Advanced International Journal for Research (AIJFR)
E-ISSN: 3048-7641 ● Website: www.aijfr.com ● Email: editor@aijfr.com

# Artificial Intelligence tools for Valuation: Quantitative Analysis of Teacher Perception

**Sruthi V.[1], Dr. Deepa P[2]**

[1]HSST Statistics Guest at SAVIO HSS Devagiri, Kozhikode
[2]Principal, Sree Narayana college of teacher education, Chelannur, Kozhikode

**Abstract**

This study examines teachers' Perception of Artificial Intelligence tools used for evaluation in educational settings. Using quantitative survey data from 250 teachers, the researcher evaluates awareness, perceived usefulness and feasibility of AI as an evaluation tool by measuring efficiency, accuracy, and user satisfaction across gender and year of experience. The result indicates that now a days majority of teachers use AI tools in their teaching learning process. There is no gender discrimination in the usage. Year of experience do not affect the usage also. AI place a significant role in teaching and evaluation process. We can't eliminate the impact of AI in our educational process

**Key words:** Artificial Intelligence tools, Teacher Perception

## 1. Introduction

In the 21st century, the rapid advancement of technology has significantly transformed the way knowledge is acquired, processed, and applied. Among these technological breakthroughs, Artificial Intelligence (AI) has emerged as a powerful force reshaping education and learning systems worldwide. AI refers to machines and software that can simulate human intelligence, enabling them to perform tasks such as problem-solving, pattern recognition, language processing, and decision-making with minimal human intervention.

There has been substantive advancement in the field of education since the introduction of Science and Technology. Artificial Intelligence (AI) has emerged as a transformative force in education, influencing teaching, learning, and assessment practices. In recent years, AI-powered tools have increasingly been used in educational evaluation and valuation processes, enabling faster, more accurate, and data-driven assessment of student performance. These tools assist teachers in grading assignments, analyzing student responses, identifying learning gaps, and providing personalized feedback.

Artificial Intelligence (AI) tools are rapidly transforming educational systems across the globe, particularly in the domain of valuation—as assessment, grading, feedback generation, and performance analytics. The integration of AI into educational valuation practices reflects broader technological advancements associated with platforms such as OpenAI, Google, and Microsoft, whose innovations have accelerated the deployment of machine learning, natural language processing, and

predictive analytics tools in academic settings. . From a valuation perspective, AI tools enhance objectivity by reducing human bias, ensuring consistency in grading, and enabling large-scale data-driven insights.

However, the adoption of AI in educational assessment is not purely technical; it is deeply intertwined with teacher perception, acceptance, and trust. Teachers remain central agents in the valuation process, and their perceptions influence implementation success, classroom integration, and ethical oversight. Quantitative analysis of teacher perception therefore becomes crucial to understanding how AI tools are received, what factors influence acceptance, and how these technologies impact professional roles. Findings across multiple educational contexts suggest that teachers' willingness to adopt AI valuation tools strongly correlates with their digital literacy levels, prior exposure to educational technology, institutional support, and clarity regarding the tool's decision-making logic.

Where transparency and training are present, positive perception scores increase significantly; conversely, where AI systems are perceived as opaque or threatening to professional judgment, resistance emerges. Thus, the quantitative study of teacher perception provides empirical grounding for policy decisions, institutional investments, and professional development programs aimed at responsible AI integration in valuation systems. Valuation, which traditionally relied on manual evaluation by teachers, often involves challenges such as time consumption, subjectivity, and inconsistencies in grading. Despite the increasing adoption of AI tools in education, teachers' perceptions play a crucial role in determining their effective implementation.

**Variables of the study**

- Artificial Intelligence tools for Evaluation
- Teachers Perception

**Objectives of the study**

1. To examine the views of teachers on Examination reforms and evaluation Practices using AI
2. To measure the effectiveness and usage of AI based evaluation tools on users performance scores, accuracy and frequency of use with respect
    - Gender
    - Years of experience
3. To Assess the role and feasibility of AI as an evaluation tool by measuring efficiency, accuracy, and user satisfaction across Gender and Years of Experience

**Hypothesis of the study**

1. There is no significant difference in teachers views on AI-based evaluation Practices based on
    - Gender
    - Year of experience
2. There is no significant difference in the effectiveness and usage of AI-based evaluation tools in terms of performance scores, accuracy and frequency of use with respect
    - Gender
    - Year of experience

3. There is no significant difference in the Perceived role and feasibility of AI as an evaluation tool in terms of efficiency, accuracy, and user satisfaction based on
   - Gender
   - Year of Experience

**Methodology:**

The Present study is attempted to investigate teachers Perception about the Artificial Intelligence tools for Valuation.

**Sample:**

The study is confined to the teachers of different institution in Kozhikode and Malappuram district. Stratified random sampling technique is used for the data collection. Sample of 250 teachers are selected for this study.

**Tools used for the study**

- AI in Examination Reforms and Evaluation Practices

**Analysis**

**Gender-wise Distribution of Teachers usage of AI tools in Evaluation**

**Table 4.1: Data and result of Gender-wise Distribution of Teachers usage of AI tools in Evaluation**

| Gender | **Usage of AI tools** | | | Total |
|---|---|---|---|---|
| | Yes | No | Sometimes | |
| Male | 53(63.8%) | 18(21%) | 11(13.2%) | 83 |
| Female | 107(64%) | 26(15.6%) | 34(20.3%) | 167 |
| Total | 160(64%) | 44(17.6) | 45(18%) | 250 |

The table 4.1 present how male and female teachers differ in their usage of tools in evaluation majority of teachers reported using AI tools, it indicates a generally a positive adoption trend. This data show that Male and Female teachers are almost same in their usage. Out of 250 64% of teachers are used the AI tools in their teaching learning activity. The data indicates that AI tools are widely adopted in evaluation. A notable portion still uses AI only occasionally.

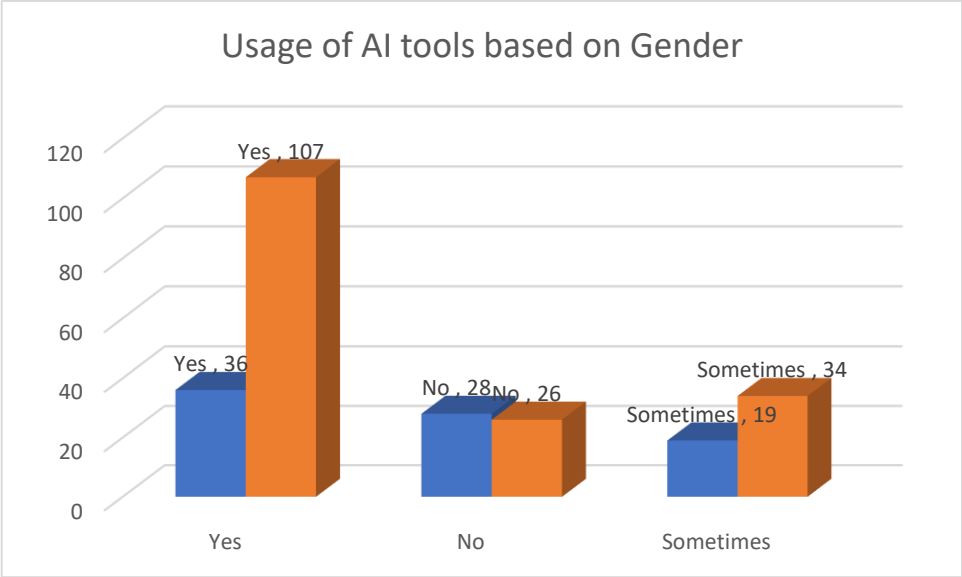


**Fig 4.1 Gender-wise Distribution of Teachers usage of AI tools in Evaluation**

**Test of Significance of Difference between Means**

This part of analysis was intended to find out whether there is any significant difference in the mean score of Views on AI-based Evaluation Practices, Effectiveness and usage of AI-based evaluation tools and Perceived role and feasibility of AI as an evaluation tools among the samples and subsamples based on type of gender, year of experience and level of teaching among teachers of Kerala.

**Mean difference in the score of Views on AI-based Evaluation Practices for the subsample based on Gender**

The mean and standard deviation of Views on AI-based Evaluation Practices between Male and Female teachers were used to test two-tailed 't-'test of significance. The data and result of t-test are given in Table 4.2

**TABLE 4:2 Data and result of the test of significance of difference between mean score of Views on AI-based Evaluation Practices subsample based on Gender**

| Variable | | N | Mean | S.D | t-value | Sign. |
|---|---|---|---|---|---|---|
| Views on AI-based evaluation Practices | **Male** | 83 | 43.88 | 4.67 | 0.888 | 0.376 |
| | **Female** | 167 | 44.45 | 4.90 | | |

The above table represent the Mean, Standard Deviation and t-value of Views on AI-based evaluation Practices among male and female teachers. The obtained t-value is 0.888 and the obtained p-value is 0.375, which is greater than 0.05. since the difference is not statistically significant. It indicates that gender does not significantly influence the Views on AI-based evaluation Practices among male and female teachers. Possibly because the male and female teachers have almost same Views on AI-based evaluation Practices. Hence the hypothesis is accepted.

**Mean difference in the score of Views on AI-based evaluation Practices for the subsample based on year of Experience**

The mean and Standard Deviation of Views on AI-based evaluation Practices based on year of experience 0-5 years, 6-10 years, 11-15 years and above 15 years were used to ANOVA test to check the significance. The data and result of ANOVA table are given below table 4.3

**TABLE 4:3 Data and result of the test of significance of difference between mean score of Views on AI-based Evaluation Practices subsample based on year of Experience**

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 111.368 | 3 | 37.123 | 1.605 | .189 |
| Within Groups | 5689.208 | 246 | 23.127 | | |
| Total | 5800.576 | 249 | | | |

From the Table 4.3, it is obtained that the calculated F value of Views on AI-based evaluation Practices based on year of experience (0-5 years, 6-10 years, 11-15 years and above 15 years) of teachers is 1.605 and the p value (0.189) is greater than the significance level of 0.05. hence there is no significant difference in the mean scores of Views on AI-based evaluation Practices on year of experience of teachers.

**Mean difference in the score of Effectiveness and usage of AI-based evaluation tools for the subsample based on Gender**

The mean and standard deviation of Effectiveness and usage of AI-based evaluation tools between Male and Female teachers were used to test two-tailed ‘t-’test of significance. The data and result of t-test are given in Table 4.4

**TABLE 4:4 Data and result of the test of significance of difference between mean score of Effectiveness and usage of AI-based evaluation tools subsample based on Gender**

| Variable | | N | Mean | S.D | t-value | Sign. |
|---|---|---|---|---|---|---|
| Effectiveness and usage of AI-based evaluation tools | **Male** | 83 | 59.2048 | 8.84109 | 1.155 | 0.249 |
| | **Female** | 167 | 57.8743 | 8.44271 | | |

The above table represent the Mean, Standard Deviation and t-value of Effectiveness and usage of AI-based evaluation tools among male and female teachers. The obtained t-value is 1.155 and the obtained p-value is 0.249, which is greater than 0.05. since the difference is not statistically significant. It indicates that gender does not significantly influence the Effectiveness and usage of AI-based evaluation tools among male and female teachers. Possibly because the male and female teachers have almost same Effectiveness and usage of AI-based evaluation tools. Hence the hypothesis is Accepted.

**Mean difference in the score of Effectiveness and usage of AI-based evaluation tools for the subsample based on year of Experience**

The mean and Standard Deviation of Effectiveness and usage of AI-based evaluation tools based on year of experience 0-5 years, 6-10 years, 11-15 years and above 15 years were used to ANOVA test to check the significance. The data and result of ANOVA table are given below table 4.5

**TABLE 4:5 Data and result of the test of significance of difference between mean score of Effectiveness and usage of AI-based evaluation tools subsample based on year of Experience**

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 246.731 | 3 | 82.244 | 1.118 | .342 |
| Within Groups | 18093.305 | 246 | 73.550 | | |
| Total | 18340.036 | 249 | | | |

From the Table 4.5, it is obtained that the calculated F value of Effectiveness and usage of AI-based evaluation tools based on year of experience (0-5 years, 6-10 years, 11-15 years and above 15 years) of teachers is 1.118and the p value (0.342) is greater than the significance level of 0.05. hence there is no significant difference in the mean scores of Effectiveness and usage of AI-based evaluation tools based on year of experience of teachers.

**Mean difference in the score of Perceived role and feasibility of AI as an Evaluation Tools for the subsample based on Gender**

The mean and standard deviation of Perceived role and feasibility of AI as an Evaluation tools between Male and Female teachers were used to test two-tailed 't-'test of significance. The data and result of t-test are given in Table 4.6

**TABLE 4:6 Data and result of the test of significance of difference between mean score of Perceived role and feasibility of AI as an evaluation tools subsample based on Gender**

| Variable | | N | Mean | S.D | t-value | Sign. |
|---|---|---|---|---|---|---|
| Perceived role and feasibility of AI as an evaluation tools | **Male** | 83 | 44.9398 | 5.11895 | 1.443 | 0.150 |
| | **Female** | 167 | 45.9641 | 5.36487 | | |

The above table represent the Mean, Standard Deviation and t-value Perceived role and feasibility of AI as an evaluation tool among male and female teachers. The obtained t-value is 1.443 and the obtained p-value is 0.150, which is greater than 0.05. since the difference is not statistically significant. It indicates that gender does not significantly influence the Perceived role and feasibility of AI as an Evaluation tools among male and female teachers. Possibly because the male and female teachers have almost same Perceived role and feasibility of AI as an evaluation tool. Hence the hypothesis is Accepted.

**Mean difference in the score of Perceived role and feasibility of AI as an Evaluation tools for the subsample based on year of Experience**

The mean and Standard Deviation of Perceived role and feasibility of AI as an Evaluation tools based on year of experience 0-5 years, 6-10 years, 11-15 years and above 15 years were used to ANOVA test to check the significance. The data and result of ANOVA table are given below table 4.7

**TABLE 4:7 Data and result of the test of significance of difference between mean score of Perceived role and feasibility of AI as an evaluation tools subsample based on year of Experience**

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 161.293 | 3 | 53.764 | 1.938 | .124 |
| Within Groups | 6823.363 | 246 | 27.737 | | |
| Total | 6984.656 | 249 | | | |

From the Table 4.7, it is obtained that the calculated F value of Perceived role and feasibility of AI as an evaluation tool based on year of experience (0-5 years, 6-10 years, 11-15 years and above 15 years) of teachers is 1.938 and the p value (0.124) is greater than the significance level of 0.05. hence there is no significant difference in the mean scores of Perceived role and feasibility of AI as an evaluation tool based on year of experience of teachers.

## 4. Conclusion

The present study examined teachers' perception of artificial intelligence (AI) tools in educational valuation. The findings of the study indicates that majority of teachers use AI tools in their teaching and evaluation practices. It shows a positive trend towards technology integration in education. The statistical analysis revealed no significant difference in the effectiveness or perception and usage of AI tools based on gender and year of experience, this indicates that AI tools gives a prominent role in every filed also in educational field.

In conclusion, AI plays a significant role in modern educational evaluation systems, and its importance is expected to increase in the future. Therefore, it is essential for educational institutions to provide appropriate training, infrastructure, and policy support to ensure the effective, ethical, and responsible use of AI tools in valuation processes.

## Reference

1. Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. B. (2016). Intelligence unleashed: An argument for AI in education. Pearson.
2. OECD. (2021). AI in education: Challenges and opportunities. OECD Publishing.
3. Russell, S., & Norvig, P. (2021). Artificial intelligence: A modern approach (4th ed.). Pearson.
4. UNESCO. (2021). Artificial intelligence and education: Guidance for policy-makers. UNESCO.