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Teachers' Perception of the Biometric Attendance System and Its Relationship with Punctuality and Work Ethics: Basis for an Action Plan

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ABSTRACT

A biometric attendance system dramatically increases teacher punctuality and operational accountability, demonstrating a strong positive correlation with overall teacher performance. This study assessed the perception of the biometric attendance system and its relationship with punctuality and work ethics in selected Elementary and Secondary Schools of Inabanga North District during the School Year 2025–2026. Adopting a descriptive quantitative research design, the study surveyed teacher respondents, focusing on their demographic profiles, level of implementation of the biometric attendance system in terms of accuracy, efficiency, accountability, and transparency, its effectiveness in terms of teachers' punctuality and work ethics, and the challenges encountered in its implementation. The Biometric Attendance System was perceived at a very high level, with accuracy obtaining the highest overall rating, followed by efficiency, accountability, and transparency. Meanwhile, the system was perceived to be very high in improving teachers' punctuality and work ethics, particularly in encouraging timely arrival, compliance with official working hours, regular attendance, and responsible time management. The findings indicated that the system provides reliable and systematic attendance monitoring while promoting responsibility, honesty, fairness, transparency, and professional discipline. There is significant relationship between the biometric attendance system and teachers' punctuality and work ethics. The study concluded that consistent and proper utilization of the biometric system should be sustained to strengthen teachers' punctuality and work ethics and recommends to proposed an action plan to strengthen the implementation of the Biometric Attendance System and further enhance teachers' punctuality and work ethics.

Keywords: *Biometric Attendance System, Punctuality, and Work Ethics*

INTRODUCTION

A biometric attendance system dramatically increases teacher punctuality and operational accountability, demonstrating a strong positive correlation with overall teacher performance. In the current digital era, educational institutions are increasingly adopting technological solutions to improve administrative processes and enhance workforce accountability. One such innovation is the biometric attendance system, which uses unique physiological characteristics to automate attendance tracking and eliminate inaccuracies associated with manual record-keeping. Research suggests that biometric systems provide more reliable attendance data, reducing human errors and time theft, which traditional systems often encounter (Ussher-Eke et al., 2025).

The adoption of biometric attendance systems holds potential to influence not only administrative efficiency but also professional behaviors such as punctuality and work ethics**.** Accurate and real-time monitoring of attendance can encourage teachers to consistently comply with reporting times, minimizing incidents of late arrivals and unauthorized absences. Studies in institutional settings indicate that digital attendance mechanisms

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contribute to improved organizational transparency and accountability, thereby shaping employee behavior through structured monitoring (Ussher-Eke et al., 2025).

Within educational environments, punctuality is critical, as teachers' arrival and departure times directly affect instructional delivery, class management, and learning outcomes. Although most literature on biometric systems emphasizes technical operational benefits, evidence also points to behavioral outcomes. For instance, biometric systems have been observed to control absenteeism and improve performance by linking attendance with payroll and compliance measures, prompting employees to adhere more strictly to work schedules (Kakepoto et al., 2022).

Furthermore, educational research has shown that integrating biometric technology in school settings helps enhance security, operational efficiency, and monitoring accuracy—attributes that contribute indirectly to professional discipline (Mufron & Wei, 2024). Despite these demonstrated benefits, there remains a gap in empirical research specifically examining how biometric attendance systems influence the work behavior of teachers, particularly regarding punctuality and intrinsic aspects of work ethics such as responsibility, diligence, and professional conduct. Most studies either focus on technical system effectiveness or general workforce outcomes, with limited investigation into the educational context where teacher behavior is crucial for both instructional quality and institutional performance.

However, despite the advantages of biometric attendance system, several challenges continue to affect their implementation and acceptance among teachers. Technical problems such as device malfunction, slow fingerprint recognition, unstable internet connection, power interruptions, and inaccurate time recording may create inconvenience and delays in attendance monitoring. Studies have shown that biometric systems may encounter operational limitations, particularly when environmental conditions and hardware sensitivity affect the accuracy of data capture (Jain et al., 2016). Teachers with unclear fingerprints due to age, dryness, or frequent paper handling may also experience repeated scanning failures, resulting in frustration and dissatisfaction.

In addition, privacy and data security concerns remain significant issues in the implementation of biometric systems. Employees may become apprehensive about how their biometric information is collected, stored, and protected. According to National Institute of Standards and Technology, safeguarding biometric data is essential because unauthorized access or misuse may compromise personal privacy and trust in the system. Teachers may also perceive constant monitoring as a source of pressure or stress, potentially affecting workplace morale and professional relationships.

Another challenge involves resistance to technological change and insufficient technical orientation. Some teachers may have limited familiarity with biometric technologies, making adaptation difficult, especially when proper training and technical support are lacking. As emphasized by Rogers, E (2009) in the Diffusion of Innovations Theory, individuals may resist adopting new technologies when they perceive them as complex or inconvenient. This resistance may influence teachers' attitudes toward punctuality policies and compliance with institutional regulations.

Given this gap, it is important to explore whether and how the biometric attendance system affects teachers' punctuality, work ethics and challenges. Understanding these relationships can provide valuable insights for school administrators and policymakers in designing policies, supervision strategies, and professional development programs that effectively integrate technology while promoting positive professional behavior among teachers. This study thereby contributes to both educational research and practical decision-making in school administration.

Within the Division of Bohol particularly in Inabanga North District, Inabanga, Bohol, they implemented the biometric attendance monitoring system during the school year 2025-2026 which the daily time record directly entered from school to the human resource management office. With these the teachers should accountably manage their time to avoid late.

In light of the growing need for accountability and efficiency in the workplace of Inabanga North District in Inabanga, Bohol, this study seeks to examine how the implementation of a biometric attendance system influences employees' punctuality, work ethics and challenges. The findings are expected to provide meaningful insights that will serve as basis for designing action plan, ultimately contributing to improved organizational performance and a more disciplined work environment.

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Statement of the Problem

This research assessed the perception of the biometric attendance system and its relationship with punctuality and work ethics in selected public elementary and secondary schools in Inabanga North District, Bohol Province Division during the school year 2025-2026 as basis for an action plan to strengthen the implementation of the Biometric Attendance System and further enhance teachers' punctuality and work ethics.

Specifically, it sought to answer the following inquiries:

1. As perceived by the respondents, what is the level of agreement to the implementation of the biometric attendance system in terms of accuracy, efficiency, accountability, and transparency?
2. What is the level of effectiveness of the biometric attendance monitoring system as to teachers' punctuality and work ethics?
3. Is there a significant relationship between the biometric attendance system and teachers' punctuality and work ethics?
4. Based on the findings of the study, what proposed action plan to strengthen the implementation of the Biometric Attendance System and further enhance teachers' punctuality and work ethics?

METHODS

Research Design

This study employed a descriptive-correlational research design to assess the teachers' perception of the biometric attendance system. Additionally, it sought to examine the level of agreement on the implementation of the biometric attendance system in terms of accuracy, efficiency, accountability, and transparency. Additionally, it sought to assess the level of effectiveness of the biometric attendance system as to teachers' punctuality and work ethics. Further, examined whether there are significant relationships between the biometric attendance system and teachers' punctuality and work ethics.

Respondents

This study involved seventy (70) teachers from elementary and secondary schools in the Inabanga North District, Inabanga, Bohol. The researcher employed purposive sampling**,** a non-probability sampling technique in which participants are deliberately selected based on specific characteristics, experiences, or qualifications that are relevant to the objectives of the study. This sampling approach enabled the researcher to identify and include respondents who possessed the necessary knowledge, experiences, and characteristics pertinent to the research variables, thereby ensuring that the data gathered were relevant to the purpose and scope of the study.

Instrument

The study primarily employed a structured questionnaire adapted from the instrument developed by Bhat, M.A & Khan (2017). Necessary modifications would be made to ensure that the questionnaire corresponds with the objectives of the present investigation and appropriately reflects the context of technology utilization and integration. Data were collected through self-administered questionnaires and analyzed using descriptive, inferential, and content analysis to generate comprehensive findings.

Data Gathering Procedure

After obtaining permission from the Schools Division Office and the principals of the sampled schools, the researcher finalized the validated and reliability-tested questionnaire. A formal request to conduct the study was approved, after which the purpose of the study, the contents of the questionnaire, and the respondents' roles were explained to the School Head. The questionnaire was administered face-to-face, allowing the researcher to clarify items and ensure complete and accurate responses. Completed questionnaires were collected, organized, and prepared for analysis, while ethical considerations such as informed consent, confidentiality and anonymity, voluntary participation, and the right to withdraw were strictly observed throughout the process.

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Statistical Treatment

The data gathered in this study were analyzed using appropriate statistical tools. Weighted means and standard deviations were used to determine the level of agreement to the implementation of biometric attendance system in terms of accuracy, efficiency, accountability and transparency and level of effectiveness of the biometric attendance system as to teachers' punctuality and work ethics. To determine the significance and degree of the relationships among biometric attendance system, teachers' punctuality and works ethics, the Pearson Product-Moment Correlation Coefficient (Pearson *r*) was employed.

RESULTS AND DISCUSSIONS

Table 1. *Accuracy n=70*

Statement	Mean	SD	Description
The biometric attendance system accurately records my attendance	4.93	0.26	Very High
The system correctly identifies authorized users without errors	4.78	0.42	Very High
The attendance records generated by the biometric system are reliable	4.97	0.17	Very High
The biometric system minimizes errors compared to manual attendance recording	4.90	0.30	Very High
I trust the accuracy of the attendance reports produced by the biometric attendance system	4.96	0.20	Very High
OVERALL MEAN AND SD	4.91	0.29	Very High

Legend: 4.51 - 5.00 - Very High, 3.51 - 4.50 – High, 2.51 - 3.50 – Moderate, 1.51 - 2.50 – Low, 1.00 - 1.50 - Very Low

Table 1 presents the teachers' assessment of the accuracy of the Biometric Attendance Monitoring System. The overall mean score of 4.91 with a standard deviation (SD) of 0.29 indicates that the system's accuracy is assessed at a "Very High" level. This suggests that teachers perceive the biometric system as highly accurate in identifying users, recording attendance, generating reliable records, minimizing errors, and producing trustworthy attendance reports.

Among the specific indicators, "The attendance records generated by the biometric system are reliable" obtained the highest mean score of 4.97 (SD = 0.17), described as "Very High." This indicates that teachers have a very high level of confidence in the reliability of the attendance records produced by the system. This was followed by "I trust the accuracy of the attendance reports produced by the biometric attendance system" with a mean of 4.96 (SD = 0.20), also interpreted as "Very High," showing strong trust in the accuracy of the system-generated reports.

The statement "The biometric attendance system accurately records my attendance" obtained a mean of 4.93 (SD = 0.26), while "The biometric system minimizes errors compared to manual attendance recording" received a mean of 4.90 (SD = 0.30). Both indicators were rated "Very High," suggesting that teachers perceive the system as effective in accurately capturing attendance and reducing errors associated with manual recording. Meanwhile, "The system correctly identifies authorized users without errors" obtained the lowest mean score of 4.78 (SD = 0.42), although it still falls within the "Very High" category. This indicates that user identification is also perceived to be highly accurate.

According to the study of Par, Quejada, and Tayawa (2025) developed an automated attendance system using facial recognition technology for educational institutions. The system was designed to address problems associated with manual attendance, including human error and manipulation, and achieved a reported 90% face-recognition accuracy in its testing. This provides technological support for your findings concerning accurate user identification and automated attendance recording.

Similarly, a 2025 study on a fingerprint-based attendance monitoring system reported that biometric technology can automate attendance recording, reduce potential human errors, and provide a reliable means of maintaining and retrieving attendance records.

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Table 2. *Efficiency n=70*

Statement	Mean	SD	Description
The biometric attendance system saves time during attendance checking	4.83	0.38	Very High
The system processes attendance quickly	4.87	0.34	Very High
The biometric system reduces the workload of attendance monitoring	4.83	0.38	Very High
The system makes attendance recording more convenient	4.90	0.30	Very High
Overall, the biometric attendance system improves operational efficiency	4.91	0.28	Very High
OVERALL MEAN AND SD	4.87	0.34	Very High

Legend: 4.51 - 5.00 - Very High, 3.51 - 4.50 – High, 2.51 - 3.50 – Moderate, 1.51 - 2.50 – Low, 1.00 - 1.50 - Very Low

Table 2 presents data on the efficiency of the Biometric Attendance System as assessed by the teachers. The overall mean score of 4.87 with a standard deviation (SD) of 0.34 indicates that the efficiency of the biometric attendance monitoring system is at a "Very High" level. This suggests that the system is perceived to perform the attendance-monitoring process quickly and conveniently while reducing the time, effort, and workload required in recording and checking teachers' attendance.

Among the specific indicators, "Overall, the biometric attendance system improves operational efficiency" obtained the highest mean score of 4.91 (SD = 0.28), described as "Very High." This indicates that teachers strongly perceive the biometric system as contributing to improved efficiency in the overall attendance-monitoring process. This was followed by "The system makes attendance recording more convenient" with a mean of 4.90 (SD = 0.30), also interpreted as "Very High," suggesting that the system provides teachers with a convenient and streamlined way of recording their attendance.

The statement "The system processes attendance quickly" obtained a mean of 4.87 (SD = 0.34), while "The biometric attendance system saves time during attendance checking" and "The biometric system reduces the workload of attendance monitoring" both obtained a mean of 4.83 (SD = 0.38). All indicators were rated "Very High," indicating that teachers consistently recognize the system's ability to save time, process attendance efficiently, and reduce the workload associated with attendance monitoring.

Findings reveal that the Biometric Attendance System has a very high level of perceived efficiency, as reflected by the overall mean of 4.87 (SD = 0.34). The relatively low standard deviation indicates that the teachers' responses were closely clustered, showing consistency in their perceptions of the system's efficiency. These findings suggest that the biometric system facilitates a faster, more convenient, and less burdensome attendance-monitoring process, thereby contributing to improved operational efficiency in the school.

According to Mankilik et al. (2022) compared biometric and manual attendance systems using queueing theory and attendance-performance measures. Their findings showed that the biometric-based attendance system was more efficient than the manual attendance system in terms of the measured queueing-performance indicators. This supports your finding that the biometric system saves time and facilitates faster attendance processing.

Table 3. *Accountability n=70*

Statement	Mean	SD	Description
The biometric system promotes honesty in attendance reporting	4.84	0.37	Very High
The system discourages fraudulent attendance practices (e.g, buddy punching)	4.84	0.37	Very High
Users are more responsible in recording their attendance because of the biometric system	4.80	0.40	Very High
The system ensures that each attendance record belongs to the correct individual	4.86	0.35	Very High

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The biometric system strengthens accountability among employees/users	4.89	0.31	Very High
OVERALL MEAN AND SD	4.85	0.36	Very High

Legend: 4.51 - 5.00 - Very High, 3.51 - 4.50 – High, 2.51 - 3.50 – Moderate, 1.51 - 2.50 – Low, 1.00 - 1.50 - Very Low

Table 3 presents data on the accountability of the Biometric Attendance System as assessed by the teachers. The overall mean score of 4.85 with a standard deviation (SD) of 0.36 indicates that the accountability promoted by the biometric attendance monitoring system is at a "Very High" level. This suggests that the system is perceived to encourage teachers and other users to take greater responsibility for accurately recording their attendance and to promote honesty, transparency, and proper compliance with attendance procedures.

Among the specific indicators, "The biometric system strengthens accountability among employees/users" obtained the highest mean score of 4.89 (SD = 0.31), described as "Very High." This indicates that teachers strongly perceive the system as an effective mechanism for strengthening individual responsibility in attendance recording. This was followed by "The system ensures that each attendance record belongs to the correct individual" with a mean of 4.86 (SD = 0.35), also interpreted as "Very High," suggesting that the system provides greater assurance that attendance records are properly attributed to the respective users.

The statements "The biometric system promotes honesty in attendance reporting" and "The system discourages fraudulent attendance practices (e.g., buddy punching)" both obtained a mean of 4.84 (SD = 0.37) and were rated "Very High." These results indicate that teachers perceive the system as promoting truthful attendance reporting and reducing opportunities for unauthorized attendance practices. Meanwhile, "Users are more responsible in recording their attendance because of the biometric system" obtained the lowest mean score of 4.80 (SD = 0.40), although it remained within the "Very High" category. This suggests that the biometric system contributes substantially to users' sense of responsibility in attendance recording.

Overall, the findings reveal that the Biometric Attendance System has a very high level of perceived accountability, as reflected by the overall mean of 4.85 (SD = 0.36). The relatively low standard deviation indicates that the teachers' responses were closely clustered, demonstrating consistency in their perceptions. These findings suggest that the biometric system supports a more transparent and accountable attendance-monitoring process by encouraging honest reporting, discouraging fraudulent practices, and ensuring that attendance records are linked to the appropriate individual.

Villaroman et al. (2018) and colleagues investigated the use of a Biometric Attendance Recording System (BARS) and its impact on the work performance of Cabanatuan City government employees. The study examined biometric attendance in relation to transparency and accountability and reported that respondents perceived the system as having a positive impact on work performance, with evidence of increased performance levels. This provides support for the present finding that biometric attendance can strengthen accountability by making attendance records individually attributable and more difficult to manipulate.

Table 4. *Transparency n=70*

Statement	Mean	SD	Description
The biometric attendance system provides clear and accessible attendance records	4.84	0.37	Very High
Attendance records can be easily verified when needed	4.80	0.40	Very High
The system promotes fairness in attendance monitoring	4.90	0.30	Very High
The biometric system reduces disputes regarding attendance records	4.86	0.35	Very High
The implementation of the biometric attendance system enhances transparency in attendance management	4.87	0.34	Very High
OVERALL MEAN AND SD	4.85	0.35	Very High

Legend: 4.51 - 5.00 - Very High, 3.51 - 4.50 – High, 2.51 - 3.50 – Moderate, 1.51 - 2.50 – Low, 1.00 - 1.50 - Very Low

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Table 4 presents data on the transparency of the Biometric Attendance System as assessed by the teachers. The overall mean score of 4.85 with a standard deviation (SD) of 0.35 indicates that the transparency of the biometric attendance monitoring system is at a "Very High" level. This suggests that teachers perceive the system as providing clear, accessible, and verifiable attendance records, thereby promoting openness and fairness in the management and monitoring of attendance.

Among the specific indicators, "The system promotes fairness in attendance monitoring" obtained the highest mean score of 4.90 (SD = 0.30), described as "Very High." This indicates that teachers strongly perceive the biometric system as promoting fairness by providing a more objective basis for monitoring attendance. This was followed by "The implementation of the biometric attendance system enhances transparency in attendance management" with a mean of 4.87 (SD = 0.34), also interpreted as "Very High," suggesting that the system contributes substantially to openness and clarity in attendance management.

The statement "The biometric system reduces disputes regarding attendance records" obtained a mean of 4.86 (SD = 0.35), while "The biometric attendance system provides clear and accessible attendance records" received a mean of 4.84 (SD = 0.37). Both indicators were rated "Very High," indicating that teachers perceive the system as making attendance information clearer and reducing disagreements concerning attendance records. Meanwhile, "Attendance records can be easily verified when needed" obtained the lowest mean score of 4.80 (SD = 0.40), although it remained within the "Very High" category. This suggests that attendance records are generally perceived as readily available and verifiable when required.

Villaroman et al. (2018) examined the use of the Biometric Attendance Recording System (BARS) among employees of the Cabanatuan City Government in the Philippines. The researchers explained that biometric attendance technology was adopted to strengthen the monitoring and recording of employee attendance and to facilitate compliance with prescribed working hours. The study noted that BARS provides a wider window of transparency because attendance records are updated in real time. It also reported that the system makes monitoring employee attendance easier and allows faster generation of attendance reports, thereby facilitating the verification and management of attendance information.

Table 5. *Teachers' Punctuality n=70*

Statement	Mean	SD	Description
The biometric attendance system encourages teachers to arrive at school on time	4.93	0.26	Very High Effective
The biometric system has reduced instances of teacher tardiness	4.84	0.37	Very High Effective
Teachers become more conscious of reporting to work on time because of the biometric attendance system	4.79	0.41	Very High Effective
The biometric attendance system promotes regular and consistent attendance among teachers	4.87	0.34	Very High Effective
The system motivates teachers to comply with official working hours	4.90	0.30	Very High Effective
Teachers are less likely to leave the workplace earlier than the required time because of the biometric attendance system	4.81	0.39	Very High Effective
The biometric system improves teachers' punctuality in reporting to duty	4.87	0.34	Very High Effective
Attendance records generated by the biometric system encourage teachers to be more disciplined with time	4.83	0.38	Very High Effective
The implementation of biometric attendance monitoring has positively influenced teachers' time management	4.89	0.32	Very High Effective

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Overall, biometric attendance has improved teachers' punctuality	4.86	0.35	Very High Effective
OVERALL MEAN AND SD	4.85	0.35	Very High Effective

Legend: 4.51 - 5.00 - Very High, 3.51 - 4.50 – High, 2.51 - 3.50 – Moderate, 1.51 - 2.50 – Low, 1.00 - 1.50 - Very Low

Table 5 presents data on teachers' punctuality as influenced by the implementation of the Biometric Attendance System. The overall mean score of 4.85 with a standard deviation (SD) of 0.35 indicates that the biometric attendance system is perceived to be "Very High Effective" in improving teachers' punctuality. This suggests that the system contributes substantially to teachers' timely arrival, regular attendance, compliance with official working hours, and responsible management of their time.

Among the specific indicators, "The biometric attendance system encourages teachers to arrive at school on time" obtained the highest mean score of 4.93 (SD = 0.26), described as "Very High Effective." This indicates that teachers strongly perceive the biometric system as encouraging timely arrival at school. This was followed by "The system motivates teachers to comply with official working hours" with a mean of 4.90 (SD = 0.30), also interpreted as "Very High Effective," suggesting that the system promotes compliance with prescribed working schedules.

The statement "The implementation of biometric attendance system has positively influenced teachers' time management" obtained a mean of 4.89 (SD = 0.32), while "The biometric attendance system promotes regular and consistent attendance among teachers" and "The biometric system improves teachers' punctuality in reporting to duty" both obtained a mean of 4.87 (SD = 0.34). These results indicate that the biometric system is perceived to positively influence teachers' time management, regular attendance, and punctual reporting to duty.

Meanwhile, "The biometric system has reduced instances of teacher tardiness" obtained a mean of 4.84 (SD = 0.37), followed by "Attendance records generated by the biometric system encourage teachers to be more disciplined with time" with a mean of 4.83 (SD = 0.38). The statement "Teachers are less likely to leave the workplace earlier than the required time because of the biometric attendance system" obtained a mean of 4.81 (SD = 0.39). Although these indicators had comparatively lower means, all remained within the "Very High Effective" category, indicating that the system is perceived to have a strong influence on reducing tardiness, promoting time discipline, and discouraging early departures.

Gabuya, Zosa, and Minoza (2022) evaluated the performance of the Biometric Attendance System (BAS) at Cebu Technological University–Tuburan Campus in Cebu, Philippines. The study involved 96 teaching staff and 48 non-teaching personnel and assessed the system in terms of timeliness, accuracy, graphical user interface, and system maintenance. The findings showed that the biometric attendance system performed very satisfactorily in terms of timeliness.

Table 6. *Work Ethics n=70*

Statement	Mean	SD	Description
The biometric attendance system promotes responsibility among teachers	4.90	0.30	Very High Effective
Teachers demonstrate greater professionalism because of the biometric attendance system	4.91	0.28	Very High Effective
The system encourages teachers to follow school rules and regulations	4.89	0.32	Very High Effective
The biometric system helps strengthen teachers' accountability in performing their duties	4.87	0.34	Very High Effective
Teachers are more committed to fulfilling their work responsibilities due to the biometric system	4.90	0.30	Very High Effective
The biometric attendance system promotes honesty in recording attendance	4.90	0.30	Very High Effective

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The system encourages fairness and integrity among teachers	4.91	0.28	Very High Effective
The biometric system helps improve teachers' discipline in the workplace	4.89	0.32	Very High Effective
Teachers are more aware of the importance of maintaining good work habits because of biometric monitoring	4.86	0.35	Very High Effective
Overall, biometric attendance system has enhanced teachers' work ethics	4.93	0.26	Very High Effective
OVERALL MEAN AND SD	4.90	0.31	Very High Effective

Legend: 4.51 - 5.00 - Very High, 3.51 - 4.50 – High, 2.51 - 3.50 – Moderate, 1.51 - 2.50 – Low, 1.00 - 1.50 - Very Low

Table 6 presents data on teachers' work ethics as influenced by the implementation of the Biometric Attendance System. The overall mean score of 4.90 with a standard deviation (SD) of 0.31 indicates that the biometric attendance monitoring system is perceived to be "Very High Effective" in enhancing teachers' work ethics. This suggests that the system contributes to the development of responsibility, professionalism, accountability, honesty, integrity, discipline, and commitment among teachers in performing their duties and complying with workplace expectations.

Among the specific indicators, "Overall, biometric attendance has enhanced teachers' work ethics" obtained the highest mean score of 4.93 (SD = 0.26), described as "Very High Effective." This indicates that teachers strongly perceive the biometric system as contributing to the overall improvement of their work ethics. The relatively low standard deviation further suggests a high degree of consistency in teachers' responses to this indicator.

The statements "Teachers demonstrate greater professionalism because of the biometric attendance system" and "The system encourages fairness and integrity among teachers" both obtained a mean score of 4.91 (SD = 0.28) and were rated "Very High Effective." These findings indicate that the biometric system is perceived to encourage professional conduct and promote fairness and integrity in the workplace. Meanwhile, "The biometric attendance system promotes responsibility among teachers," "Teachers are more committed to fulfilling their work responsibilities due to the biometric system," and "The biometric attendance system promotes honesty in recording attendance" each obtained a mean of 4.90 (SD = 0.30). These results suggest that the system is perceived to strengthen teachers' responsibility, commitment, and honesty in attendance reporting and work performance.

The statement "The system encourages teachers to follow school rules and regulations" and "The biometric system helps improve teachers' discipline in the workplace" both obtained a mean of 4.89 (SD = 0.32), while "The biometric system helps strengthen teachers' accountability in performing their duties" obtained a mean of 4.87 (SD = 0.34). All indicators were interpreted as "Very High Effective," indicating that the biometric system is perceived to support compliance with school policies, workplace discipline, and accountability in the performance of assigned duties. The lowest mean was obtained by "Teachers are more aware of the importance of maintaining good work habits because of biometric monitoring" with 4.86 (SD = 0.35). Despite having the lowest mean, it still falls within the "Very High Effective" category, indicating a consistently positive assessment.

Villaroman, San Pedro, Bacani, Clerigo, and Hipos (2018) investigated the use of the Biometric Attendance Recording System (BARS) and its impact on the work performance of Cabanatuan City government employees in the Philippines. The study assessed employees' performance using their Individual Performance Commitment and Review (IPCR) ratings as well as their perceptions of the biometric system. The researchers reported that the majority of respondents perceived BARS as having a positive impact on work performance, and the study found a significant increase in employees' level of performance. The authors also emphasized the relevance of biometric attendance systems to transparency and accountability**,** which are closely related to the responsibility, honesty, discipline, and professional conduct reflected in the present study's work-ethics indicators.

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Table 7. *Relationship Between Biometric Attendance System and Teachers' Punctuality and Work Ethics*

Variables	Df	α	R	p-value	Interpretation	Decision
Biometric Attendance System and Teachers' Punctuality	68	.05	1.000	<.001	Significant	Reject H_o
Biometric Attendance System and Work Ethics	68	.05	0.540	<.001	Significant	Reject H_o

Table 7 presents the relationship between the Biometric Attendance System and teachers' punctuality and work ethics among 70 respondents. The analysis used the Pearson product-moment correlation coefficient (Pearson r) at a 0.05 level of significance, with 68 degrees of freedom (df).

For the relationship between the Biometric Attendance System and Teachers' Punctuality, the computed Pearson correlation coefficient was r = 1.000, with a p-value < .001. This indicates a perfect positive correlation, meaning that higher scores in the implementation of the biometric attendance monitoring system were associated with correspondingly higher scores in teachers' punctuality. Since the p-value is less than the 0.05 level of significance, the relationship is statistically significant. Thus, the null hypothesis is rejected for this relationship.

For the relationship between the Biometric Attendance System and Work Ethics, the computed Pearson correlation coefficient was r = 0.540, with a p-value < .001. This indicates a moderate positive relationship, suggesting that higher implementation scores of the biometric attendance system were associated with higher levels of teachers' work ethics. Since the p-value is also less than 0.05, the relationship is statistically significant. Therefore, the null hypothesis is rejected for this relationship.

Raj and Mahajan (2021) conducted a study entitled "Study of Opinions Related to the Use of Bio-Enabled Attendance System for Improving Punctuality Among Teachers." The study involved 70 teachers from an institution where a fingerprint-based attendance monitoring system was being used. The researchers found that the bio-enabled attendance system contributed to improving teachers' punctuality and was perceived as effective, accurate, and time-saving. The study further indicated that biometric monitoring can support teachers in becoming more conscious of their attendance and reporting time. These findings support the present study, wherein the Biometric Attendance Monitoring System demonstrated a statistically significant positive association with teachers' punctuality, with a Pearson correlation coefficient of r = 1.000 and p < .001.

Findings

The findings suggest that Biometric Attendance System was perceived at a very high level, with accuracy obtaining the highest overall rating, followed by efficiency, accountability, and transparency. Meanwhile, the system was perceived to be very high in improving teachers' punctuality and work ethics, particularly in encouraging timely arrival, compliance with official working hours, regular attendance, and responsible time management. It was found out that Biometric Attendance System and Teachers' Punctuality and Work Ethics are significantly related to each other.

CONCLUSION AND RECOMMENDATIONS

In conclusion, the analysis indicates that the Biometric Attendance System was perceived at a very high level in terms of accuracy, efficiency, accountability, and transparency, and was perceived to be very high in improving teachers' punctuality and work ethics**.** The high level of implementation demonstrates that the system provides reliable and systematic attendance monitoring while promoting responsibility, honesty, fairness, and transparency among teachers. Furthermore, its perception was very high in improving punctuality and work ethics highlights its contribution to timely arrival, compliance with official working hours, regular attendance, time management, and professional discipline. These findings emphasize the importance of sustaining the proper implementation and consistent use of the biometric system to strengthen teachers' punctuality and work ethics.

By promoting responsible attendance practices and accountability, the system can continue to support punctuality, discipline, and ethical work practices among teachers.

To address these gaps, the action plan is designed to strengthen teachers' punctuality and work ethics and recommends to proposed an action plan to strengthen the implementation of the biometric attendance system and further enhance teachers' punctuality and work ethics. The study revealed a relationship between biometric attendance system and teachers' punctuality and work ethics. Therefore, enhancing teachers' punctuality and work ethics can increase their capacity to effectively growth professionally especially in the field of teaching, which may contribute to improved teacher performance and the achievement of organizational goals.

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