USING ARTIFICIAL INTELLIGENCE AMONG SECONDARY SCHOOL TEACHERS OF PURULIA DISTRICT

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ABSTRACT

In this present perspective, artificial intelligence (AI) has changed human daily lives across the globe. Nowadays in school education, immanse use AI for the betterment of teaching-learning outcomes. AI as a tool to enhance teachers professional competencies in each and every aspect. In this current study, the researchers have realized the significance of AI as a tool for empowering school education. This study explores the level of willingness of secondary school teachers to use artificial intelligence in the context of Purulia District. 100 secondary school teachers were selected through the stratified random sampling technique in the Purulia district. For data analysis, use statistical techniques like percentage means. The results found that male and urban teachers have higher levels of use of artificial intelligence in the teaching-learning process than other groups.

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Keywords: Artificial Intelligence, School Education, Professional Competencies, Purulia District.

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Introduction

Artificial intelligence is one of the buzz words we hear these days. Artificial intelligence is nothing but human intelligence working on a machine. AI can do reasoning, decision-making, and creative problem-solving. Artificial intelligence has changed the approach to human work in various sectors, including education. AI as a teaching and learning tool in secondary-level schools is very helpful to both teachers and learners. Teachers can maximize learning outcomes with the support of AI (Kumar, J. M., 2023) Artificial intelligence (AI) tools enhance the secondary school teachers their content creation and formation, personalized learning, proper assessment and feedback by the learners, accurate data analysis, language support, and most importantly, holistic professional development. In the 21st century, AI has sifted the paradigm of school education; moreover, artificial intelligence provides a more effective and inclusive class environment for teachers and learners alike. Google Classroom, Edmodo, Squirrel AI, Knowton, Brainly, Quillionz, Smart Learning Suite Online, and Classscraft are many tools that teachers can use to enhance the teaching and learning process in a fruitful way.

Review of the Related Literature

Sharma, A. (2023). carried out a study on the role of AI in the Indian education sector, and this study explores that AI as a tool enhances grading efficiency, fostering critical thinking and analytical skills in the students. A similar study was conducted by Sexsena, R. (2022). He found that the AI tools develop abilities for planning, learning, reasoning, and thinking. Sexsena proposed that AI play a crucial role in the field of education. Kumar, J. M. (2023). He has written an article on 'Artificial Intelligence in Education: Are You Ready?' Dr. Kumar explains properly each and every aspect of AI to enhance teacher's competencies towards teaching and learning. Mishra, A., & Kumar, P. (2023). The main purpose of this study is to explore how artificial intelligence can revolutionize education from an Indian perspective. Kumar, V. (2018). Carried out a study to find out the challenges and opportunities of AI in the Indian education system.

Rationale of the Study

Presently, artificial intelligence is making magnification contribution in the world-wide. Especially, in western countries, immense use of AI in the field of school education. AI help the teachers

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in various way to enhance their teaching competencies, like academic writing, content formulating, lesson presentation and assessment and so on. Teachers plays crucial role in context of secondary education. In this stage student going their adolescence period critical and creative thoughts arise. It is responsibility of teachers to properly stimulate and reform their thoughts process. The N.E.P (2020) gave importance on artificial intelligence. So, that the investigators understand the needs and investigate the level of secondary school teachers towards using artificial intelligence in the teaching and learning process.

Objectives of the Paper

- To find out the level of using artificial intelligence of male secondary schoolteachers in teaching and learning process.
- To investigate the level of using artificial intelligence of female secondary school teachers in teaching and learning process.
- To know the level of using artificial intelligence of rural secondary school teachers in teaching and learning process.
- To access the level of using artificial intelligence of urban secondary school teachers in teaching and learning process.

Hypotheses of the Study

Ho_1:   There is no significant level of using artificial intelligence of male secondary school teachers.

Ho_2:   There is no significant level of using artificial intelligence of female secondary school teachers.

Ho_3:   There is no significant level of using artificial intelligence of rural secondary school teachers.

Ho_4:   There is no significant level of using artificial intelligence of rural secondary school teachers.

Methodology of the Study

- **Method of the Study:** In this present study investigators adopted 'Descriptive type survey' method.

- **Sample and Sampling of the Study:** investigators have consisted 100 secondary school teachers from different blocks of Purulia district. Investigators were followed Random sampling technique for formulate sample smoothly.
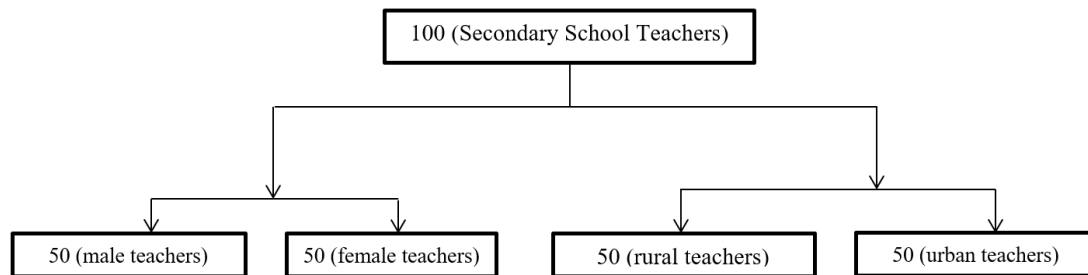
- **Tool of The Study:** The investigators have constructed self-made Likert type rating scale formulate on Google form to collect the data on teachers of secondary school.

- **Statistical Technique:** for the statistical analysis investigators have used 'percentage mean'

Analysis and Interpretation

     Analysis and interpretation of collected data according to the hypothesis.

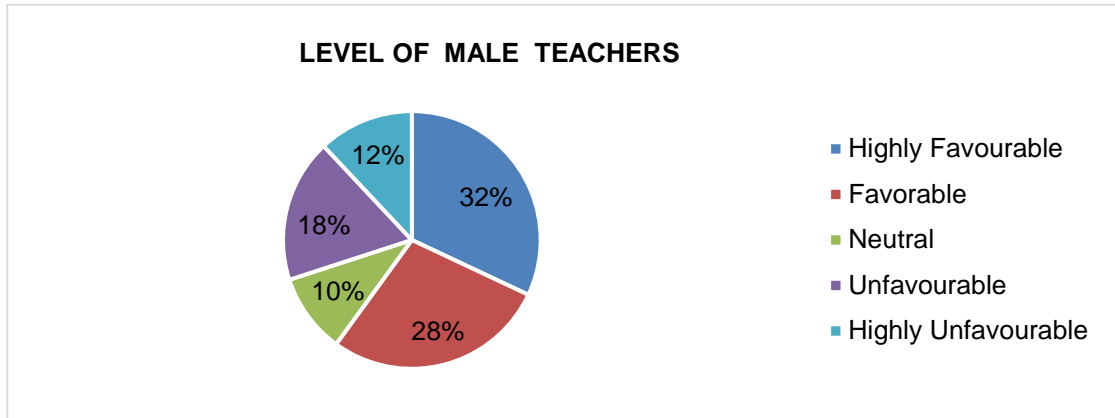Ho_1:   There is no significant level of using artificial intelligence of male secondary school teachers.

Table 1

Level	Male Teachers	
	N	Percentage %
Highly Favorable	16	32.00%
Favorable	14	28.00%
Neutral	5	10.00%
Unfavorable	9	18.00%
Highly Unfavorable	6	12.00%
Total	50	100.00%

It can be observed that above table the calculate percentage mean in 5 point rating scale is difference 32.00% male teachers are highly favorable, 28.00% are favorable level on the other hand 18.00% and 12.00% unfavorable, highly unfavorable level respectively 10.00% male teachers giving their opinion neutral.

Hence, Ho1 is rejected and it found that there is exist significant level of male teachers towards using AI.

Figure 1: Graphical Representation of the Data by Pic Chart

H02:   There is no significant level of using artificial intelligence of female secondary school teachers.
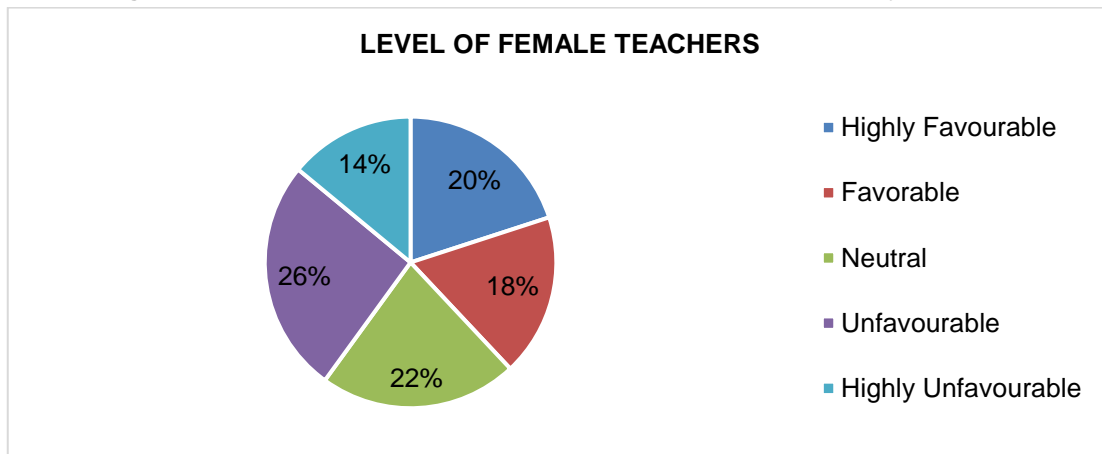
Table 2

Level	Female Teachers	
	N	Percentage
Highly Favorable	10	22.00%
Favorable	9	18.00%
Neutral	11	22.00%
unfavorable	13	26.00%
Highly unfavorable	7	14.00%
Total	50	100.00%

The aforementioned table shows that level of female teachers in respect of using AI in teaching on basis of percentage are 22.00% (H.F), 18.00% (F), 22.00% (N) 26.00% (UF), and 14.00% (HUF) respectively.

Hence, $H_{02.}$ is rejected. On the basis of data interpretation it can say that there are various levels of female using AI for teaching-learning process.

Figure 2: Graphical Representation of the Data to Female Teachers by Pic Chart
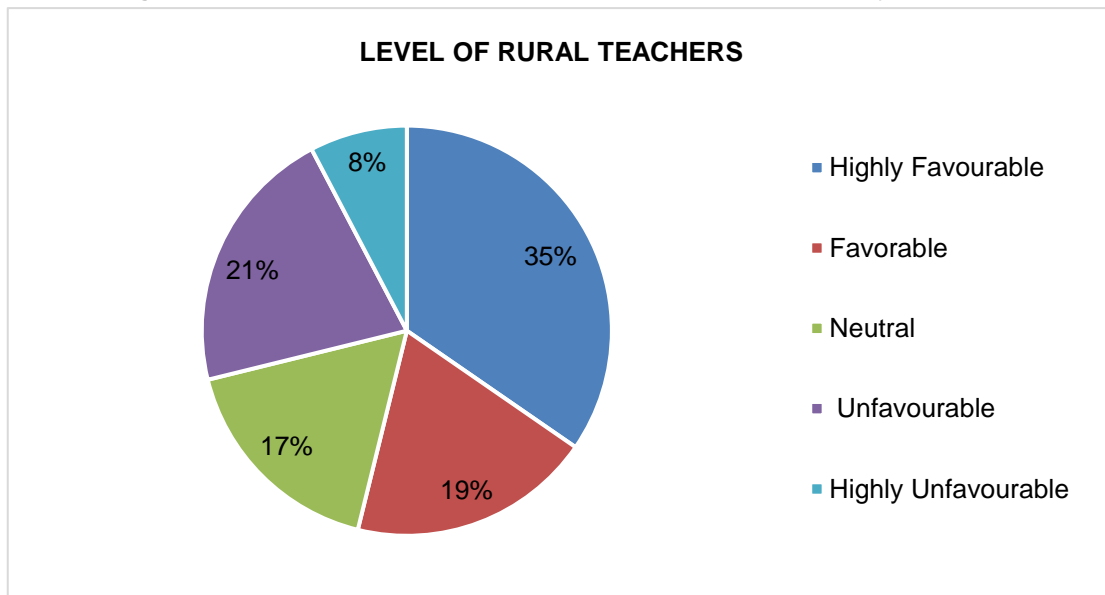
Ho₃: There is no significant level of using artificial intelligence of rural secondary school teachers.

Table 3

Level	Rural Teachers	
	N	Percentage
Highly Favorable	18	35%
Favorable	10	19%
Neutral	9	17%
Unfavorable	11	21%
Highly Unfavorable	4	8%
Total	50	100%

Table 3 shows that level of percentage of rural secondary school teachers towards using AI in teaching and learning moderate, the is that highest 35% teachers have highly favorable level, 19% have favorable, 17% have neutral, 21% have Unfavorable and 8% have highly unfavorable level on using AI.

Hence, H_{03} is rejected. There is exist different level of using AI in teaching-learning process towards rural secondary school teachers.

**Figure 3: Graphical Representation of the Data to Rural Teachers by Pic Chart**

Ho₄: There is no significant level of using artificial intelligence of urban secondary school teachers.

Table 4

Level	Urban Teachers	
	N	Percentage
Highly Favourable	27	54.00%
Favourable	13	26.00%
Neutral	3	6.00%
Unfavourable	5	10.00%
Highly Unfavourable	2	4.00%
Total	50	100%

Table 4 indicates that highest 54.00% highly favorable level and lowest 4.00% highly unfavorable level for using AI of urban teachers. There are 26.00% favorable, 6.00% neutral and 4.00% highly unfavorable level.

Hence, $H_{04.}$ Is rejected. It is found that various level exist of urban secondary teachers towards using AI. And on basis of analysis maximum urban secondary teachers highly favor with using AI in teaching learning process.

Figure 4: Graphical Representation of the Data to Science Group Teachers by Pic Chart
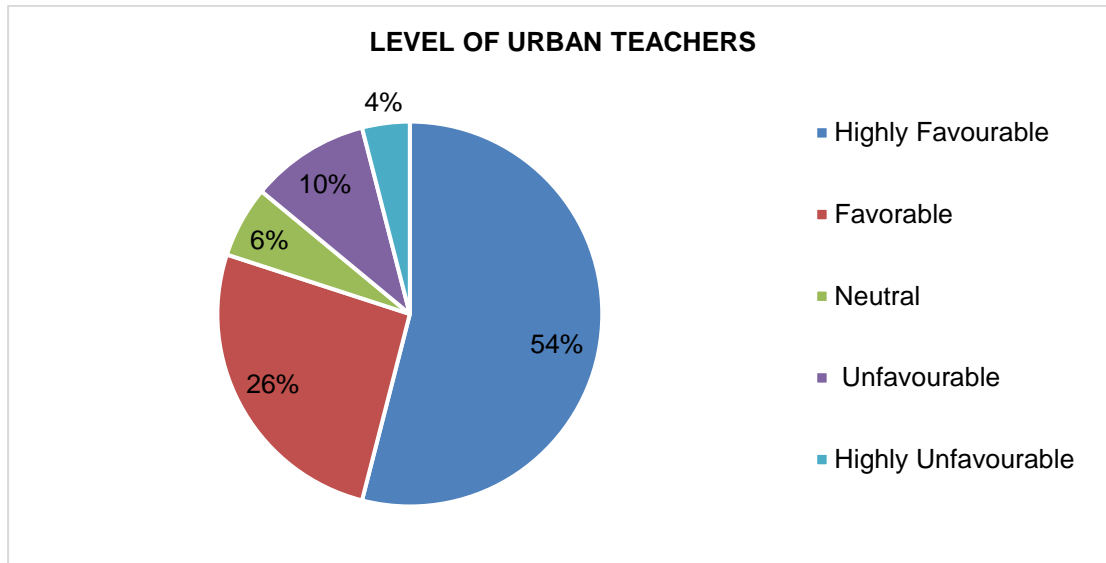
Conclusion of the Study

After analyzing and interpreting the obtained data, the investigators have assured that most of the secondary school teachers have a positive level while using artificial intelligence. Particularly, the investigators found that male teachers and urban teachers have a high level toward using AI in teaching. But the female teachers and rural teachers have a less positive level as compared to the afore-mentioned group. Moreover, there are many teachers in this study whose opinions have been seen neutrally. This study was very significant from the present and future perspectives of secondary school teachers. Using AI in school education play a vital role in this era. Investigators have conveyed their heartfelt thanks and gratitude to all the secondary school teachers who participated in this study and gave their valuable opinions.

Suggestions

The investigators consider the following suggestions for other researchers while conducting similar research work:

- A similar study could be conducted with a larger sample of the teachers.
- This research work can be conducted in different areas.
- Similar work could be conducted in the future by elementary and high school teachers.
- This study was conducted as a comparative study of two or more different district teachers.
- Similar research can be conducted on students at the college and university levels as well.

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