEPARTMENT OF COMPUER SCIENCE ST. ANN'S COLLEGE FOR WOMEN 2022).

As the adoption of digital data collection methods increases, it is important that these methods are successfully funded to deliver advanced education and teaching. While we may not see humanoid robots acting as educators over the next decade, there are many career projects that use computer intelligence to help students and teachers gain more from reading knowledge. The results of combining technology with a new learning process have completely transformed education systems around the world. China has also contributed to the high investment in its famous post-medical and automotive sector, ultimately looking for significant increase in development in the sector (brookings.edu, 2020).

There is a need for a bottom up approach - the SDGs should be located in the grass root level. As we enter the last decade of achieving the goals set by the UN, there is a need to commend progress on achieving these goals and an important step in achieving the same will be to look at their indicators on real time basis (sustainabledevelopment.un.org, 2017). The 'Transformation of Aspirational Districts' program has shown how monitoring and tracking aimed at regionalization can promote healthy competition between regions, motivating each of them to fulfill their responsibilities (K.Naveen Kumar, Research Scholar, Rabindranath Tagore University and Assistant Professor, Villa Marie Degree College for Women, Somajiguda, Hyderabad). The momentum needed to accelerate progress towards these goals will be provided by Artificial intelligence

(indiatoday.in, 2020).

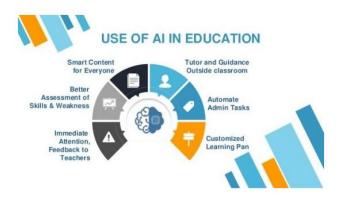
COURSE CREATION AND CUSTOMIZED TEXTBOOKS

Al can do a lot more than providing support for courses. It can also be used as a tool for creating courses and bringing real-time improvements in the educational process.

For example, when attending an online class, students will receive suggestions and assistance as they progress, according to their evolution and they will

receive support each time they struggle to complete a task. Teachers will also be helped by receiving notifications when complicated issues arise, so they can offer further details and focus more on important aspects.

Al is slowly changing the way we use textbooks. New technologies are making way for customized study guides that cater to students' needs. Teachers will no longer waste their time going through manuals to extract the necessary information and put it in a form that makes it easier for students to understand and assimilate.



WHAT AI MEANS FOR TEACHERS

Since intelligent systems will handle so many tasks that were once performed by teachers, some people got the idea that the rise of AI technologies in education might reduce the value of teachers. But in reality, this is highly unlikely to happen.

Al can drive efficiency, personalization, and streamline admin tasks to allow teachers the time and freedom to provide understanding and adaptability—uniquely human capabilities where machines would struggle. A more realistic scenario would be a future in which Al becomes a reliable assistant for teachers, helping them fulfill their responsibilities with higher efficiency. While Al can be of great help, students still need a teacher to connect with, someone that can guide and inspire them in a way that no machine ever will.



Intelligence (AI) which will be a game changer to turn these aspirations into success. Unprecedented availability of data points in the second most populous country in the world combined with the access to heavy computational power can turn India into one of the strongest beneficiaries of the AI wave (NitiAayog, 2020).

One of the targets set under the Quality Education agenda states that by 2030, our nation must significantly increase the supply of qualified teachers. While it is not possible to fill a huge demand-supply gap in existing provision, it is possible that teachers will be made more efficient. Here are some ways AI can do that (sdg4education2030.org):

Real-time text to speech and text translation systems can be used to spread information seamlessly in the regional language, in line with the Draft of National Education Policy 2019 which has promoted the of mother-tongues languages. translation programs can be integrated with DIKSHA, Digital Intelligent Infrastructure, a digital infrastructure developed by MHRD or by e-PATHSHALA, (initiatives under SarvaShikshaAbhiyaan) (The Hindu, 2020). For example, if the E-PATHSHALA textbook is only available in Hindi, text translation services can make it available in other regional languages and make it more readily available. Thanks to these language translation programs, the language barrier can be removed and the inter-operability of teachers in all states can be achieved, helping to meet needs better than ever before (epathshala, 2020).

Biometric authentication: Mundane and teacher support functions - attendance and other administrative tasks - can be taken over by Al. For example, student biometric authentication can be introduced and integrated with UDISE + (Unified District Information System for Education) - an application that is one of largest forms of Education Information Management in Schools. Biometric attendance records can be used as a proxy for inclusiveness of the education in the district/ state/ block and can be easily tracked, helping to monitor national indicators such as youth and adult participation rates and the proportion of men and women enrolled in higher education, technical and vocational education. This can help monitor the quality of education in the school (m2sys.com, 2020).

Chatbots: In a diverse country like India, the integration of conversations into digital infrastructure or the availability through IVRS system education domain can be transformational - they can be trained on subject matter and a good percentage of student doubts can be answered immediately, thus reducing the current workload of teachers, they can focus on more creative activities (ai-chatbot-education, 2020). Mobile access would not be an obstacle here as it is driven by rural India as the number of internet users in Rural India is

expected to reach 290 million by the end of 2020(livemint.com, 2020).

Automated grading: With Drafted National Education Policy 2019 prioritizes online learning on its agenda, ML methods such as Natural Language Processing can be used for automated grading of assessment on a large scale on platforms such as DIKSHA, E-PATHSHALA and SWAYAM (Study Webs of Active Learning for Young Aspiring Minds) - not only objective questions but also subjective questions (NitiAayog, 2020). Automatic content creation is another field in which Al can intervene - given the vast online resources, NLP techniques will be able to use Automatic Text Summarization to create crisp content and publish them on these e-learning websites (algorithmia.com, 2017). The standard ML-based integrated curriculum will be aligned with the nationally defined learning outcomes (MHRD has developed a 70-point performance matrix called Performance Grading Index (PGI) to grade the states and UTs) and will assist in assessing indicators for percentage of students who benefitted by minimum proficiency level (NitiAayog, 2020).

Personalization: If such content is in the field of e-learning platforms, personalized feedback and recommendations on a large scale can be possible. At this moment, it is not possible to give each student an individual attention. However, if content is created and graded by AI, will ensure personalized learning styles by identifying students' pain points and providing appropriate recommendations. In fact, AI-enabled educational infrastructure would bless each Indian student with a personalized tutor (hbr.org, 2019).

Supervised classification models to reduce drop-out rates: If AI programs provide a personalized response, we can reduce India's total drop- out rates which stands at 4% at the primary level but increases to 20% in higher education. While these personalized trainers continue to collect data points from each juncture in the child's educational journey, ML classification models can be used to predict children at risk of withdrawal of studies and dropping out and appropriate remedial measures can be developed. The inclusion of these activities will help increase the number of higher education enrollment ratio and ensure that the majority of adults achieve literacy, in line with the objectives under this SDG (NitiAayog, 2020).

Pattern detection to increase engagement: (R.RENUKA) Targets to eliminate gender inequality in education and inclusion of people with disabilities can be positively impacted by the use of AI - not only has Apple's Siri and Amazon 'Alexa announced in the public category, allowing visually impaired users to participate more, but closer to real-time of text in speech systems allows the mute to have an active exchange of information. Supporting Inclusive Education for Children with Special Needs (CWSN)

Children under the SamagraShiksha MHRD program, children affected with autism, Parkinson's disease or any other speech-induced disorder can benefit from the integration of machine learning models to online learning websites that find speech patterns, augment speech by correcting mispronunciations or broken words and extracting the same in audio or text format (modev.com, 2019). In addition, in today's system of things, certain educational institutions may have a natural, unknowable or otherwise, such as the choice of multiple students of the same sex or a policy that restricts equal opportunities for certain Indigenous (unesco.org. 2019). However, machine learning algorithms can be set up to be used to assist and monitor enrolment and are clearly designed to eliminate such annoyances. For example, career options selection criteria for jobs may include testing by these AI systems to ensure that the process is correct, a process that will be the precursor integrated education (pewresearch.org, 2017).

MOTIVATION

(M. MARIA LAVANYA) suggests that more than 300 Indian startups use AI in the delivery of their core product. About 11% of them are based on education (Tracxn.com, 2020). This is a strong indication of nontechnology and ecommerce industries using Al in the delivery of their product. Of all the available Alpowered solutions ML (100% of the participants) and automated research and data integration solutions (57% of participants) are available as applications that have a significant impact on education and teaching (PwC, 2018). The Indian start-ups has jointly raised by \$ 100Mn over the past 3 years. Organized a few Global Hackathons from 2017 is fueled by companies like OpenEd.ai, supported by NITI Aayog, IBM, Google Developer Groups. NITI Aayog and Google are teaming up to develop and expand the education and health care ecosystem. Google is going to invest \$ 10 Bn on transforming education, health and creating Digital Ecosystem in India (Businessworld, 2018; Nasscom, 2017; denib.gov.tr, 2017).

Facebook messenger chatbot to learn Maths: Developed a conversational interface where users can learn Maths concept by texting a Bot. The Bot solves equations and recommends related videos from Youtube (NDTV, 2018).

Text to Narrated Films: Transforms boring text into engaging videos with audio and captions. It can generate videos from PDF / Text by identifying titles and image search. Finds and download relevant images from Google, and exports them as a video. The goal is to make learning fun and enjoyable (NDTV, 2018).

ReadEx: ReadEx is an intelligent document reader app. This app creates quiz, questions automatically as the user reads. Uses Natural Language Processing (NLP) (NDTV, 2018).

At Toppr ML and Al lists out the strengths and weaknesses of the student. Individual reading speed and records are monitored. These tests are designed to boost a child's confidence in the best possible areas and challenge areas they do not. This perfect approach helps children to stay motivated (toppr.com, 2020).

EduGorilla is another company that uses AI to analyze Big Data in the education industry in India. It analyzes data from 600,000 schools and 70,000 teaching institutions to deliver high quality results for Indian students. This makes them one-stop shop for all the educational activities in India. Students can rely on one place for their questions to be answered (edugorilla.com, 2020).

Robust AI stacks focused on content and automation intelligence, behavioral recommendations and student intelligence, reimagining how Embibe has affected the lives of 15 million students across the country. It has also worked with more than 60 educational institutions to expand the curriculum and learning programs using the PAAS model. This forum uses a process called the relative quartile jump, which constantly checks the student's knowledge (K. Naveen Kumar, Research Scholar, Rabindranath Tagore University and Assistant Professor, Villa Marie Degree College for Women, Somajiguda, and Hyderabad).

About a year ago, Think and Learn Pvt. Ltd., which operates Byju's popular online educational app, has acquired a Palo Alto company called Osmo, which made educational games for young children. The \$ 120 million acquisition has brought Byju's expertise into artificial intelligence and machine learning. After 6 months, Osmo-Byju's collaboration led to the launch of a new app, Disney Byju's Early Learn, aimed at children in grades 1-3. The app, the result of Byju'spartnership with the Walt Disney Company, taps many rights for Disney's large franchise of characters from movies like Frozen and cars (byjus.com).

Growing scenario of AI intervention in Indian Education system, and promise for future for the Education Industry provided motivation for this research. This propels to do a study on relationship between gender and awareness about AI intervention in Education in India, the perception that AI Intervention will disrupt the Education system of India and the perception that AI Intervention will improve the personalization and interactivity in the Education system of India.

RESEARCH OBJECTIVES

The research objectives are as follows:

 To study the relationship between gender and awareness of Artificial Intelligence intervention in Education in India.

- To study the relationship between gender and the perception that AI Intervention will disrupt the Education System of India.
- 3. To study the relationship between gender and the perception that AI Intervention will improve the personalization and interactivity.

RESEARCH METHODOLOGY

It is an empirical research study that follows a descriptive research design. Data has been collected from Primary Source. The research method used to collect primary data was surveyed online from 20.07.2020 to 25.07.2020 via a well-structured close ended questionnaire consisting of 10 items for the survey. Pearson Chi-Square testhas been used to identify various factors mentioned in the hypothesis. Sample size: The sample Size consisted of 287 individuals belonging to Northern India. Sample element: The sample elements were individuals over 18years old who completed basic education in 10+2+3 format. Sample Procedure: Simple random sampling.

DATA ANALYSIS& RESULT

The data was analyzed through chi square tests. The whole hypotheses testing process is mentioned below:

Hypothesis 1:

 H_0 : There is an insignificant relationship between gender and awareness of Artificial Intelligence intervention in Education in India.

 H_1 : There is a significant relationship between gender and awareness of Artificial Intelligence intervention in Education in India

VAR00002 * Gender Cross-tabulation

Gender	Total					
	Female Male					
/AR00002	Yes	Count	95	120	215	
		% within Gender	78.5%	72.3%	74.9%	
	No	Count	26	46	72	
		% within Gender	21.5%	27.7%	25.1%	
Total		Count	121	166	287	
		% within Gender	100.0%	100.0%	100.0%	

Pearson Chi square value=1.442 p value=0.144

The above table depicts the relationship of awareness of Artificial Intelligence intervention in Education in India with respect to gender. As the table signifies that 78.5% of the females are aware and 21.5% are unaware about these technologies. On the other hand, 72.3% males are aware while 27.7% are not aware about such technologies. Chi square test was used to

find out whether this difference is significant or not. The above table reflects that the calculated value of Pearson Chi-square is = 1.442 which is lesser than critical value 3.84 at 5% level of significance with degree of freedom V= 1. Therefore, null hypothesis is accepted. This implies there is an insignificant relationship between gender and awareness of Artificial Intelligence intervention in Education in India.

Hypothesis H02:

 H_0 : There is an insignificant relationship between gender and the perception that AI Intervention will disrupt the Education System of India

 H_2 : There is a significant relationship between gender and the perception that AI Intervention will disrupt the Education System of India

VAR00003 * Gender Cross-tabulation

Gender					
			Fe	emale Male	Total
0003	Yes	Count	42	66	108
		% within Gender	34.7%	39.8%	37.6%
	No	Count	79	100	179
		% within Gender	65.3%	60.2%	62.4%
Total		Count	121	166	287
		% within Gender	100.0%	100.0%	100.0%

Pearson Chi square value=0.760 p value=0.227

The above table depicts the relationship between people's perception that Al Intervention will disrupt the Education System of India with respect to gender. As the table signifies that 34.7% of the females are favorable perception and 65.3% are having the opposite viewpoint for this statement. On the other hand, 39.8% males are having positive viewpoint while 60.2% are having unfavorable viewpoint against the statement. Chi square test was used to find out whether this difference is significant or not. The above table reflects that the calculated value of Pearson Chi-square is = .760 which is lesser than critical value 3.84 at 5% level of significance with degree of freedom V= 1. Therefore, null hypothesis is accepted. This implies there is an insignificant relationship between gender and the perception of people regarding Al Intervention will disrupt the Education System of India.

Hypothesis H03:

 H_0 : There is an insignificant relationship between gender and the perception that AI Intervention will improve the personalization and interactivity

H₃: There is a significant relationship between gender and the perception that AI Intervention will improve the personalization and interactivity

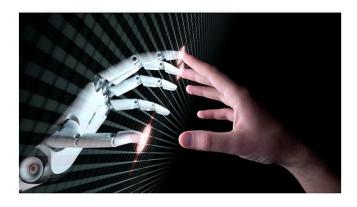
VAR00004 * Gender Cross-tabulation

		Gender		Total
		Female	Male	
Yes	Count	99	149	248
	% within Gender	81.8%	89.8%	86.4%
No	Count	22	17	39
	% within Gender	18.2%	10.2%	13.6%
Total	Count	121	166	287
	% within Gender	100.0%	100.0%	100.0%

Pearson Chi square value=3.88 p value=0.040

The above table depicts the relationship between people's perception that Al Intervention will improve the personalization and interactivity with respect to gender. As the table signifies that 81.8% of the females have a positive perception and 18.2% are having the unfavorable perception for this statement. On the other hand, 89.8% males are having positive viewpoint while 10.2% are having unfavorable viewpoint against the statement. Chi square test was used to find out whether this difference is significant or not. The above table reflects that the calculated value of Pearson Chi-square is = 3.88which is greater than critical value 3.84 at 5% level of significance with degree of freedom V= 1. Therefore, null hypothesis is rejected. This implies that there is a significant relationship between gender and the perception that Al Intervention will improve the personalization and interactivity.

Role of Artificial Intelligence in Shaping the Future Workforce



The adoption of Artificial Intelligence (AI) technology across the globe is presently outrunning the speed at which employees are accepting and embracing AI as a disruptor. Although this poses a significant problem for

organizations around the world, it also comes as a unique opportunity to help employees prepare for the changing corporate landscape.

According to a paper published by McKinsey Global Institute, AI technologies are set to generate between 3.5 trillion to 5.8 trillion dollars in annual revenue globally, while Gartner suggests 25% of all customer service operations will use virtual customer assistants by the year 2020[1]. This only goes to show that technological disruption is imminent and inevitable. Global organizations have more than witnessed such significant technological jumps, including the advent of the printing press, computers and automation. However, with AI set to have a deep and transformative effect on industries, society, and life as a whole, it is imperative for organizations to slowly, yet surely, align themselves and their employees with this transformation.

CONCLUSION

The research can be concluded by revisiting the objectives of the research and finding out whether the research has fulfilled these objectives.

The first objective of the research was 'To study the relationship between gender and awareness of Artificial Intelligence intervention in Education in India' the study results proves that concept of awareness about Artificial Intelligence does not vary with gender the perception is same for male as well as female.

For the second objective, 'To study the relationship between gender and the perception that Al Intervention will disrupt the Education System of India' the study demonstrates that perception of people regarding Al Intervention will disrupt the Education System of India does not vary with respect to gender. Peoples' inclination against the viewpoint suggests that they think the rise of Al intervention in Education is temporary for time being due to COVID-19. After this situation stabilizes everything will be as before.

For the third objective, 'To study the relationship between gender and the perception that Al Intervention will improve the personalization and interactivity' the study depicts the perception of Al intervention will improve the personalization and interactivity varies with the gender & there is a significant relationship exists between them.

Artificial Intelligence can help us shape online learning and make it more engaging and effective. With the right use of the technology, you can improve lesson planning, implement better teaching styles, make your classes inclusive, and even flip the classrooms when needed.

A study published by e-School News indicates that by 2021, the application of AI in education and learning will be increased by 47.5%.

REFERENCES

- Dr Naveen Prasadula. MSC (I.T), MBA, PHD (2021) Department of Business Management Osmania University: Working Employes satisfaction and corporate social responsibility on organizational culture, Employee Relations © 2020 IJRAR December 2019, Volume 6, Issue 7 www.ijrar.org (E-ISSN 2348-1269, P-ISSN 2349-5138)
- R.Swathi (Research Scholar Osmania University) (2020). A study on employee retention strategies adopted by ICICI bank, International Journal of Scientific and Technology Research, 9 (4), pp. 3373-3382.
- 3. Dr Naveen Prasadula MSC (I.T), MBA, PHD (2020) A Study of Corona Virus impact on Indian Economy and FDI impact in Indian Economy
- 4. R.Swathi (Research Scholar Osmania University) (2020). Work-Life Balance during COVID-19 Pandemic and Remote Work IN (JETIR) Journal of Emerging Technologies and Innovative Research (ISSN: 2349-5162)
- Dr Moturi Aparna MBA, PHD (2020) (Andhra University Visakhapatnam) Work-Life Balance Work of Indian Woman in (JETIR) Journal of Emerging Technologies and Innovative Research (ISSN: 2349-5162)
- R.Swathi (Research Scholar Osmania University) (2019). A study on employee retention strategies adopted by ICICI bank, International Journal of Scientific and Technology Research, 9 (4), pp. 3373-3382.
- 7. Dr Moturi Aparna MBA, PHD (2019) (Andhra University Visakhapatnam). A Cross-National Study on the Antecedents of Work-Life Balance from the Fit and Balance Perspective. Social IndicatorResearch © 2019 IJRAR December 2019, Volume 6, Issue www.ijrar.org (E-ISSN 2348-1269, P- ISSN 2349-5138) Kurup, A. (2019). The leaky pipeline: social science perspective. Spoorthi: Celebrating Women Science. https://indiabioscience.org/women-inscience/spoorthi-celebrating-indian-women-inscience
- 8. K.Naveen Kumar Assistant Professor Villa
 Marie Degree College for Woman Smajiguda
 Hyderabad (2022) MERGERS AND
 ACQUISITIONS IN INDIAN
 PHARMACEUTICAL INDUSTRY

- UNDERSTANDING THE STRATEGIC TRENDS FROM EXISTING LITERATURE" <a href="http://s3-ap-southeast-1.amazonaws.com/ijmer/pdf/volume11/volume11-issue2(6)/33.pdf" http://s3-ap-southeast-1.amazonaws.com/ijmer/pdf/volume11/volume11-issue2(6)/33.pdf"
- Dr. Madireddi SSV Srikumar School of Commerce and Management Studies, JAIN University Bangalore, Karnataka, India (2022) DIVIDEND POLICY http://ijmer.in/issues/volume11/volume11issue2(6).aspx
- 10. https://www.getsmarter.com/blog/markettrends/the-role-of-artificial-intelligence-in-thefuture-of-education/
- https://elearningindustry.com/artificialintelligence-in-workplace-role-shaping-future https://www.niti.gov.in/writereaddata/files/docu ment_publication/NationalStrategy-for-Al-Discussion-Paper.pdf
- 12. https://edu.google.com/latest-news/future-of-the-classroom/?modal active=none
- 13. https://indiadidac.org/2019/03/how-ai-will-be-a-game-changer-for-indian-education-system/
- https://www.bbvaopenmind.com/en/articles/t he-past-decade-and-future-of-ais-impacton-society/
- https://www.brookings.edu/research/howartificial-intelligence-is-transforming-theworld/
- 16. https://medium.com/@vratulmittal/how-ai-will-be-a-game-changer-for-indian-education-system-befa9bc6b7bd
- 17. https://www.hindustantimes.com/education/cb se-to-introduce-artificial-intelligence-courses-in-classes-8-9-10/story-cDUJjS5q1GipKbhcMpZzxH.html
- 18. https://sustainabledevelopment.un.org/content/documents/15836India.pdf
- 19. https://niti.gov.in/indian-education-sector-ripe-disruption-artificial-intelligence
- 20. https://www.indiatoday.in/educationtoday/news/story/india-s-student-teacher-ratiolowest-lags-behind-brazil-and-1568695-2019-07-14
- 21. https://niti.gov.in/about-aspirational-districts-programme
- 22. https://sdg4education2030.org/the-goal

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- 23. https://www.thehindu.com/news/national/new-education-policy-cabinet-briefing-live-updates/article32219499.ece
- 24. https://epathshala.nic.in/
- https://www.m2sys.com/blog/guest-blogposts/the-effectiveness-of-biometrics-instudent-education/
- 26. https://switchon.nopaperforms.com/ai-chatbot-education-niaa-admission-assistant?utm_source=GoogleAds&utm_medium=searchad&utm_campaign=meet_niaa&utm_term=%2Bchatbot%20%
 2Beducation&gclid=CjwKCAjw34n5BRA9EiwA2u9k35Oqd8Y59cVXyOg36mClSkucSD1KRS3hHZgl_SudnfBni2rL tKKojRoCG7sQAvD_BwE
- 27. https://www.livemint.com/industry/telecom/inter net-users-exceed-500-million-rural-india-driving-growth-report- 1552300847307.html
- 28. https://algorithmia.com/blog/introductionautomatic-text-summarization
- 29. https://niti.gov.in/sites/default/files/2019-11/AnnualReport2019.pdf
- 30. https://hbr.org/2019/10/how-ai-and-data-could-personalize-higher-education
- 31. https://www.modev.com/blog/voice-assistants-are-changing-how-users-with-disabilities-get-things-done
- 32. https://en.unesco.org/news/first-unescorecommendations-combat-gender-biasapplications-using-artificial-intelligence
- 33. https://www.pewresearch.org/internet/2017/05/03/the-future-of-jobs-and-jobs-training/
- 34. K. Naveen Kumar, Research Scholar, Rabindranath Tagore University and Assistant Professor, Villa Marie Degree College for Women, Somajiguda, Hyderabad (2022) MERGERS AND ACQUISITIONS IN INDIAN PHARMACEUTICAL INDUSTRY
- 35. UNDERSTANDING THE STRATEGIC TRENDS FROM EXISTING LITERATURE" http://s3-ap-southeast-1.amazonaws.com/ijmer/pdf/volume11/volume11-issue2(6)/33.pdf
- 36. https://tracxn.com/explore/Al-in-Education-Startups-in-India
- 37. http://www.denib.gov.tr/files/downloads/sirku_e kleri/2017-49-ek4-2.pdf
- 38. http://www.businessworld.in/article/ls-Artificial-

- Intelligence-The-Way-Forward-For-Education-In-India/09-12-2018- 164980/
- 39. https://www.franchiseindia.com/education/Role -for-Artificial-Intelligence-in-Education.10240
- 40. https://www.indiatoday.in/educationtoday/featurephilia/story/artificial-intelligence-canempower-our-education-system- here-s-how-1281653-2018-07-10
- 41. https://www.forbes.com/sites/bernardmarr/2018/0 7/25/how-is-ai-used-in-education-real-world-examples-of-today-and-a-peek-into-the-future/#2e58f2b1586e
- 42. http://www.gdac.uqam.ca/inf7470/IAetEduca tion/How%20Is%20AI%20Used%20In%20E ducation%20--
- 43. %20Real%20World%20Examples%20Of%2 0Today%20And%20A%20Peek%20Into%2 0The%20Future.pdf
- 44. https://www.getsmarter.com/blog/markettrends/the-role-of-artificial-intelligence-inthe-future-of-education/
- 45. https://www.lexalytics.com/lexablog/ai-in-education-present-future-ethics
- 46. https://niti.gov.in/writereaddata/files/docume nt_publication/NationalStrategy-for-Al-Discussion-Paper.pdf
- 47. https://medium.com/opened-ai/readex-anintelligent-reading-assistant-106f2e50bd9f
- 48. PWC Analysis 2018
- 49. www.embibe.com
- 50. https://byjus.com/
- 51. https://www.toppr.com/
- 52. https://edugorilla.com/
- 53. https://www.ndtv.com/

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