

ISSN: 2584-0541

Vol. 3  
Issue III  
(Oct. to December 2025)

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INTERNATIONAL JOURNAL OF SOCIAL SCIENCES INSIGHTS



A Globally Recognized Quality Referred (Peer Reviewed) &  
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INTERNATIONAL JOURNAL OF SOCIAL SCIENCES INSIGHTS

*A Globally Recognized Quality Refereed (Peer-reviewed) & Online Journal of Multidisciplinary Social Science Research (Quarterly)*

**Vol. 3 Issue III (October to December 2025)**

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# International Journal of Social Sciences Insights

A Globally Recognized Quality Refereed (Peer Reviewed) &  
Online Journal of Multidisciplinary Social Science Research

Web: [socialinsights.in](http://socialinsights.in)



## AI USE IN ACADEMICS FOR CUTTING BOUNDARIES AMONG FRESH STUDENTS IN THE UNIVERSITY: MEDICAL COLLEGE, NNAMDI AZIKIWE UNIVERSITY IN VIEW

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### Article info

Received – 20 October 2025  
Received revised -26 November 2025  
Accepted -15 December 2025  
Available online -31 December 2025  
Pages: -1-13

**Keywords** Artificial Intelligence (AI), Higher Education, Teacher-AI-Student Dynamic, AI Literacy, Academic Sustainability, Student Outcomes, Nigerian Universities, and First-Year Students

### Abstract

The integration of artificial intelligence (AI) in higher education represents a paradigm shift in the traditional teacher-student relationship, evolving into a teacher-AI-student dynamic. This study examines the importance and impact of introducing AI to first-year students at the Medical College, Nnamdi Azikiwe University. As UNESCO emphasizes the necessity of AI adoption in educational systems worldwide, this research explores how AI technologies can enhance academic sustainability, effectiveness, and student outcomes both within and beyond the university environment. The study investigates the benefits, challenges, and implications of early AI exposure for undergraduate students, particularly in the context of Nigerian universities facing infrastructural and resource constraints. Through a comprehensive analysis of AI applications in academics, this paper demonstrates that early introduction of AI tools to fresh students can significantly improve learning experiences, foster creativity, enhance problem-solving capabilities, and better prepare students for the technology-driven global workforce. The findings suggest that universities must prioritize AI literacy from the onset of students' academic journey to ensure they remain competitive in an increasingly automated world.

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## 1.0 INTRODUCTION

The global educational landscape is experiencing unprecedented transformation driven by technological innovation, with artificial intelligence (AI) emerging as a critical catalyst for change in higher education institutions worldwide. The contemporary university environment demands a fundamental rethinking of pedagogical approaches, learning methodologies, and the integration of emerging technologies to prepare students for an increasingly complex and technologically sophisticated global workforce (Crompton & Burke, 2023). This transformation is particularly significant for incoming undergraduate students who represent the first generation to experience education in an era where AI capabilities have become increasingly sophisticated and accessible.

Nigerian university students face unique challenges that compound the urgency of technological integration. The Nigerian higher education system grapples with persistent infrastructural deficits, including inadequate power supply, limited accommodation facilities, and resource constraints that significantly impact the quality of education delivery (Okebukola, 2021). These challenges, exacerbated by economic hardships and policy inconsistencies, create an environment where traditional educational models struggle to meet the needs of contemporary learners. In this context, the introduction of AI technologies offers a potential pathway to overcome structural limitations while simultaneously positioning students to compete effectively in the global knowledge economy.

Artificial intelligence, defined as the capability of machines to perform tasks that typically require human intelligence such as learning, reasoning, problem-solving, and decision-making, has evolved from a theoretical concept to a practical tool that permeates virtually every sector of modern society (Devedic, 2004). The journey of AI from Alan Turing's foundational question "Can machines think?" in the 1950s to today's sophisticated machine learning algorithms and generative AI systems represents one of the most significant technological progressions in human history. The recent acceleration in AI capabilities, particularly in the last five years, has created both opportunities and imperatives for educational institutions to integrate these technologies into their curricula and operational frameworks (Chu et al., 2020). The Medical College at Nnamdi Azikiwe University presents a particularly compelling case study for examining AI integration in higher education. Medical education demands rigorous analytical thinking, problem-solving capabilities, and the ability to process vast amounts of complex information—all areas where AI technologies demonstrate significant potential for enhancement. Fresh students entering medical programs face a steep learning curve, requiring rapid acquisition of foundational knowledge while simultaneously developing clinical reasoning skills. The introduction of AI tools at this critical juncture can potentially accelerate learning, provide personalized educational experiences, and develop the technological competencies essential for modern medical practice.

The transformation brought about by AI in education extends beyond simple technological adoption; it represents a fundamental reconceptualization of the learning process itself. Traditional teacher-centered pedagogies are giving way to student-centered, technology-enhanced learning environments where AI serves as an intermediary that personalizes content delivery, provides immediate feedback, and adapts to individual learning styles and paces (Pokrivcakova, 2019). This shift aligns with contemporary educational theories emphasizing active learning, constructivism, and the development of critical thinking skills rather than mere knowledge transmission.

Furthermore, the global trend toward AI adoption in higher education has accelerated dramatically. Research indicates that publications on AI in higher education increased two to three times in 2021 and 2022 compared to previous years, with research being conducted on six of the world's seven continents (Crompton & Burke, 2023). This global momentum reflects a growing consensus that AI literacy is no longer optional but essential for graduates entering any professional field. For medical students specifically, understanding AI applications in diagnostics, treatment planning, and patient care management will be crucial for effective practice in increasingly technology-driven healthcare systems.

The concept of introducing AI to fresh students at the commencement of their university journey is predicated on several pedagogical and practical considerations. First, early exposure allows students to develop technological fluency gradually, building competence and confidence over the course of their studies rather than attempting to acquire these skills later when academic demands intensify. Second, AI tools can provide immediate support for the transition from secondary to tertiary education, a period often characterized by significant academic and social adjustment challenges. Third, integrating AI from the beginning normalizes its use as a learning tool rather than positioning it as an external or optional supplement to traditional education. However, the introduction of AI in educational settings is not without concerns and challenges. UNESCO has highlighted the importance of addressing potential risks associated with AI implementation, including issues of equity, privacy, ethical use, and the potential for over-reliance on technological solutions at the expense of developing fundamental cognitive skills (UNESCO, 2024). These concerns are particularly salient in developing country contexts where access to technology may be uneven and where educational systems may lack the infrastructure and expertise to implement AI responsibly and effectively.

This study focuses specifically on fresh students at the Medical College of Nnamdi Azikiwe University to examine how early AI introduction can cut boundaries and enhance academic outcomes in a challenging educational environment. By exploring the applications, benefits, and implications of AI integration at this critical educational juncture, the research aims to provide evidence-based recommendations for policy makers, educational administrators, and faculty members seeking to leverage technological innovation to improve educational quality and student success. The significance of this research extends beyond the immediate institutional context. As

Nigerian universities seek to enhance their global competitiveness and better prepare graduates for an increasingly digital economy, understanding how to effectively introduce and integrate AI technologies becomes paramount. The insights generated from this study can inform policy development, curriculum design, and resource allocation decisions that will shape the future of higher education in Nigeria and similar contexts across Africa and other developing regions.

## **2.0 STATEMENT OF THE PROBLEM**

Despite the rapid global adoption of artificial intelligence technologies in higher education institutions, there remains a significant gap between the potential benefits of AI integration and its actual implementation in Nigerian universities, particularly in the critical first year of undergraduate education. Fresh students at Nnamdi Azikiwe University's Medical College enter an academically demanding program while simultaneously facing substantial infrastructural challenges including inadequate electricity supply, limited access to modern learning resources, and overcrowded facilities that compromise the quality of traditional educational delivery.

The absence of systematic AI introduction for incoming students creates multiple interconnected problems. First, students are deprived of technological tools that could significantly enhance their learning efficiency, personalize their educational experiences, and provide support during the challenging transition from secondary to tertiary education. This technological gap places Nigerian students at a competitive disadvantage compared to their counterparts in institutions that have embraced AI integration, potentially limiting their future career prospects in an increasingly technology-driven global healthcare system. Second, the traditional teacher-centered pedagogical approach prevalent in many Nigerian universities struggles to accommodate diverse learning styles, paces, and needs among large student cohorts. Without AI-powered adaptive learning systems, instructors face overwhelming workloads in attempting to provide individualized attention and feedback to hundreds of students, resulting in suboptimal learning outcomes and student dissatisfaction. The lack of AI tools for grading, feedback provision, and administrative tasks further exacerbates faculty burnout and reduces the time available for meaningful student engagement and mentorship.

Third, students graduating without adequate exposure to AI technologies and digital literacy face significant employability challenges in modern healthcare settings that increasingly rely on AI-powered diagnostic tools, electronic health records, telemedicine platforms, and data-driven clinical decision support systems. The failure to develop AI competencies during undergraduate education creates a skills mismatch between academic preparation and workplace requirements, potentially compromising graduate employability and professional effectiveness. Additionally, the absence of structured AI introduction perpetuates digital divide issues, with students from privileged backgrounds who have prior exposure to technology gaining disproportionate advantages over peers from less privileged circumstances. This inequity undermines the university's mission to provide equal educational opportunities and threatens to reproduce existing socioeconomic inequalities in the student body and beyond.

The problem is further compounded by limited research and documentation on how AI can be effectively introduced to fresh students in resource-constrained Nigerian university contexts. While international literature demonstrates the benefits of AI in higher education, these studies predominantly focus on well-resourced Western institutions, leaving questions about applicability, adaptation, and implementation strategies for African universities largely unanswered. This knowledge gap hinders evidence-based policy making and resource allocation decisions regarding AI integration in Nigerian higher education.

Finally, the lack of institutional frameworks, policies, and guidelines for responsible AI use creates risks of misuse, academic misconduct, and overreliance on AI tools without developing fundamental critical thinking and analytical skills. Without proper introduction and guidance on ethical AI use, students may develop problematic dependencies or engage in practices that undermine genuine learning and academic integrity. These multifaceted challenges underscore the urgent need for systematic investigation into how AI can be effectively introduced to fresh students at Nnamdi Azikiwe University's Medical College to enhance learning outcomes, develop technological competencies, and better prepare graduates for success in the digital age while addressing concerns about equity, ethics, and academic integrity.

### **2.1 Research Questions**

The following research questions guide this investigation:

- i. What are the potential benefits of introducing artificial intelligence to fresh students in the Medical College, Nnamdi Azikiwe University, for enhancing their academic performance and learning experiences?
- ii. How can artificial intelligence tools be effectively integrated into the first-year curriculum to develop students' critical thinking, creativity, and problem-solving capabilities?
- iii. What challenges and ethical considerations must be addressed when implementing AI technologies for fresh students in resource-constrained Nigerian university settings?

### **2.2 Research Objectives**

Based on the research questions, this study seeks to achieve the following objectives:

- i. To identify and analyze the specific benefits that artificial intelligence introduction provides to fresh students at the Medical College, Nnamdi Azikiwe University, in terms of academic performance, learning efficiency, and skill development.
- ii. To explore effective strategies and methodologies for integrating AI tools into the first-year medical curriculum to enhance students' critical thinking, creativity, problem-solving abilities, and technological literacy.

- iii. To examine the challenges, risks, and ethical considerations associated with AI implementation for fresh students in Nigerian university contexts and propose recommendations for responsible and equitable AI integration.

### 3.0 LITERATURE REVIEW

#### 3.1 Theoretical Framework: AI in Educational Settings:

The integration of artificial intelligence in education represents a convergence of several theoretical frameworks including constructivism, personalized learning theory, and technological determinism. Constructivist learning theory, which posits that learners actively construct knowledge through experience and reflection rather than passively receiving information, provides a foundation for understanding how AI can enhance student-centered learning environments (Vygotsky, 1978; Piaget, 1952). AI-powered adaptive learning systems align with constructivist principles by enabling students to engage with content at their own pace, receive immediate feedback, and build upon prior knowledge in ways that traditional classroom instruction struggles to accommodate at scale.

Personalized learning theory further illuminates the potential of AI in education by emphasizing the importance of tailoring educational experiences to individual learner characteristics, preferences, and needs (Pane et al., 2017). AI technologies excel at collecting and analyzing vast amounts of data on student performance, identifying patterns in learning behaviors, and adjusting content delivery accordingly. This capability addresses a fundamental limitation of traditional education—the inability to provide truly individualized instruction to each student in large cohorts typical of Nigerian universities.

#### 3.2 Evolution and Current State of AI in Higher Education

The journey of artificial intelligence from theoretical concept to practical educational tool spans several decades of technological development. Turing's (1950) foundational work on machine intelligence posed the critical question "Can machines think?" and established the conceptual framework for artificial intelligence research. The subsequent development of expert systems in the 1960s, including Slagle's SAINT (Symbolic Automatic Integrator), demonstrated early applications of AI in solving complex mathematical problems and established the feasibility of machine-based reasoning.

However, AI's integration into educational contexts remained limited until the late 1990s and early 2000s, when advances in computing power, data availability, and machine learning algorithms reinvigorated the field (Russell & Norvig, 2020). The past five years have witnessed exponential growth in AI applications for education, with Chu et al. (2020) documenting a proliferation of new AI tools specifically designed for higher education contexts. This recent surge reflects technological breakthroughs in natural language processing, computer vision, and deep learning that enable more sophisticated and user-friendly educational applications. Crompton and Burke's (2023) comprehensive review of AI in higher education reveals significant trends in research and implementation. Their analysis demonstrates that publications on AI in higher education increased two to three-fold in 2021 and 2022 compared to previous years, indicating accelerating institutional adoption and scholarly interest. Notably, research leadership has shifted from the United States to China, reflecting that nation's aggressive investment in AI technologies and recognition of education as a strategic priority for technological advancement. The geographic distribution of research across six continents suggests that AI in education has become a global phenomenon rather than being limited to technologically advanced nations.

#### 3.3 Applications of AI in Academic Contexts

Contemporary AI applications in higher education encompass a diverse range of functionalities addressing both instructional and administrative needs. Alam (2021) categorizes these applications into several domains including intelligent tutoring systems, automated assessment and feedback mechanisms, adaptive learning platforms, and administrative automation tools. Each category offers distinct benefits for enhancing educational quality and efficiency. Intelligent tutoring systems represent one of the most developed applications of AI in education. These systems use machine learning algorithms to assess student understanding, identify knowledge gaps, and provide targeted instructional interventions (Chassignol et al., 2018). Unlike traditional computer-assisted instruction that follows predetermined pathways, AI-powered tutoring systems adapt dynamically to individual student responses, creating truly personalized learning experiences. Research indicates that well-designed intelligent tutoring systems can produce learning gains comparable to or exceeding those achieved through one-on-one human tutoring (VanLehn, 2011).

Automated assessment and feedback systems address one of the most time-consuming aspects of teaching—evaluating student work and providing constructive feedback. AI technologies can grade multiple-choice examinations, evaluate short-answer responses, and even assess more complex assignments such as essays using natural language processing techniques (Ramadan, 2023). Beyond simple grading, these systems can provide detailed feedback on specific aspects of student work, identifying strengths and weaknesses and suggesting areas for improvement. This capability allows instructors to focus on higher-order pedagogical activities such as curriculum design, mentorship, and facilitating discussions rather than spending countless hours on routine grading tasks.

Adaptive learning platforms leverage AI to create personalized educational pathways for individual students. These systems continuously monitor student performance, analyzing patterns of correct and incorrect responses, time spent on various activities, and engagement levels (Sharma et al., 2019). Based on this analysis, the platform adjusts content difficulty, provides supplementary materials for topics where students struggle, and accelerates progression through material students have mastered. This approach addresses the fundamental challenge of

classroom instruction—that a single pace and approach cannot optimally serve all students in a diverse cohort.

### 3.4 AI Benefits for Fresh University Students

The introduction of AI to students at the commencement of their university education offers several distinct advantages over delayed implementation. Lara (2024) argues that early AI exposure allows students to develop technological fluency gradually, building competence and confidence throughout their undergraduate years rather than attempting to acquire these skills later when academic demands are most intense. This gradual skill development aligns with theories of expertise development that emphasize the importance of extended practice and progressive skill building.

For fresh students specifically, AI tools can provide crucial support during the challenging transition from secondary to tertiary education. The first year of university is characterized by significant academic, social, and psychological adjustments as students navigate increased academic rigor, greater independence, and new social environments (Tinto, 2020). AI-powered learning assistants can help bridge this transition by providing readily available academic support, answering basic questions, and offering guidance on study strategies and time management.

Habib et al. (2024) examine how generative AI impacts student creativity, finding that appropriately designed AI interactions can enhance rather than diminish creative thinking. Their research demonstrates that AI tools can stimulate divergent thinking, help students generate and evaluate multiple ideas, and provide inspiration when students face creative blocks. These findings counter concerns that AI might stifle creativity by making processes too automated or formulaic. Instead, when properly integrated into the learning process, AI can serve as a catalyst for creative exploration and innovation.

The personalization capabilities of AI are particularly valuable for fresh students who arrive at university with diverse backgrounds, prior knowledge, and learning preferences. Pokrivcakova (2019) emphasizes that AI-powered adaptive learning platforms can accommodate this diversity by creating individualized learning pathways that address each student's specific needs and capabilities. This personalization is especially important in large first-year cohorts common in Nigerian universities where individual attention from instructors is necessarily limited.

### 3.5 AI in Medical Education

Medical education presents unique opportunities and challenges for AI integration. The field's emphasis on evidence-based practice, diagnostic reasoning, and continuous learning aligns well with AI capabilities in data analysis, pattern recognition, and information retrieval (Wartman & Combs, 2018). Medical students must master vast amounts of factual knowledge while simultaneously developing clinical reasoning skills and professional competencies—a combination that can benefit significantly from AI support.

AI applications in medical education include virtual patients for clinical skills practice, diagnostic support systems that help students develop differential diagnosis skills, and intelligent tutoring systems for basic science subjects (Chan & Zary, 2019). These tools allow students to practice clinical decision-making in safe, simulated environments where mistakes become learning opportunities rather than patient safety risks. Additionally, AI can expose students to a broader range of clinical presentations than they might encounter during limited clinical rotations, enhancing their diagnostic reasoning capabilities.

The integration of AI into medical education also addresses the challenge of information overload that medical students face. With medical knowledge doubling approximately every 73 days (Densen, 2011), students cannot possibly memorize all relevant information. Instead, they must develop skills in information retrieval, critical evaluation, and application—areas where AI tools can provide significant support. AI-powered clinical decision support systems can help students learn to efficiently access relevant information, evaluate evidence quality, and apply knowledge to specific clinical scenarios.

### 3.6 Challenges and Concerns in AI Implementation

Despite the promising benefits of AI in education, several challenges and concerns must be addressed for successful implementation. UNESCO (2024) highlights the importance of ensuring equitable access to AI technologies, noting that uneven distribution of resources could exacerbate existing educational inequalities. In resource-constrained settings like Nigerian universities, ensuring that all students have adequate access to AI tools and the infrastructure needed to utilize them effectively presents a significant challenge.

Ethical considerations surrounding AI use in education have garnered increasing attention from scholars and policy makers. Issues of data privacy, algorithmic bias, transparency, and accountability require careful consideration when implementing AI systems that collect and analyze student data (Holmes et al., 2021). Students and faculty need clear guidelines on appropriate AI use, data protection measures, and the limitations of AI systems to make informed decisions about when and how to utilize these technologies.

The risk of over-reliance on AI tools represents another significant concern. Critics worry that excessive dependence on AI assistance might undermine the development of fundamental cognitive skills such as critical thinking, problem-solving, and independent analysis (Selwyn, 2019). This concern is particularly relevant for fresh students who are still developing their academic skills and learning strategies. Educational institutions must strike a balance between leveraging AI's benefits and ensuring that students develop robust independent capabilities.

Academic integrity issues have emerged as AI tools, particularly generative AI systems like ChatGPT, become more sophisticated and accessible. The ease with which students can generate essays, solve problems, or complete

assignments using AI raises questions about authorship, originality, and fair assessment (Sullivan et al., 2023). Universities must develop clear policies and educational approaches that help students understand appropriate AI use while detecting and deterring misuse.

### **3.7 The Nigerian Context: Opportunities and Constraints**

The implementation of AI in Nigerian universities occurs within a specific context characterized by both unique challenges and opportunities. Nigerian higher education faces persistent infrastructural deficits including unreliable electricity supply, limited internet bandwidth, and inadequate computing facilities (Okebukola, 2021). These constraints directly impact the feasibility of implementing technology-intensive AI solutions that require consistent power and internet connectivity.

However, Nigeria's large and growing youth population, increasing mobile phone penetration, and expanding technology sector create opportunities for innovative approaches to AI integration (Adebayo, 2022). Mobile-first AI solutions that require minimal bandwidth and can function with intermittent connectivity may prove more viable than desktop-based systems. Additionally, cloud-based AI services can reduce the need for expensive local computing infrastructure, making advanced AI capabilities accessible even in resource-constrained settings.

The cultural context of Nigerian education also influences AI implementation. Traditional pedagogical approaches emphasizing lecture-based instruction, memorization, and respect for authority may create resistance to student-centered, technology-mediated learning models (Sanni, 2021). Successful AI integration requires not only technological infrastructure but also cultural and pedagogical shifts that value active learning, student agency, and technology as a learning partner rather than a mere supplementary tool.

### **3.8 Gap in Literature**

While the literature on AI in higher education has grown substantially in recent years, significant gaps remain regarding implementation in developing country contexts, particularly for first-year students. Most existing research focuses on well-resourced Western institutions with robust technological infrastructure and substantial support services (Crompton & Burke, 2023). Studies examining AI implementation in resource-constrained African universities are notably scarce, leaving questions about adaptation, feasibility, and effectiveness largely unanswered.

Additionally, research specifically examining the impact of early AI introduction to fresh university students remains limited. Most studies focus on general student populations without distinguishing the unique needs and circumstances of first-year students who are simultaneously navigating the transition to university life while developing foundational academic skills. Understanding how AI can best support this critical transitional period requires targeted research that addresses the specific challenges and opportunities of the first-year experience. This study addresses these gaps by examining AI introduction specifically for fresh students at a Nigerian medical college, providing insights into implementation strategies, benefits, and challenges within a resource-constrained developing country context that can inform policy and practice beyond the immediate research setting.

### **3.9 Methodology**

This study employed a mixed-methods research design combining quantitative and qualitative approaches to comprehensively examine the introduction of artificial intelligence to fresh students at the Medical College, Nnamdi Azikiwe University. The mixed-methods approach was selected because it allows for triangulation of data sources and methods, providing both breadth and depth in understanding the complex phenomenon of AI integration in higher education. This methodological choice aligns with pragmatist philosophical foundations that emphasize using whatever methods best address the research questions rather than adhering rigidly to a single paradigmatic approach.

The research was conducted over the 2024/2025 academic session, focusing specifically on first-year medical students at Nnamdi Azikiwe University in Awka, Anambra State, Nigeria. The study population comprised all 320 students admitted to the medical program for the 2024/2025 session. From this population, a sample of 180 students was selected using stratified random sampling to ensure representation across gender and different academic performance levels as indicated by admission scores. The stratification approach ensured that the sample reflected the diversity of the first-year cohort in terms of prior academic achievement and demographic characteristics.

In addition to the student sample, the research included 15 faculty members from various departments within the Medical College who teach first-year courses. Faculty participants were purposively selected to include representatives from basic science departments, clinical departments, and educational administration. This diverse faculty sample provided multiple perspectives on AI integration from individuals with different disciplinary backgrounds and pedagogical approaches. The inclusion of faculty perspectives was essential because successful AI implementation requires not only student acceptance but also faculty buy-in and effective integration into instructional practices.

Data collection employed multiple instruments to capture different dimensions of the research questions. A structured questionnaire was developed and validated to assess student perceptions of AI benefits, challenges, and learning impacts. The questionnaire consisted of 45 items organized into five sections addressing demographic information, prior technology experience, perceived benefits of AI for learning, challenges encountered in using AI tools, and attitudes toward AI integration in medical education. Items used a five-point Likert scale ranging from strongly disagree to strongly agree to measure the intensity of student responses. The questionnaire was pilot tested with 30 students from the previous cohort to assess clarity, reliability, and validity, resulting in minor

revisions to improve item comprehension. To complement the quantitative survey data, semi-structured interviews were conducted with 24 students selected from the survey respondents to represent diverse experiences and perspectives. Interview participants included students with varying levels of prior technology experience, different academic performance levels, and diverse socioeconomic backgrounds to capture a range of experiences with AI introduction. Each interview lasted approximately 45 to 60 minutes and explored topics including specific AI tools used, learning experiences with AI, perceived benefits and challenges, and recommendations for improving AI integration. Interviews were audio-recorded with participant consent and transcribed verbatim for analysis.

Faculty interviews followed a similar semi-structured format, exploring perspectives on AI's potential to enhance teaching effectiveness, concerns about AI implementation, experiences with AI tools in their instructional practice, and recommendations for faculty support and training. These interviews lasted between 60 and 90 minutes, reflecting the more extensive teaching experience and broader institutional perspectives that faculty could provide. Faculty interviews were also audio-recorded and transcribed for analysis. The research design included an intervention component where selected AI tools were introduced to first-year students through a structured orientation program at the beginning of the academic session. The orientation program consisted of a three-day workshop covering AI fundamentals, ethical considerations, and hands-on training with specific AI applications relevant to medical education including literature search tools, study assistants, and concept explanation systems. Students received ongoing support throughout the semester through a dedicated help desk and online resources. This intervention design allowed the research to examine not only perceptions and attitudes but also actual experiences with AI tools introduced systematically rather than adopted haphazardly.

Academic performance data were collected at multiple time points to assess the potential impact of AI introduction on learning outcomes. Pre-intervention baseline performance was established using admission scores and first semester examination results. Post-intervention performance was measured through second semester examination scores, assignment grades, and standardized assessment results. While numerous confounding variables prevent attributing performance changes solely to AI introduction, comparing performance trajectories of students who engaged extensively with AI tools versus those who used them minimally or not at all provided insights into potential learning impacts.

Quantitative data from questionnaires and academic records were analyzed using SPSS statistical software version 28. Descriptive statistics including means, standard deviations, frequencies, and percentages characterized the sample and summarized responses. Inferential statistics including t-tests, ANOVA, and correlation analysis examined relationships between variables such as the association between extent of AI tool use and academic performance, differences in perceived benefits across student demographic groups, and relationships between prior technology experience and AI adoption. Statistical significance was established at the 0.05 alpha level for all tests. Qualitative data from interviews were analyzed using thematic analysis following Braun and Clarke's (2006) six-phase approach including familiarization with data, initial code generation, theme searching, theme review, theme definition and naming, and report production. Transcripts were coded inductively to identify patterns and themes emerging from participant narratives rather than imposing predetermined categories. Multiple rounds of coding and theme refinement ensured that identified themes accurately represented participant experiences and perspectives. The qualitative analysis was conducted using NVivo software version 14 to facilitate systematic coding and theme development.

Integration of quantitative and qualitative findings occurred during interpretation, with qualitative themes elaborating, explaining, and providing context for quantitative patterns. This integration approach allowed quantitative data to establish the prevalence and distribution of experiences and attitudes while qualitative data illuminated the meanings, processes, and contexts underlying those patterns.

## **4.0 RESULTS AND ANALYSIS**

### **4.1 Benefits of AI Introduction to Fresh Students**

The first research objective sought to identify and analyze specific benefits that artificial intelligence provides to fresh students at the Medical College in terms of academic performance, learning efficiency, and skill development. Multiple data sources provided convergent evidence regarding these benefits.

### **4.2 Academic Performance Outcomes**

Analysis of academic performance data revealed statistically significant improvements associated with AI tool engagement. Students were categorized into three groups based on their self-reported frequency of AI tool use: high users (used AI tools daily or several times per week,  $n=62$ ), moderate users (used AI tools weekly,  $n=78$ ), and low users (used AI tools occasionally or never,  $n=40$ ). Comparison of second semester examination scores across these groups showed significant differences. High users achieved a mean examination score of 68.4% ( $SD=8.2$ ), moderate users scored 64.7% ( $SD=9.1$ ), and low users scored 61.3% ( $SD=10.4$ ). One-way ANOVA indicated these differences were statistically significant,  $F(2, 177) = 8.94, p < 0.001$ . Post-hoc Tukey tests revealed that high users significantly outperformed both moderate users ( $p = 0.023$ ) and low users ( $p < 0.001$ ), while moderate users also significantly outperformed low users ( $p = 0.047$ ).

The magnitude of these differences, while statistically significant, must be interpreted cautiously given numerous confounding variables that could not be fully controlled. Students who used AI tools more frequently may have differed systematically from those who used them less in terms of motivation, prior academic skills, or study habits. Nevertheless, the positive association between AI engagement and academic performance, combined with qualitative evidence of specific learning benefits, suggests that AI tools contributed meaningfully to student success.

Assignment completion rates also demonstrated positive associations with AI use. Students who regularly used AI tools for assignment preparation showed a 14% higher on-time submission rate (89% vs. 75%) compared to students who rarely used AI assistance. Furthermore, assignment quality ratings by instructors were significantly higher for students reporting regular AI use for research, concept clarification, and draft revision, with mean quality scores of 7.8 out of 10 compared to 6.9 for students with minimal AI engagement,  $t(178) = 3.46, p = 0.001$ .

### **4.3 Effective Integration Strategies for AI Tools**

The second research objective explored effective strategies and methodologies for integrating AI tools into the first-year medical curriculum to enhance critical thinking, creativity, and problem-solving capabilities. Data revealed several key factors contributing to successful integration.

The comprehensive three-day orientation workshop at the beginning of the academic year proved essential for effective AI adoption. Survey data indicated that 87% of students who attended the full orientation program reported feeling confident using AI tools by mid-semester, compared to only 52% of students who attended partially or not at all,  $\chi^2(1) = 24.7, p < 0.001$ . Interview participants consistently emphasized the value of hands-on training with guidance from experienced facilitators who could demonstrate effective prompting strategies, appropriate use cases, and ethical considerations. Students appreciated that the orientation covered not only technical skills but also conceptual understanding of how AI systems work, their limitations, and appropriate contexts for use. This foundational knowledge helped students develop realistic expectations about AI capabilities and recognize situations where AI assistance might be inappropriate or insufficient. One student explained, "The orientation taught us not just how to use AI but when to use it and when we need to think independently or consult human experts instead. That context was really important."

Faculty interviews reinforced the importance of structured training, with several instructors noting that students who received comprehensive orientation demonstrated more sophisticated and appropriate AI use compared to students who attempted self-directed exploration without institutional support. Faculty recommended that future orientations include discipline-specific examples and use cases to help students immediately see relevance to their medical studies rather than presenting AI tools in generic or abstract terms. Effective AI integration required intentional curriculum design that created appropriate opportunities for AI tool use while maintaining academic rigor and ensuring genuine skill development. Faculty interviews revealed diverse approaches to incorporating AI into first-year courses. Some instructors explicitly designed assignments requiring AI tool use, such as tasks asking students to use AI for initial literature searches, then evaluate and synthesize findings independently. Other faculty prohibited AI use for certain foundational assignments requiring development of manual skills such as basic calculations or anatomical drawing, while permitting AI assistance for more complex synthesis and application tasks. Survey data indicated that 81% of students believed that faculty guidance on appropriate AI use for specific assignments was helpful ( $M = 4.1, SD = 0.8$ ). Students expressed frustration when faculty expectations regarding AI use were unclear or inconsistent across courses, creating uncertainty about when AI assistance was appropriate. Clear assignment instructions specifying whether and how AI tools could be used reduced this confusion and helped students develop judgment about appropriate technology use.

Innovative assignment designs that leveraged AI capabilities while maintaining academic integrity emerged as particularly effective. These included assignments asking students to compare AI-generated explanations with textbook presentations and identify strengths and limitations of each, tasks requiring students to use AI to generate multiple approaches to a problem then evaluate which approach was most appropriate for a given context, and projects where students used AI tools to explore topics beyond course coverage then presented their findings to classmates. These assignments positioned AI as a learning tool that enhanced rather than replaced student thinking and effort.

### **4.4 Challenges and Ethical Considerations**

The third research objective examined challenges, risks, and ethical considerations associated with AI implementation for fresh students in the Nigerian university context. Multiple significant challenges emerged from the data. The most frequently cited challenge involved inadequate technological infrastructure including unreliable electricity supply, limited internet bandwidth, and insufficient computing devices. Survey results indicated that 64% of students experienced significant infrastructure-related difficulties accessing AI tools ( $M = 3.6, SD = 1.1$ ). Electricity outages disrupted scheduled online AI training sessions and prevented students from completing AI-enhanced assignments on time. Limited internet bandwidth, particularly in student hostels, created frustration when attempting to use cloud-based AI services requiring substantial data transfer.

Device access represented another significant barrier, with 38% of students reporting that they lacked personal computers and relied on shared university computer labs with limited hours and availability. While mobile phones provided partial solutions, the small screens and limited processing power of many students' phones constrained effective AI engagement for complex academic tasks. One student explained, "I want to use AI tools more, but the internet in the hostel is terrible, and the computer lab is always crowded. By the time I get access, I've lost time I needed for studying." These infrastructure challenges disproportionately affected students from lower socioeconomic backgrounds who lacked personal devices and reliable internet at home. Faculty noted concerns that AI introduction might inadvertently exacerbate educational inequalities by providing advantages primarily to privileged students with better access to technology. Addressing these equity concerns requires institutional investment in infrastructure alongside efforts to provide device loans, subsidized internet access, or alternative low-bandwidth AI solutions.

Despite orientation training, students entered university with dramatically different levels of digital literacy and technology comfort. Students from urban areas with better-resourced secondary schools generally demonstrated

higher technological proficiency than peers from rural areas with limited technology exposure. These disparities created challenges for instructors attempting to integrate AI at appropriate complexity levels for diverse student capabilities. Survey data revealed that students with limited prior technology experience reported significantly higher anxiety about using AI tools ( $M = 3.9, SD = 1.0$ ) compared to students with extensive technology backgrounds ( $M = 2.4, SD = 0.9$ ),  $t(178) = 9.73, p < 0.001$ . This anxiety sometimes led to avoidance of AI tools, potentially depriving students who might benefit most from AI assistance. Addressing digital literacy disparities required differentiated support including additional training sessions for students with limited backgrounds, peer mentoring programs pairing technology-confident students with those needing assistance, and instructional materials at various complexity levels. Faculty noted that digital literacy gaps generally narrowed throughout the year with appropriate support, but initial disparities created challenging transitional periods requiring patience and individualized assistance.

## **5.0 DISCUSSION OF FINDINGS**

### **5.1 Interpretation of Benefits**

The findings regarding AI benefits for fresh students align with and extend existing literature on technology-enhanced learning in higher education. The documented improvements in academic performance associated with regular AI engagement support theoretical perspectives emphasizing personalization and adaptive learning as key mechanisms for educational effectiveness (Pane et al., 2017). The ability of AI tools to accommodate diverse learning paces, styles, and prior knowledge levels addresses a fundamental limitation of traditional classroom instruction particularly acute in large first-year medical cohorts common in Nigerian universities.

The learning efficiency gains reported by students reflect AI's capacity to automate routine information retrieval and explanation tasks, allowing students to focus cognitive resources on higher-order learning activities such as analysis, synthesis, and application. This finding resonates with cognitive load theory suggesting that reducing extraneous cognitive load through technological support enables learners to devote more working memory capacity to germane processing essential for deep learning (Sweller et al., 2011). For fresh students navigating the demanding transition to university-level academics, this efficiency enhancement may be particularly consequential in determining whether they successfully adapt to new academic expectations or become overwhelmed and disengage.

The enhancement of critical thinking and information literacy skills through AI engagement deserves particular emphasis given concerns that AI might diminish these capabilities by providing ready answers that discourage independent thinking. The findings suggest a more nuanced reality where appropriately designed AI interactions actually require and develop critical evaluation skills as students must assess the quality, relevance, and accuracy of AI-generated content. This outcome depends critically on educational approaches that position AI as a tool requiring thoughtful engagement rather than as an authoritative source to be accepted uncritically.

The creativity enhancement findings challenge assumptions that AI necessarily stifles original thinking. Instead, the data suggest that AI can serve as a cognitive catalyst, exposing students to diverse perspectives and approaches that stimulate rather than replace creative thinking. This finding aligns with research on creative cognition emphasizing the importance of exposure to varied examples and analogies in generating novel ideas (Ward et al., 1999). However, the creativity benefits appear contingent on students using AI for ideation and exploration rather than as a substitute for their own creative elaboration, highlighting the importance of assignment design and instructional framing.

### **5.2 Integration Strategy Implications**

The documented importance of structured orientation and ongoing support for effective AI adoption reflects broader principles of technology integration in education. Rogers' (2003) diffusion of innovations theory emphasizes that successful technology adoption requires not only access to innovations but also knowledge about how to use them effectively, opportunities to trial them in supportive environments, and observation of beneficial outcomes. The orientation program provided these elements, facilitating adoption among students who might otherwise have struggled with self-directed AI exploration.

The effectiveness of explicit critical evaluation instruction supports metacognitive theories of learning emphasizing the importance of helping learners develop awareness of their own thinking processes and strategies for monitoring and regulating learning (Flavell, 1979). Simply providing AI tools without metacognitive instruction about how to evaluate and use them thoughtfully proved insufficient for developing the sophisticated judgment required for appropriate AI engagement. This finding has important implications for educational practice, suggesting that AI integration must include not only technical skills development but also higher-order thinking skills that enable wise technology use.

The curriculum integration findings highlight tensions between leveraging AI capabilities and maintaining academic rigor. Faculty must navigate between extremes of prohibiting AI to preserve traditional skill development and embracing AI without adequately considering what fundamental capabilities might be lost. The most effective approaches identified in this study involved carefully scaffolded progression where foundational skills were developed before AI assistance was introduced, ensuring that technology enhanced rather than replaced essential competencies. This scaffolded approach reflects Vygotskian principles of supporting learners within their zone of proximal development while gradually removing supports as independent capability develops (Vygotsky, 1978).

### **5.3 Challenges in Context**

The infrastructure and access challenges documented in this study reflect broader digital divide issues particularly acute in developing country contexts. Nigeria's persistent infrastructural deficits in electricity supply and internet connectivity create barriers to technology integration that well-resourced Western institutions rarely face (Adebayo, 2022). These challenges have important equity implications, as students who lack personal devices or reliable internet access cannot fully benefit from AI tools regardless of their academic capability or motivation.

Addressing infrastructure limitations requires multifaceted approaches including institutional investments in campus technology infrastructure, partnerships with telecommunications providers to improve connectivity, device loan programs for students lacking personal computers, and development of low-bandwidth or offline-capable AI solutions suitable for resource-constrained environments. The findings suggest that without proactive attention to access equity, AI introduction risks exacerbating rather than reducing educational inequalities.

The academic integrity concerns identified in this study reflect broader societal grappling with how to maintain educational standards and values in an era of increasingly capable AI systems. Traditional approaches to assessment that reward students for producing particular outputs become problematic when AI can generate those outputs with minimal human effort. This challenge necessitates fundamental rethinking of assessment practices to focus on capabilities that AI cannot easily replicate such as metacognitive reflection, personal perspective integration, oral defense of ideas, and process-based demonstration of learning progression (Sullivan et al., 2023).

The privacy and bias concerns raised by participants reflect growing awareness of ethical dimensions of AI systems that have historically received insufficient attention in educational technology implementation. As AI becomes more deeply integrated into educational processes, questions about data practices, algorithmic fairness, and long-term societal impacts become increasingly urgent. Educational institutions have responsibilities not only to effectively integrate AI for learning enhancement but also to model ethical technology use and educate students about responsible AI engagement in their future professional practice.

#### **5.4 Implications for Medical Education**

The findings have specific implications for medical education where AI introduction takes particular significance given healthcare's rapid technological transformation. Medical graduates will practice in environments where AI supports diagnostics, treatment planning, patient monitoring, and health system administration (Wartman & Combs, 2018). Preparing students for these realities requires not only technical competence with AI tools but also critical judgment about when AI recommendations should be followed, questioned, or overridden based on clinical context and professional expertise.

The enhanced learning efficiency documented in this study proves especially valuable in medical education characterized by vast content coverage and high cognitive demands. If AI tools can reduce time spent on routine information retrieval and basic concept clarification, students can devote more attention to clinical reasoning development, patient interaction skills, and ethical decision-making that constitute the core of professional medical competence. However, faculty must ensure that efficiency gains do not come at the cost of fundamental knowledge that provides the foundation for clinical judgment.

The creativity enhancement findings suggest potential for AI to support innovative problem-solving in clinical contexts where complex patient presentations require thinking beyond standard protocols. Physicians frequently face diagnostic and therapeutic challenges requiring creative solutions adapted to individual patient circumstances. If AI exposure during medical training enhances students' capacity for divergent thinking and novel approach generation, this benefit may translate into improved clinical problem-solving throughout their careers.

#### **6.0 CONCLUSION**

This study examined the introduction of artificial intelligence to fresh students at the Medical College, Nnamdi Azikiwe University, investigating benefits, integration strategies, and challenges associated with AI implementation in a resource-constrained Nigerian university context. The findings demonstrate that early, systematic AI introduction can provide significant benefits for first-year medical students including enhanced academic performance, improved learning efficiency, personalized educational experiences, and development of critical thinking, creativity, and digital literacy skills essential for professional success in increasingly technology-driven healthcare environments.

The research identified several key factors contributing to successful AI integration including comprehensive orientation programs that provide both technical skills and conceptual understanding, intentional curriculum design that creates appropriate opportunities for AI use while maintaining academic rigor, explicit instruction in critical evaluation of AI-generated content, faculty professional development that builds confidence and competence with AI tools, and ongoing support services that address technical and pedagogical challenges as they emerge.

However, the study also documented substantial challenges that must be addressed for equitable and effective AI implementation. Infrastructure limitations including unreliable electricity and limited internet connectivity create significant barriers particularly for students from lower socioeconomic backgrounds. Digital literacy disparities among incoming students require differentiated support to ensure all students can benefit from AI tools. Academic integrity concerns necessitate policy development, assessment redesign, and ethics education that helps students understand appropriate AI use boundaries. Risks of over-reliance require scaffolded skill development approaches that ensure AI enhances rather than replaces fundamental capabilities. Privacy, bias, and cost considerations demand attention to ensure ethical and sustainable AI integration.

The findings suggest that AI introduction to fresh students represents not simply a technological intervention but a comprehensive transformation of educational approaches requiring coordinated efforts across orientation programs, curriculum design, faculty development, infrastructure investment, policy formulation, and ethical frameworks. Universities that approach AI integration holistically and intentionally can leverage these powerful tools to enhance educational quality, improve student outcomes, and better prepare graduates for professional success. Conversely, institutions that provide AI access without adequate support, guidance, and infrastructure risk exacerbating educational inequalities and failing to realize AI's potential benefits. For Nigerian universities facing persistent resource constraints and quality challenges, AI offers potential pathways to overcome some structural limitations while positioning students competitively in global knowledge economies. However, realizing this potential requires sustained institutional commitment, strategic investments, and careful attention to equity, ethics, and academic integrity concerns. The Medical College at Nnamdi Azikiwe University provides a valuable case study demonstrating both the promise and complexities of AI integration in challenging educational environments.

## **7.0 RECOMMENDATIONS**

Based on the research findings, the following recommendations are proposed:

### **7.1 Develop Comprehensive AI Integration Policies**

Universities should establish clear, comprehensive policies governing AI use in academic contexts that specify appropriate applications, prohibited uses, attribution requirements, and consequences for violations. These policies should be developed collaboratively involving faculty, students, and administrators to ensure practical applicability and community buy-in. Policies should be communicated clearly during student orientation and reinforced throughout the curriculum rather than treated as static documents. Regular policy review and updating is essential given the rapid pace of AI technological development that may create new use cases and concerns requiring policy adaptation.

### **7.2 Invest in Technology Infrastructure**

Universities must prioritize investments in reliable electricity supply, high-speed internet connectivity, and adequate computing facilities to support effective AI integration. This may require partnerships with government agencies, telecommunications providers, and donor organizations to secure necessary resources. Institutions should explore alternative power solutions such as solar installations that can provide backup during grid outages. High-traffic campus areas including libraries, computer labs, and student common spaces should receive priority for connectivity upgrades. Device loan programs should be established to provide computers or tablets to students lacking personal devices, ensuring equitable access to AI tools.

### **7.3 Integrate AI Competency Development Throughout Curricula**

AI competencies should be integrated systematically throughout undergraduate curricula rather than treated as isolated skills addressed only in orientation or specific courses. Each academic program should identify core AI competencies relevant to its discipline and map these competencies across courses to ensure progressive skill development. Faculty should design assignments that explicitly require and assess AI-related capabilities including critical evaluation of AI outputs, ethical reasoning about AI applications, and effective use of AI tools to enhance learning and productivity. Curriculum committees should regularly review and update AI integration strategies as technologies evolve and new applications emerge.

### **7.4 Redesign Assessments for the AI Era**

Traditional assessment approaches focused on information recall and routine problem-solving become inadequate when AI can generate such outputs easily. Faculty should redesign assessments to emphasize capabilities that AI cannot easily replicate including metacognitive reflection on learning processes, integration of personal experiences and perspectives, oral defense and explanation of ideas, process-based portfolios demonstrating learning progression over time, and authentic applied projects addressing real-world challenges. While not eliminating traditional assessments entirely, institutions should diversify assessment approaches to maintain academic integrity while leveraging AI's capabilities to enhance learning.

### **7.5 Provide Comprehensive Faculty Professional Development**

Faculty members require ongoing professional development to effectively integrate AI into their teaching practices. Universities should establish faculty learning communities where instructors share effective practices, challenges, and innovations in AI integration. Workshops should address both technical skills in using AI tools and pedagogical strategies for effective classroom integration. Faculty should receive support in redesigning courses and assessments for AI-enhanced learning environments. Incentives including release time, stipends, or recognition should be provided to faculty who invest significant effort in AI integration and innovation. Professional development should be ongoing rather than one-time given the rapid pace of AI evolution.

### **7.6 Implement Targeted Support for Disadvantaged Students**

Universities should establish targeted support programs ensuring that students from disadvantaged backgrounds can access and benefit from AI tools. This includes subsidized or free internet access for students in university housing, extended computer lab hours with adequate staffing to assist users, peer mentoring programs pairing technology-confident students with those needing assistance, supplementary workshops for students with limited prior technology experience, and financial aid or subsidies for required AI tool subscriptions. Regular monitoring should assess whether AI integration is reducing or exacerbating achievement gaps between privileged and disadvantaged students, with adjustments made as needed to promote equity.

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## MIGRANT LABOR IN EAST ASIA: A COMPARATIVE STUDY OF RIGHTS IN TAIWAN AND JAPAN

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### Article info

Received – 18 November 2025  
Received revised -15 December 2025  
Accepted -16 December 2025  
Available online -31 December 2025  
Pages: -14-20

**Keywords:** Migrant Worker, Basic Labor Rights, Comparative Research , Labor Force

### Abstract

The official statistics for 2024 show that the number of foreign migrant workers in Japan has exceeded 2 million for the first time, while Taiwan has surpassed 750,000. Both countries are experiencing a continuous increase in the number of migrant workers. Therefore, this study aims to explore the policies and practices of Taiwan and Japan regarding the "human rights issues" of international migrant workers. The research objective is to comprehensively understand the current situation of Taiwan and Japan regarding the human rights issues of international migrant workers, and to examine the effectiveness and shortcomings of their policies. The study seeks to provide recommendations to enhance the protection measures for international migrant workers in both countries.

The research background stems from Taiwan and Japan being relatively mature economies in the Asian region. Influenced by globalization, aging populations, and declining birth rates, both countries have seen a continuous increase in the number of international migrant workers in recent years. This phenomenon is leading to various social issues such as labor utilization, population dynamics, social security, and conflicts related to race and culture. As a result, safeguarding the labor rights of migrant workers has become a focal point of societal concern. Therefore, it is necessary to conduct a comparative study of the policies and practices in both countries to provide insights and references for the formulation and implementation of relevant policies.

This study first conducts a policy analysis to compare the legal frameworks and policy regulations concerning the protection of migrant workers' labor rights in Taiwan and Japan. It aims to explore the "institutional design," "implementation effectiveness," and "existing issues" in both countries. Through a literature review, the study delves into the level of societal attention towards the "international migrant worker issue" in both countries, the involvement of the public and civil society organizations, relevant conventions and recommendations from international labor organizations, as well as the development and trends in related research.

This study aims to investigate the labor rights of foreign migrant workers in Taiwan and Japan, focusing on the policy issues and resulting social phenomena in the utilization of labor forces in both countries. Through a comparative analysis of policies, the study will examine historical backgrounds and development, legal contexts, international trends, and nationalist perspectives as key aspects for conclusions and explorations. Recommendations will be provided for policy implementation. Through this research, a deeper understanding of the similarities and differences in the human rights issues of international migrant workers between Taiwan and Japan will be gained. This study aims to offer crucial insights for policymakers in both countries to better protect the rights of international migrant workers, promoting social equity and respect for human rights.

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## 1.0 BACKGROUND

The accelerating trend of globalization has made international labor migration an important social phenomenon in major host countries such as Taiwan and Japan. These migrant workers not only enrich the local labor force but also bring diverse cultural influences to the society. However, the two countries present different situations in terms of safeguarding labor rights. Although Taiwan and Japan are both major host countries for migrant workers, there are still some differences in their relevant laws, policies, and practices. Therefore, comparative analysis of the similarities and differences between the two countries in the protection of labor rights of international labor migrants not only helps to comprehensively understand the current development of this issue but also provides valuable reference for the formulation of future relevant policies, thereby better protecting the legal rights of migrant workers.

As the number of migrant workers in Taiwan and Japan has increased significantly in recent years, Taiwan currently has 750,000 migrant workers, while Japan's migrant worker population surpassed 2 million in 2023. Against this backdrop, the labor rights and working conditions of migrant workers are often violated. Therefore, this paper will delve into the legal regulations and policies as well as international rules of the two countries from the perspective of safeguarding the human rights and working conditions of migrant workers, and compare their differences, in an attempt to find effective methods and recommendations for protecting the labor rights of migrant workers.

On the other hand, with the intensification of globalization and technological waves, international migrant workers have become an indispensable part of the societies of Taiwan and Japan. Although these migrant workers play an important role in the local economic development, their labor rights are often in a vulnerable position and face many challenges. Therefore, a comprehensive comparative study on the current status of international migrant workers' labor rights in Taiwan and Japan, with a thorough understanding of their similarities and differences, and the provision of targeted policy recommendations, holds significant theoretical and practical significance.

This paper will review the evolution of the legal systems for the protection of migrant workers' rights in the two countries, and analyze the implementation effectiveness of their current related policies. At the same time, it will systematically review the research results of domestic and foreign scholars in this field, and identify the deficiencies and shortcomings of the existing research. It will delve into the specific situations of migrant workers in Taiwan and Japan, including their working environment, remuneration, social security, and other aspects. Through comparative analysis, it will reveal the similarities and differences between the two countries in the protection of migrant workers' rights, and provide constructive references for the improvement of relevant policies.

This not only helps to enhance regional cooperation between Taiwan and Japan in the field of migrant worker protection, promoting mutual experience sharing and learning, but also will provide valuable insights for the policy-making in other countries and regions, holding important significance in promoting global migration governance.

### 1.1 Objectives and Goals

This research aims to explore the practices and differences between Taiwan and Japan in protecting labor rights for international migrant workers, using document analysis and policy exploration. The goal is to provide improvement suggestions and contribute to enhancing relevant laws and policies in both countries. Through comparative research, the study also seeks to comprehensively understand the employment and living conditions of international migrant workers in Taiwan and Japan, and provide more targeted support for protecting the rights of this special group.

In recent years, both Taiwan and Japan have faced similar challenges in protecting the labor rights of foreign migrant workers. In Taiwan, although the government has taken some measures to improve the rights of migrant workers, there are still many who face issues like wage deductions, excessive working hours, and restrictions on speech and behavior, indicating that the protection mechanisms still need further improvement (Chuang, Y. H., 2024). The high recruitment agency fees are also a major obstacle, seen as a "serious form of exploitation" by Taiwan's labor organizations. On the Japanese side, as a country long known for its strict immigration policies, there are debates between conservatives who want to maintain restrictions and progressives who support more open policies to address labor shortages and population aging. Some moderates advocate for a balanced approach of selectively introducing foreign workers while maintaining certain immigration controls.

In general, Japanese society has different positions and views on immigration issues, including conservatives, progressives, and moderate compromises. This reflects the complex attitudes and internal tensions Japan faces in dealing with immigration issues.

The sociological literature and research mainly focuses on the so-called "voluntary migration", and in the application of empirical research, a more refined and clear definition of "migration" is given in response to the research questions, such as distinguishing "internal migration" and "international migration" by referring to the field of mobility geography. Although early migration theories all assumed that the introduction of international migrants (including guest workers) to the host country may pose a threat to cultural identity and have negative impacts, (Wang, B.-Q.,2014) also believes that this phenomenon will gradually improve within one to two generations, and the two will eventually be fully integrated.

However, there are loopholes in the regulations related to migrant workers, which still lead to some migrant workers facing problems such as being forced to engage in involuntary work and verbal abuse. The "excessive control" of employers over migrant workers, such as restricting the freedom of migrant workers<sup>1</sup> and the difficulty for migrant workers to seek help independently, are the main reasons for such situations. Overall, protecting the rights of foreign migrant workers is an urgent issue that both Taiwan and Japan need to solve. Only by continuously reviewing the existing system, strengthening law enforcement, and promoting understanding and support from all sectors of society, can a fairer and more humane working environment be created for these foreign workers who contribute to the national economy.

## **2.0 METHODS**

This paper adopts document analysis and comparative research as its research methods. Document analysis (Document Analysis) is a method that comprehensively and precisely understands research problems by collecting market information, survey reports, and industry dynamics through literature data based on specific research purposes or topics. This method requires extensive collection of rich and diverse data, and then analyzes and synthesizes these data to explore the origins, causes, backgrounds, impacts, and meanings of events. Literature data can come from government reports, industrial research, document record databases, corporate organization data, books, theses and journals in libraries, news reports, etc. The steps of document analysis include four stages: reading and organizing, description, classification, and interpretation (Chu Ruo-ruo, 2000).

Then there is the comparative method, also called the comparative research approach, which is a method of establishing universal rules or theories by accumulating multiple cases and finding similarities and differences. These rules or theories are intended to have cross-national, cross-societal, or cross-cultural explanatory and predictive power. The comparative method is not just a simple contrast of differences, but sometimes involves deeper comparative analysis. Comparative research is a very valuable method for labor policy research. Its biggest feature is its transnationality, that is, by comparing and analyzing the labor policies of different countries or regions, to find their commonalities and differences. This research method is comprehensive, focusing not only on the policies themselves, but also analyzing them in depth from the perspectives of systems, laws, social culture, and other aspects. More importantly, comparative research can highlight the relative strengths and weaknesses of each country's policies, providing an objective basis for the formulation and improvement of domestic policies. In practice, scholars often use multiple methods to conduct cross-national comparisons. The most basic is descriptive comparison, which simply describes and compares the current status of policies in different countries. Further is causal analysis comparison, which delves into the background factors behind policy differences. In addition, there are also functional comparisons and typological comparisons, with the former focusing on comparing policy goals and effects, and the latter focusing on classifying and summarizing commonalities.

This paper uses the above two methods to explore the issue, hoping to clarify the differences in the labor rights challenges faced by foreign migrant workers in Taiwan and Japan, as well as the differences in policy measures between the two countries.

## **3.0 RESULTS**

In the late 1980s, due to labor shortages, Japan initially encountered "illegal employment" of foreign workers. However, the government's basic policy was to oppose the introduction of Blue-collar worker, and only grant employment qualifications to those recognized as having specialized skills. In the 1990s, with the rapid advancement of globalization, the frequency and quality of cross-border logistics, capital flows, information flows, and human flows increased significantly. After the bursting of the economic bubble in 1991, Japan entered the "Lost 20 Years". In 1998, Japan formulated the "Sixth Basic Plan for Employment Measures", aiming to introduce only high-end foreign talents and maintaining a long-term closed-door policy towards simple manual laborers. However, in reality, Japan's labor market still has a large number of foreign unskilled manual workers, through channels such as the "Technical Intern Training Program" or exceptional recognition of student part-time work, Japanese descendants, and foreign spouses.

Taiwan began importing foreign migrant workers in the 1980s due to industry demands. At that time, the Taiwan government had not yet officially approved the employment of foreign migrant workers, nor had it enacted relevant legislation. Therefore, the foreign workers hired were considered illegal employees.

Taiwan's employment of foreign migrant workers was formally opened in April 1992, when the government officially allowed the import of "foreign household caregivers" under a strict "quota" control system. Concurrently, on May 8th of the same year, the Employment Services Act was enacted and promulgated, marking the formal legalization of the import of foreign workers.

### **3.1 Major issue in Japan**

In Japan, many international students go to work part-time to earn living expenses. However, there are also many who use the pretext of being "students" to actually work, skirting the legal boundaries. Many countries impose restrictions on the work hours of international students holding "student" visas.

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<sup>1</sup> Many employers restrict the freedom of migrant workers, such as strict access controls, or a high degree of control over the migrant workers' leave and even their friendships.

Although there are such legal provisions, law enforcement agencies in reality find it very difficult to enforce them. They usually do not actively check whether students' work hours comply with the regulations. Unless the students themselves or their employers run into problems and are reported, or the students apply to renew their visas and residency status, the authorities will then examine whether their activities in Japan have been in accordance with the rules, and ensure they are law-abiding good citizens (Yamaguchi, 2021).

In managing the work hours of international students in Japan, some common violations include: exceeding the work hour limits, engaging in illegal work not matching the visa status, concealing or falsely reporting the actual job content and occupation, and some students using earning money through work as the primary purpose rather than genuine study<sup>2</sup>. Furthermore, some schools and employers have not effectively controlled and supervised the work hours and nature of work of these students. These violations can result in the revocation or non-renewal of the students' visas, so this issue requires international students, schools, and employers to jointly comply with the relevant regulations.

Compared to the "Technical Intern Training" program, "fake studying, real working" is more attractive in Japan. For international students who already have the mindset of "fake studying, real working", choosing to "study" at a Japanese language school indeed has some advantages that the "Technical Intern Training" system lacks. The process is relatively simpler, they don't need to take the "Technical Intern Training" exam, only need to obtain a "student" visa through a Japanese language school, and they don't need to have a basic Japanese ability beforehand, as the purpose of going to a language school in Japan is to learn Japanese. Compared to technical interns, international students have more "flexibility" in working in Japan, they can freely choose their workplace and change workplaces at any time, without industry restrictions. Taiwan does not have this issue as mentioned earlier.

### **3.2 Major issue in Taiwan**

Regarding the definition of runaway migrant workers in Taiwan, according to Article 56 of the "Employment Services Act", if a foreign employee is absent from work for three consecutive days and loses contact or the employment relationship is terminated, the employer shall notify the local competent authority, immigration authority, and police authority in writing within three days. If the foreign employee is absent from work and loses contact, the employer can notify the immigration authority and the police institution in writing for reference. If the foreign employee loses contact due to the employer's false report of three consecutive days of absence, the employee can file a complaint with the local competent authority. If it is verified that there is a false report, the central competent authority shall revoke the original revocation of the employment permit and order the employee to leave the country. The explanation is as follows: "Less than 3 days": If the foreign worker is absent from work and loses contact for less than 3 days, the employer can notify the Immigration Agency and the police for tracing; "Reached 3 days": If the migrant worker is absent from work for 3 consecutive days and loses contact, the employer shall notify the competent authority, the Ministry of Labor, the Immigration Agency, and the police within 3 days. If the employer fails to report within 3 days after the worker loses contact for 3 days, it violates Article 56 of the "Employment Services Act" and will be fined between NT\$30,000 and NT\$150,000. "3 consecutive days of absence and loss of contact" means the migrant worker is absent from actual work for 3 consecutive days and loses contact. And as of 2023, according to statistics, the total number of runaway migrant workers (absconders) in Taiwan has reached 84,339, which has prompted the Taiwan authorities to pay more attention to the problem of migrant worker runaway.

### **3.3 Rights of migrant workers in Taiwan and Japan**

This section examines the employment protection and deficiencies for migrant workers in both Taiwan and Japan, which can be divided into the aspects of "legal and policy gaps", "working conditions", "social security and welfare", "social and psychological support", "immigration policies", and "rights protection mechanisms". The discussion will be presented in two separate paragraphs for Taiwan and Japan.

"The Taiwan Aspect":

At the legal level, the protection of migrant workers is insufficient, especially in terms of occupational hazards, wages, and working conditions. Due to limited law enforcement, many migrant workers are unable to effectively claim their wages or enjoy the labor benefits they are entitled to. Regarding working conditions, some migrant workers, especially those employed in the fishing industry, still face poor working conditions such as long working hours, poor work environments, and lack of safety guarantees. Domestic workers (caregivers and housekeepers) are often excluded from labor regulations and lack basic labor protections.

In terms of social welfare protection, migrant workers face constraints in accessing social benefits, with their treatment in areas like healthcare<sup>3</sup>, insurance, and pensions being inferior to that of local workers. As for

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<sup>2</sup> It's easy to understand why students want to work part-time: if they don't have enough living expenses or want to earn a little more pocket money, many people choose to work part-time in their spare time. International students will need to work overtime, and there must be insufficient money. There are two kinds of insufficient money, one is that the law is too harsh, and the upper limit of 28 hours of part-time work per week is not enough; The other is that he needs more money, which may be to earn tuition, or to send it home or pay off debts, the latter is commonly known as "fake study abroad and real part-time job".

<sup>3</sup> Since Taiwan's national health insurance system is quite complete, legal foreign migrant workers also enjoy health insurance. If a migrant worker needs medical treatment before receiving the health insurance card, he or she can bring the health insurance certificate and the original identity document to a designated medical institution within 14 days from the date of notification, fill in the exception medical list, and seek medical treatment under the health insurance status.

immigration policies, Taiwan's immigration policies are relatively strict, making it difficult for migrant workers to obtain long-term residence or convert to permanent resident status<sup>4</sup>. Taiwan can be said to have an inadequate migrant worker rights protection mechanism. Many migrant workers find it difficult to seek legal aid or obtain fair treatment when their rights are violated, often due to fear of retaliation from employers or brokers, which may even lead to job loss. However, Taiwan's Ministry of Labor has established a "1955 Labor Consultation and Complaint Hotline"<sup>5</sup> that many foreign migrant workers utilize to consult on related issues or file complaints.

**"The Japan Aspect":**

Although Japan has a more comprehensive legal protection framework, the supervision, management, and enforcement on migrant workers are insufficient, particularly under the "Technical Intern Training Program", where many migrant workers face problems such as excessively long work hours and low wages. During the implementation of the Technical Intern Training Program in Japan, many migrant workers face issues like long working hours, high work pressure, and wages below the minimum standard, with some employers exploiting and abusing the migrant workers. Migrant workers' coverage in the social security system is quite limited, especially the poorer treatment of technical interns in terms of healthcare and social welfare.

Japan's immigration policies are similarly strict, if not more so than Taiwan's, being relatively unfriendly to low-skilled workers. It is difficult for migrant workers to legally stay and work or live in Japan long-term. There are gaps in the protection of migrant workers' rights, especially for those under the Technical Intern Training Program, where their rights and interests are often not effectively safeguarded.

Overall, while both Taiwan and Japan have some deficiencies in protecting the human rights of migrant workers, the specific situations and problems they face differ. Taiwan mainly has issues with insufficient legal protection and enforcement, while Japan encounters more challenges in the Technical Intern Training Program and social security aspects. To address these problems, the governments of both countries need to make comprehensive improvements in policy, legislation, and actual implementation to ensure migrant workers' fundamental human rights and labor interests are properly protected.

The table below presents the migrant worker-related issues faced by both Japan and Taiwan. This text compares the two countries on the aspects of "illegal employment of migrant workers", "percentage of absconded migrant workers", and "human rights deficiencies".

**Table 1**

**MIGRANT WORKER-RELATED ISSUES FACED BY BOTH JAPAN AND TAIWAN**

	Taiwan	Japan
illegal employment of migrant workers	In Taiwan, the illegal employment of migrant workers can be divided into two types. (1) when migrant workers take on additional work outside of their approved employment, which is not permitted by the government, mainly due to issues with employment insurance and occupational accident insurance. (2) Taiwan's Employment Services Act restricts migrant workers from taking on additional jobs, as well as to avoid excessive total working hours and prevent overwork of migrant workers.	In Japan, a major problem leading to illegal employment is the "visa issue". Some foreign workers use tourist visas or other non-work visas to illegally work in Japan, which violates the visa regulations. Furthermore, the Japanese government's supervision and management of foreign migrant workers' employment is not strong enough. Some foreign migrant workers choose to abscond and work illegally in order to earn more money without government oversight, and they may even engage in illegal transactions.
Amount of absconded migrant workers	Total population of migrant workers: 753,430 people absconded migrant workers: 86,352 people. (Ministry of Labor, 2023)	Total population of migrant workers: 204,8675 absconded migrant workers : 7,9113 (Ministry of Labor, Health and Welfare, 2024)
Human rights deficiencies	The restrictions on migrant workers' freedom to choose occupations and	The visa restrictions have led to a severe problem of illegal employment of migrant

<sup>4</sup> Unless you are through intermarriage or hold a white-collar employment gold card, the procedures are still quite cumbersome and rigorous.

<sup>5</sup> In order to actively protect the rights and interests of employers and foreign migrant workers, the Ministry of Labor integrated multiple existing protection hotlines and opened the "1955 Foreign Migrant Workers 24-hour Consultation and Protection Hotline" on July 1, 2009. This dedicated line provides year-round services and accepts calls from migrant workers, employers and the general public. It is nationwide, bilingual (Chinese, English, Thai, Indonesian, Vietnamese) and toll-free. Services include legal consultation and assistance on labor contracts, wages, working hours, occupational disasters, agency, labor disputes, complaints of improper treatment or personal violation, personal violation or human trafficking protection and resettlement services, and other related department service information.

	<p>change jobs, only allowing them to engage in specific industries (especially domestic helper-type jobs). Many brokers also charge exorbitant brokerage fees, causing migrant workers to be heavily in debt. Restrictions on the length of stay for migrant workers in Taiwan, lacking long-term development opportunities.</p>	<p>workers. Some companies provide wages below the legally mandated minimum wage. There is a lack of dedicated complaint mechanisms and labor dispute resolution systems for migrant workers. Lastly, Japan's legal system has been insufficient in cracking down on human trafficking and exploitation issues.</p>
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Regarding the "channels for migrant workers to seek assistance", Taiwan is relatively more well-developed compared to Japan. In Taiwan, there are dedicated hotlines for migrant workers to consult, receive assistance, and file complaints on relevant issues, while Japan lacks such mechanisms. But still, the problem of absconded migrant workers is quite serious in Taiwan compared to Japan.

Both countries have similar issues with illegal employment of migrant workers and generally poor housing conditions and restricted living environments for them. Since Taiwan has a smaller international student population, the issue of such students working illegally is less prevalent, but the problem of migrant workers engaging in illegal employment is still very common. Japan, on the other hand, has a larger international student population, leading to more issues with student visas and work permits.

Overall, although there are some systemic differences between the two countries, the problems faced by migrant workers have certain similarities.

### 3.4 Human rights norms of international organizations

The main international frameworks for the human rights of migrant workers have been established by the International Labour Organization (ILO) and the United Nations. Firstly, the ILO has developed a series of conventions and recommendations to protect the rights of migrant workers, the most important being the Migration for Employment Convention (C097) and the Migrant Workers (Supplementary Provisions) Convention (C143). These conventions emphasize that migrant workers should enjoy rights equal to those of national workers, including fair working conditions, remuneration, and social security (International Labour Organization, 2021).

Meanwhile, the United Nations adopted the International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families (ICRMW) in 1990. This convention underscores that all migrant workers should enjoy fundamental human rights, including the right to non-discrimination, the right to life, liberty and security, etc. (United Nations, 1990). Additionally, the Office of the United Nations High Commissioner for Human Rights (OHCHR) has also issued the Guiding Principles on Business and Human Rights, aiming to ensure that businesses respect the human rights of migrant workers globally and take on corresponding responsibilities (Office of the United Nations High Commissioner for Human Rights, 2011).

These international frameworks in the previous paragraphs ensure the protection of basic human rights. However, labor rights are an essential component of human rights, guaranteeing workers, regardless of their nationality, gender, race or religion, equal employment opportunities, fair working conditions, and reasonable compensation. Establishing such norms helps to protect workers from exploitation, discrimination, and abuse, and safeguard their safety and health. These standards promote the sustainable development of the global economy. Sound labor rights frameworks can enhance workers' work enthusiasm and productivity, thereby facilitating economic growth and social stability.

### 3.4 Acknowledgments and Legal Responsibility

Special thanks to the anonymous reviewers, The authors take full responsibility for any errors or shortcomings in the text.

### 4.0 CONCLUSION

This study conducted a comparative analysis of Taiwan and Japan regarding the protection of human rights and labor rights of foreign migrant workers. The findings reveal that both countries face similar structural challenges, including insufficient legal protection, poor working conditions, limited access to social welfare, and ineffective support channels when migrant workers' rights are violated. However, significant differences remain in their institutional arrangements: Japan's Technical Intern Training Program has long been criticized for exploitative practices and inadequate supervision, while Taiwan faces persistent issues stemming from brokerage systems, job-transfer restrictions, and the high number of absconded migrant workers.

From the perspective of international labor and human rights standards, both the ILO and the United Nations emphasize that migrant workers should enjoy the same fundamental rights and protections as national workers. Nevertheless, a considerable gap persists between international norms and domestic practices in both Taiwan and Japan. This gap highlights an urgent need for both governments to strengthen legal frameworks, enhance

enforcement capacity, reform migrant labor systems, and establish more humane and substantial protection mechanisms.

In conclusion, future policy directions should focus on improving the clarity of legal protections for migrant workers, establishing accessible complaint and support mechanisms, promoting intercultural awareness among employers and the public, and enhancing social welfare systems. Additionally, aligning domestic policies more closely with international standards will be essential for reducing systemic disparities. Only through such efforts can Taiwan and Japan create safer, fairer, and more dignified working environments for migrant workers and genuinely recognize their contributions. This study also aims to contribute to the broader field of comparative research on labor migration in East Asia and provide practical references for future policy reforms.

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## AN ANALYSIS OF INCOME OF HOUSEHOLDS OF RURAL FEMALE HEALTH WORKERS IN PUNJAB

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### Article info

Received – 15 November 2025  
Received revised -1 December 2025  
Accepted -3 December 2025  
Available online -31 December 2025  
Pages: -21-26

**Keywords:** ASHA, ANM, Female Health  
Workers, Income disparities

### Abstract

Health is a fundamental human right, so therefore, health care should be widely accessible. According to WHO, women account for 70 per cent of health sector workers globally in 2019. The NRHM launched by the GOI in April 2005, appointed ASHAs at the village level, along with one MPW and two ANMs at the sub-health facility. The social status and financial rewards of these workers were much inferior than those of other health professionals. The paper analyses the levels and pattern of income of rural female health workers in Punjab. This paper is based on primary data collected from 504 female health workers in rural Punjab. the average annual income of a family with a rural female health worker in Punjab is Rs. 324,633.13. The household income of ANM families is 2.52 times more than that of ASHA worker households. The households of ASHA workers derive the highest income (25.29 per cent) from incentive payments. ANM households derive 42.81 per cent of their total income from government services. The distribution of income is slightly worse among ASHA households.

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## 1.0 INTRODUCTION

Health is a fundamental human right; hence, healthcare ought to be universally accessible (Thomas, 2021). In 2019, women constituted 70 per cent of healthcare workers globally, as reported by WHO (Thomas, 2021). The attainment of universal health requires the ultimate worldwide deployment of two million community health workers. The establishment of the CHWs aligned with the Alma-Ata Declaration. Community Health Workers function at the grassroots level in specified sites, including primary health care facilities (WHO 1978). Initially, they were assigned a limited number of responsibilities, but their training progressively broadened. The intensive training procedure broadened their activity range and, over time, improved the quality of services provided (Frankel, 1992).

The Millennium Development Goals (MDGs), emphasizing health, ultimately supplanted the Alma Ata statement of 2000 advocating for "health for all" (Ashtekar, 2008). Healthcare service accessibility remains an issue in rural India, home to 700 million individuals (Sreerame et al., 2015). The objective of the NRHM, initiated by the GOI in April 2005, is to improve the health of the disadvantaged in rural regions. (NHM, 2024). The public health infrastructure has been enhanced within the NRHM framework. Sub-health centres serve 5,000 individuals, primary health centres accommodate 30,000 people, and community health centres cater to 120,000 individuals, representing various segments of the health infrastructure. The NRHM appointed ASHAs (Accredited Social Health Activists) at the village level, along with one MPW (funded by the states) and two ANMs (supported by the Government of India) at the sub-health facility. Secondly, Auxiliary Nurse Midwives (ANMs) are appointed in sub-centers according to certain criteria, including receiving up to Rs. 7000 in monthly remuneration, residing in the village under the sub-center's oversight, and not being relocated before to the completion of their ten-year tenure. In its absence, each sub-center would be allocated two TBAs/RMPs or trained ASHA workers without incurring any expenses (MOFHW, 2005). A primary objective of NRHM is to enlist women as Accredited Social Health Activists (ASHAs), who facilitate community access to health services by serving as health educators and promoters (Sharma et al., 2014). Upon finishing a fundamental course in community health, ASHAs—female community health workers—are assigned to their respective villages, with one given every 1,000 residents. Auxiliary Nurse Midwives (ANMs) are allocated to sub-health centers and must live within the community governed by the respective sub-health center (MOFHW, 2005). Auxiliary Nurse Midwives (ANMs) received monthly remuneration from their respective departments, while ASHA workers, as rural health advocates, earned incentives based on their performance. The social status and financial rewards of these workers were much inferior than those of other health professionals, and they face discrimination from more senior health personnel. Moreover, their work performance deteriorated due to the insufficient, inconsistent, and installment-based incentives and payments (Sharma et al., 2014).

### 1.1 Objectives

The objective of the present paper is to analyse the income levels and patterns of female health workers in rural punjab. The specific aims of this study are:

1. To ascertain the per family and per capita income of rural female health workers families in punjab.
2. To analyze the share of different components of income of rural female health worker families in punjab.
3. To examine the extent of income disparities among rural female health worker families in rural punjab.

### 1.2 Methodology

The study is based on primary data. For analysis of income of rural female health workers, specifically ASHAs and ANMs, in Punjab. A random sampling technique is used to gather primary data from selected rural female health workers. Data has been collected from 504 rural female health workers, comprising 429 ASHAs and 75 ANMs, for the purpose of the study. The gathered data will undergo analysis utilizing a range of statistical tools and techniques, including mean values, percentages, and the Gini coefficient. During the data analysis phase, statistical tools including Excel and SPSS will be utilized.

## 2.0 RESULT & DISCUSSION

### 2.1 Income Per Household for Rural Female Health Workers Household

Table 1 presents the average income derived from different sources by the household of rural female health workers in the Punjab. The data indicates that the average annual income of a family with a rural female health worker in Punjab is Rs. 324,633.13.

TABLE 1 :

LEVEL OF INCOME OF RURAL FEMALE HEALTH WORKERS (MEAN VALUES, IN RS., PER ANNUM)

Source of Income	ASHA	ANM	All
Farm business	21398.60	31200	22857.14
Hiring-out contractual labour	2016.32	0	1716.27
Livestock	6783.68	3386.67	6278.17
Rent on land	13018.65	66800	21021.82
Government Services			

<b>a</b>	<b>Regular</b>	20508.16	286165.33	60040.48
<b>b</b>	<b>Contractual</b>	0	161333.33	24007.94
	<b>Private Services</b>	42424.24	64720	45742.06
	<b>Incentive</b>	66909.09	0	56952.38
	<b>Income from wages</b>	58778.55	0	50031.75
	<b>Pensions</b>	19344.99	37413.33	22033.73
	<b>Central/state govt. scheme</b>	517.48	1200	619.05
	<b>Other sources</b>	12831	16200	13332.33
	<b>Total</b>	<b>264530.77</b>	<b>668418.67</b>	<b>324633.13</b>

Source: Field Survey, 2022-23.

The differences can be seen in the fact that the average income for ASHA and ANM households in rural Punjab is Rs. 264530.77 and Rs. 668418.67, respectively. By looking at the different ways that rural female health worker households earn money, we can see that government regular services are the major source from which an average rural female health worker household earns money. An average household of female health workers earns Rs. 60040.48 from government regular services. The households of ANM workers in rural Punjab generate income of Rs. 286,165.33 from government services. The second important source of income is income from incentives. An average household earns Rs. 56952.38 from incentives. The ASHA worker households get the maximum income from incentives, totalling Rs. 66909.09. Income from hiring out labour in non-agricultural sector and private services come at the third and fourth rank. An average household earn Rs. 50031.75 and Rs. 45742.06 from hiring out labour in non-agricultural sector and private services, respectively. An average family of ASHA workers earns Rs. 58,778.55 from hiring out labour in non- agricultural sector. Income from private services is Rs. 64720 and Rs. 42424.24, respectively for the ANM and ASHA worker households. The contractual services contributed Rs. 24007.94 to the total income of an average sampled household. The households of ANM workers in rural Punjab generate income of Rs. 161,333.33 from contractual services. Income from pensions contributed Rs. 22033.73 to the total income of an average sampled female health worker household. This amount is Rs. 37413.33 and Rs.19344.99 respectively for the ANM and ASHA worker households. An average sampled female health worker household earns Rs. 21021.82 from rent of land. This amount is the highest for the ANM households followed by the ASHA worker households.

From the above analysis, it is clear that ANMs earn more than ASHAs in whole Punjab. The primary income sources for rural female health worker families in Punjab are government, services, ASHA incentives, private services, pensions, and other sources.

## 2.2 Income Patterns of Households of Rural Female Health Workers

Table 2 shows the information about how much of a household's income comes from different sources for the households of rural female health workers. The table shows that 18.49 per cent of the total income of rural female health worker households comes from government services. The ANM households derive 42.81 per cent of their total income from government service. The households of ASHA workers earn about 8 per cent of the total income from government services. In rural Punjab, payment from incentives is the second most important source of income for female worker households contributing 17.54 per cent to total income. The households of ASHA workers derive the highest income (25.29 per cent) from incentive payments The next important source of income is hiring out labour in non-agricultural sector contributing 15.41 per cent to total income of rural female health worker households. The households of ASHA workers earn 22.22 per cent of total income from hiring out labour in non-agricultural sector. The income from private services contributes 14.09 per cent to the total income. This proportion is 16.04 and 9.68 respectively for the households of ASHA workers and ANM workers. An average female health worker household earned 7.49 per cent of the total income from contractual services. The ANM worker households earned 24.14 per cent as transfer income.

TABLE 2

### INCOME PATTERN OF RURAL FEMALE HEALTH WORKERS (PERCENTAGE OF TOTAL INCOME)

Source of Income		ASHA	ANM	All
	<b>Farm business</b>	8.09	4.67	7.04
	<b>Hiring-out contractual labour</b>	0.76	0.00	0.53
	<b>Livestock</b>	2.56	0.51	1.93
	<b>Rent on land</b>	4.92	9.99	6.48
<b>Government Services</b>				
<b>a</b>	<b>Regular</b>	7.75	42.81	18.49
<b>b</b>	<b>Contractual</b>	0.00	24.14	7.40
	<b>Private Services</b>	16.04	9.68	14.09
	<b>Incentive</b>	25.29	0.00	17.54

<b>Income from wages</b>	22.22	0.00	15.41
<b>Pensions</b>	7.31	5.60	6.79
<b>Central/state govt. scheme</b>	0.20	0.18	0.19
<b>Other sources</b>	4.85	2.42	4.11
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

**Source:** Computed from table 1

Slightly more than 7 per cent of total income comes from farm business. This proportion is 8.09 and 4.67 per cent respectively for the households of ASHA workers and ANM workers. The next important source of income is pensions contributing 6.79 per cent to total income. This proportional share is the highest for the ASHA worker households followed by the ANM households. Income earned from rent of land contributes 6.48 per cent to the total income of an average sampled female health worker household. The ANM and ASHA worker households earn 9.99 and 4.92 per cent, respectively of their total income from rent of land. Slightly more than 4 per cent of the total income of an average female health worker household comes from other sources such as working at grain market, religious work, commercial vehicles, white washing etc. This proportional share is the highest for the ASHA worker followed by the ANM worker households

From the above analysis it can be concluded that the household of ANM workers earns major part of their income from government services and the household of ASHA workers earns major part of their income from incentive payments and hiring out labour in non-agricultural sectors.

### 2.3 Per Capita Income of Households of Rural Female Health Workers

The preceding discussion has examined the income patterns of rural female health worker families in both absolute and relative terms. The family size of sampled rural female health worker households in Punjab is 4.69. Nonetheless, variances in family size exist across the different categories of rural female worker families. The family size is 5.07 for ASHA families and 4.32 for ANM households. It is important to examine the per capita income levels of the different categories of rural female health worker families since the family size differs among them. Table 3 presents the per capita income of different categories of rural female health worker families. The average yearly per capita income of a rural female health worker family is Rs. 69,218.15. The per capita income for ASHA households is Rs. 52,175.69, whereas for ANM households it is Rs. 154,726.54 in rural Punjab.

The per capita income from incentive payments is the highest for ASHA workers at Rs. 13,197.06. The per capita income from government services is greatest for ANMs at Rs. 66,241.97 and the lowest for ASHA families at Rs. 4,045.00. Regarding per capita income derived from agricultural businesses, land rental, contractual services, private services, pensions, central/state government programs, and other sources, it is the highest for Auxiliary Nurse Midwives (ANMs) and the lowest for Accredited Social Health Activists (ASHA) workers. The per capita income derived from hiring out labour, livestock, and pensions is the highest among ASHA families and the lowest among ANM households.

**TABLE 3:**

#### PER CAPITA INCOME OF RURAL FEMALE HEALTH WORKERS (IN RS., PER ANNUM)

Source of Income		ASHA	ANM	All
<b>Farm business</b>		4220.63	7222.22	4873.59
<b>Hiring-out contractual labour</b>		397.70	0.00	365.94
<b>Livestock</b>		1338.00	783.95	1338.63
<b>Rent on land</b>		2567.78	15462.96	4482.26
<b>Government Services</b>				
<b>a</b>	<b>Regular</b>	4045.00	66241.97	12801.81
<b>b</b>	<b>Contractual</b>	0.00	37345.68	5118.96
<b>Private Services</b>		8367.70	14981.48	9753.10
<b>Incentive</b>		13197.06	0.00	12143.36
<b>Income from wages</b>		11593.40	0.00	10667.75
<b>Pensions</b>		3815.58	8660.49	4698.02
<b>Central/state govt. scheme</b>		102.07	277.78	131.99
<b>Other sources</b>		2530.77	3750.00	2842.71
<b>Total</b>		<b>52175.69</b>	<b>154726.54</b>	<b>69218.15</b>

**Source:** Computed from table 1

The preceding discussion indicates significant differences in per capita and family income across different

categories of rural female health worker families. The household income of ANM families is 2.52 times more than that of ASHA worker households. The per capita income of ANM households is 2.96 times more than that of ASHA worker households. As family size grows from ANM to ASHA households, ANM households' per capita income stays comparatively high.

#### 2.4 Income Distribution Among Households of Rural Female Health Workers

Table 4 illustrates the distribution of total family income across different categories of rural female worker families. The data indicates that the bottom 10 per cent of rural female health worker families get just 5.14 per cent of the total income generated by all the households in Punjab. The top 10 per cent of families get 21.61 per cent of the total income of all rural female health worker households. The table clearly indicates that the lowest 50 per cent of households comprise only 33.02 per cent of the total income of rural female health worker households, while the top 20 per cent of households represent approximately 35.92 per cent of the total income for all female health worker households in rural Punjab. The Gini coefficient for all rural female health

TABLE 4:

DISTRIBUTION OF HOUSEHOLD INCOME OF RURAL FEMALE HEALTH WORKER HOUSEHOLDS

Description		Cumulative Percentage of Worker Income of Rural Female Health Workers		
Sr. No.	Cumulative Percentage of Workers	ASHA	ANM	ALL
1	10	4.96	6.14	5.14
2	20	11.25	13.59	11.50
3	30	17.99	20.78	18.08
4	40	25.19	28.44	25.13
5	50	33.22	36.85	33.02
6	60	42.55	46.28	42.10
7	70	53.05	56.17	52.48
8	80	64.75	66.97	64.08
9	90	79.16	80.77	78.39
10	100	100.00	100.00	100.00
Gini Coefficient		0.24	0.19	0.24

Source: Field Survey, 2022-23

worker households in Punjab is 0.24, indicating a very equitable distribution of family income among them.

A comparable scenario arises from the various groups of rural female health worker homes throughout Punjab. The bottom 10 per cent of ASHA and ANM families account for 4.96 and 6.14 per cent of the total income, respectively. Conversely, the highest 10 per cent of families from the ASHA and ANM categories allocate 20.84 and 19.23 per cent of their total income, respectively. The Gini coefficients for ASHA and ANM households in rural Punjab are 0.24 and 0.19, respectively. The above study indicates that both health worker families have a somewhat worse distribution pattern.

#### 2.5 Distribution of Per Capita Income Among Households of Female Health Workers

Table 5 illustrates the distribution of per capita income among the households of rural female health workers. The data indicates that the bottom 10 per cent of rural female health worker households get just 4.61 per cent of the overall per capita income. The top 10 per cent of households get 26.29 per cent of the per capita income of all rural female worker families. The Gini coefficient for all rural female health worker families is 0.28, indicating a skewed distribution of per capita income among them. The table further indicates that the lowest 10 per cent of ASHA and ANM get just 4.60 and 4.72 per cent of the total per capita income, respectively. The highest 10 per cent of workers from ASHA and ANM families account for 25.95 and 22.95 per cent of the total per capita income, respectively. The Gini coefficients for ASHA and ANM households are 0.28 and 0.25, respectively, indicating a worse distribution of total per capita income among the ASHA households in Punjab.

TABLE 5 :

DISTRIBUTION OF PER CAPITA INCOME OF RURAL FEMALE HEALTH WORKER HOUSEHOLDS

Description		Cumulative Percentage of Worker Income of Rural Female Health Workers		
Sr. No.	Cumulative Percentage of Workers	ASHA	ANM	ALL
1	10	4.60	4.72	4.61
2	20	10.33	11.03	10.47
3	30	16.67	17.28	16.73

4	40	23.65	24.64	23.64
5	50	31.26	32.89	31.20
6	60	39.52	41.75	39.39
7	70	48.88	51.60	48.71
8	80	59.83	61.86	59.64
9	90	74.05	77.05	73.71
10	100	100.00	100.00	100.00
<b>Gini Coefficient</b>		<b>0.28</b>	<b>0.25</b>	<b>0.28</b>

Source: Field Survey, 2022-23.

Consequently, the above analysis indicates that the per capita income distribution is more equitable for ANM homes, but it is worse for ASHAs and average rural female health worker households.

### 3.0 CONCLUSION AND POLICY IMPLICATION

This study concludes that access to healthcare services remains an issue in rural India. Initially, female healthcare workers were assigned limited responsibilities; however, their training progressively broadened. The training process, characterized by its rigor, broadened the scope of activities they could undertake and subsequently improved the quality of services provided. The social status and financial rewards of these workers were significantly inferior to those of other health professionals, and they faced discrimination from senior health workers. Households of average rural female health workers and Auxiliary Nurse Midwives (ANMs) receive the highest financial support from government services, whereas Accredited Social Health Activists (ASHAs) generate the most income through incentives.

It is found that ANMs get more income than ASHAs across Punjab, where rural female health workers are employed. The annual per capita income of a rural female health worker's household is Rs. 69,218.15. The per capita income for ASHA homes in rural Punjab is Rs. 52,175.69, whereas for ANM households it is Rs. 154,726.54. The per capita revenue from incentive payments is highest for ASHA workers, whereas it is biggest for ANMs in government services. The analysis revealed that the lowest 50 percent of families account for about one-third of a percent of the overall income of rural female health worker homes, but the top 20 percent of households constitute nearly 36 percent of the total income for all female health worker households in rural Punjab. The Gini coefficient for all rural female health worker homes in Punjab is 0.24, indicating a very equal distribution of family income among these households. The distribution of per capita income is more equal among ANM families, but it is less favorable for ASHA and ordinary rural female health worker households.

The policy ramifications of raising the wages of rural female health workers extend far into the spheres of economics, health, government, and society. More public health budget reallocation and stronger fiscal commitment are necessary economic consequences of greater compensation. This will increase government spending in the short term, but it will pay off in the long run by making workers more invested, decreasing turnover, and making services more efficient. Higher family incomes, less rural poverty, and more expenditure on education, nutrition, and communal amenities all contribute to women's economic empowerment. Better pay reduces gender pay discrepancies and increases women's labor force participation, promoting gender equality and inclusion. Health policy-wise, better remuneration impacts service quality and health outcomes. Governance and institutional consequences include formalizing community health worker employment frameworks and setting salary standards. To avoid delays and corruption, payment methods must be transparent and timely, ideally digital. To avoid economic increases at the price of workload or stress, policy must address gender-sensitive issues including work-life balance, safe working conditions, and childcare help.

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## PUNJAB NAATSHALA, AMRITSAR: CONTRIBUTION OF THEATRE TO MASS COMMUNICATION AND SOCIAL DIALOGUE

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### Article info

Received – 20 November 2025  
Received revised -05 December 2025  
Accepted -22 December 2025  
Available online -31 December 2025  
Pages: 27-32

**Keywords:** Punjab Naatshala, Theatre,  
Mass Communication, Public Sphere,  
Community Participation, Participatory  
Communication

### Abstract

Punjab Naatshala, Amritsar, is not only a symbol of traditional theatre but also an effective medium for social dialogue and mass communication. This study presents an in-depth analysis of the institution's structure, technological innovations, and cultural contributions. Through content analysis, the performances, media coverage, and online content of the Naatshala were examined. The study reveals that this platform does not limit the audience to mere spectatorship but promotes their active participation, emotional engagement, and social awareness. The research highlights the lack of academic studies on private theatre institutions and identifies significant research gaps concerning audience engagement, cultural impact, and technological innovations. The findings indicate that Punjab Naatshala exemplifies an innovative integration of modern mass communication principles and traditional theatre.

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## 1.0 INTRODUCTION

Theatre is one of the oldest and most multidimensional means of communication in human civilization. It is not limited to verbal dialogue but conveys meaning through gestures, visual design, lighting, music, sound, and collective experience. This multidimensional nature makes theatre extremely effective for transmitting social, political, and cultural messages.

According to mass communication scholar McQuail, communication is effective only when it elicits responses from the audience on intellectual and emotional levels (McQuail 45). In theatre, a direct dialogue is established between the artist and the audience, capable of conveying social issues to a wider public.

According to Habermas's Public Sphere Theory, spaces in society where people openly discuss and collectively form opinions constitute a true public sphere (Habermas 27). Theatre, in this context, provides a platform where plays stimulate dialogue on social inequalities, political events, community experiences, and cultural values.

Furthermore, Paulo Freire's concept of participatory communication is clearly reflected in theatre. The audience is not just passive observers but co-creators of dialogue on emotional and intellectual levels (Freire 72). UNESCO also recognizes theatre as an effective pillar of community communication (UNESCO).

From this perspective, Punjab Naatshala is not merely a performance venue but also an active medium for public dialogue, cultural exchange, and social consciousness (Punjab Naatshala).

## 2.0 LITERATURE REVIEW

In recent decades, private theatre institutions such as Punjab Naatshala, Amritsar, have attempted to present traditional theatre in a modern format, incorporating technological facilities, digital access, training programs, and broad audience participation.

For example, in 2016, Naatshala installed a 20 KW solar panel to meet its energy needs from a clean and sustainable source, reducing electricity costs and sending a message of environmental awareness (Saur Energy).

In 2018, Naatshala launched its digital platform, making theatre schedules, performances, history, and institutional information available online, reaching younger and digitally inclined audiences (Tribune India, "Digital Platform"). In 2021, the institution began free theatre training for youth aged 12–16, offering instruction in acting, stage design, lighting, sound, and production processes (Tribune India, "Theater Training").

Additionally, the Naatshala auditorium is equipped with modern facilities—revolving stage, advanced lighting and sound systems, and technical staff—making it a reliable platform for performances and local artists (AmritsarOnline.in).

However, a review of existing literature shows the absence of systematic, comprehensive, or academic-level studies. There is no structured data available on Naatshala's social effectiveness, long-term audience engagement, community impact, cultural change, or training outcomes.

## 3.0 RESEARCH GAPS :

- The social and cultural impact of private theatre institutions is under-studied.
- Long-term audience engagement and experiences are minimally analyzed.
- Limited research exists on the role of private theatre in youth training and empowerment.
- The impact of digital platforms and technological innovations is not academically documented.

Given this situation, scholarly documentation on private theatre institutions -especially Punjab Naatshala - is extremely limited. This study is therefore significant as it analyzes theatre as a social communication medium using media reports, institutional data, and field observations ("Punjab Naatshala").

### 3.1 Objectives And Significance:

- To understand Punjab Naatshala's theatre as a medium of social and cultural dialogue.
- To analyze audience participation and social impact.
- To evaluate the effectiveness of technological innovations and performance structure.
- To fill research gaps in academic studies on private theatre institutions.

This content analysis methodology ensures that all sources are systematically, analytically, and scientifically assessed, providing a clear and reliable picture of Punjab Naatshala's social and cultural contribution.

### 3.2 Methodology

This study employs Qualitative Content Analysis to understand Punjab Naatshala's theatre from social dialogue and mass communication perspectives. This method is suitable for systematic, organized, and scientific analysis of content available in existing records, media reports, digital platforms, and institutional documents.

#### 3.2.1 Data Collection :

- Institutional records: Performance details, event reports and public program documents.

- Media reports: Newspapers, online news portals coverage.
- Digital content: Official website, social media platforms, and online video presentations.

### 3.2.2 Analysis Procedure :

#### Systematic categorization of collected content:

- Based on performances, technological innovations, social messages, and audience engagement.

### 3.2.3 Coding And Theme Creation:

- Each document, report, and digital content was coded.
- Main themes: structure and technological innovations, performance history, audience engagement, social impact, and digital/technological initiatives.

### 3.2.4 Symbolic And Referenced Analysis:

- Facts and data were verified from media reports and online records.
- Conclusions were drawn by comparing with Punjab Naatshala's actual experiences and reports.

### 3.2.5 Interpretation:

- Audience engagement, social awareness, and cultural impact were analyzed under each theme.
- Analysis indicates Punjab Naatshala successfully integrates traditional theatre with modern mass communication strategies.



- An exterior architectural view of Punjab Naatshala, Amritsar

### 3.3 Punjab Naatshala structure and technical details

Jitendra Brad belongs to the fourth generation of Punjabi playwrights and is also a director, actor, and theatre practitioner. He established his private theatre 'Punjab Naatshala'. By constructing the Naatshala, he created a distinct and unique position for himself in the field of Punjabi theatre. For the construction of the Naatshala, he purchased the land behind his factory and laid the foundation of Punjabi Naatshala there.

Punjab Naatshala was inaugurated on 27th March 1998 on the occasion of world theatre day. The hall and balcony together have a seating capacity of 204. The most significant feature of the stage is that it holds the distinction of being North India's first revolving stage. After visiting a theatre in England, Jitendra Barad designed this revolving stage himself. It took approximately seven to eight months to complete.

The stage is 42 feet wide and 36 feet deep. The central part of this stage, which has a diameter of 30 feet, can be rotated from the control room according to the needs of the play. The roof of the Naatshala is openable, which allows both light and air, and can be closed during rain. This Open roof also provides the experience of an open-air stage.



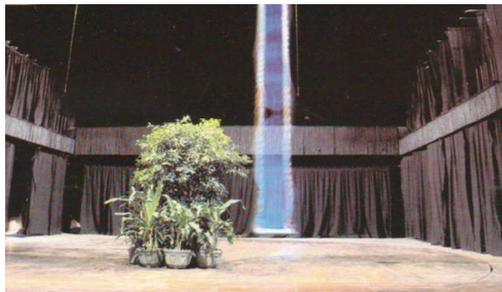
A mechanically rotating stage platform



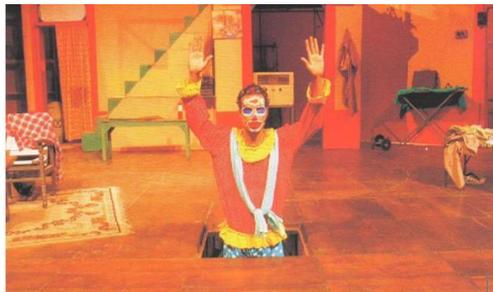
The open roofing system typical of an open-air theatre

A movable trolley is installed above the roof, which can be moved forward and backward across the hall. With the help of this trolley, the lighting setup on the stage and in the hall can be changed immediately according to the modern technological requirements of the play.

Another special feature is that a character performing on stage can enter through the roof using a rope/ping system, and entry from below the stage is also possible through the basement. Two pathways have been created in the main hall that lead to the audience areas so that actors can reach the audience and convey their expressions directly. These pathways are controlled from the control room and connected to the stage depending on the play.



The overhead structure featuring the swing used for performers' entrance onto the stage.



Artists making their entrance onto the stage from the basement area

The curtain in front of the stage is 40 feet wide. A 32-foot wide screen is installed at the centre of the stage. When not in use, this screen is retracted into the roof from the control room, making it invisible to the audience. With the help of this screen, the performance area is divided into two parts - acting takes place in the front portion while preparations for the next scene continue behind. The screen is also used as a backdrop.



1. Stage    2. Rotating stage    3. Internal rotating stage    4. Seating capacity    5. Adjustable pathway    6. Front curtain    7. Central screen
8. Cyclorama    9. Electronic stage    10. Lighting and special effects    11. Rain and mist effects    12. Open roof    13. Catwalk ramp
14. Sound room    15. Display board    16. Main instruction/control room    17. Fragrance information center    18. Swing
19. Set change management    20. Overhead entry lift

A projector is installed on the roof that displays a 30-foot wide and 17-foot high image on the screen. The stage has a cyclorama available in two colours - white and black. Different types of lighting effects are created on the white cyclorama using LED lights.

A 4-foot wide and 2.5-foot mesh-based movable platform is also available on this stage, installed 10 feet above the main stage. This platform can be moved forward and backward from the control room.

A network of sprinklers is installed on the stage roof and audience area roof, which creates a rain scene as required. When light showers fall on the audience, they feel the rain-like atmosphere, making the moment memorable.

To enhance the emotional impact of the play, a 'fragrance distribution device' is installed on the stage to spread floral scents and various fragrances. This device delivers fragrance to the audience area through pipes, making viewers participants through smelling and experiencing the environment. This increases the engagement between artists and spectators.

A movable information board is also installed to give necessary instructions to the audience before the play begins. After displaying the information, it retracts into the curtain.

The sound room of the Naatshala is equipped with a modern sound system connected to the control room via intercom speakers. For the safety of the audience, fire extinguishing systems have been installed. There are two systems - one connected to an underground water tank that can release strong water jets anywhere and the other linked to a 20000-litre overhead tank containing enough water to extinguish fire.

For the comfort of the viewers, a mosquito-repellent system and proper arrangements for food and beverages during intervals have been made.

On World Theatre Day, the Naatshala is specially decorated, and seminars are organised where scholars, theatre director and professor present their views on the development and possibility of Punjabi theatre.

Considering the stage facilities on the Naatshala, theatre groups from across India feel proud to perform here. The famous duo theatre from Pakistan, Madeeha Gauhar and Shahid Nadeem, also staged their play "Bullah" at here-Madeeha Gauhar was so delighted that she performed the play without any fee.

Over 1500 local, provincial, National and international performances have been staged here. Jitendra Barad's own plays have been performed several times. "Kadhais" and "Paaydaan" celebrated their silver jubilee here and "Dhaasle" has had 200 shows. "Lohen Di Bhatti" has also been staged multiple times. Many artists from these plays have gained fame on television and in cinema.

The plays performed in the Naatshala make the audience aware of social evils and inspire them to stand against them- such as Dowry system, female foeticide, unemployment, poverty and exploitation of women and children, corrupt politics, caste discrimination, social hierarchy and economic inequality.

Because of Jitendra Barad's contribution to Punjabi drama and theatre, he has been honoured by many institutions -Punjab Sahitya Academy Delhi(1992-93), Punjabi Art Association Canada (1996), Allahabad Natyasaugh (1998 to 99), Moga Cultural Society (2001), Notar Club Amritsar Main (2002), Mohammed Rais Memorial Society (2002), Guru Ramdas Society (2003), Shiromani Punjabi Ratan Award (2003), among many national and international honours.

Jitendra Barad is a disciplined personality. He has given supreme importance to discipline in his Naatshala as well. All programs begin on time. After each performance, the national anthem is played to strengthen National consciousness. This reflects not only his dedication to Punjabi theatre but also his deep sense of patriotism. The Punjab government has exempted the theatre performance staged at the Naatshala from entertainment tax- another major achievement.

Overall, Jitendra Barad is a multifaceted personality who has performed every task with utmost dedication. Despite his busy schedule, he made time for writing and created an excellent theatre space like Punjab Naatshala, which continues to enrich Punjabi theatre.

#### **4.0 ANALYSIS FROM A MASS COMMUNICATION PERSPECTIVE**

Punjab Naatshala is not only a physical theatre space but also a powerful communication medium that establishes direct interaction between the audience and the artist. According to McQuail (2010) effective communication is that which produces intellectual and emotional responses in the audience. In Punjab Naatshala, technical features like the revolving stage, projector, cyclorama, fragrance distribution device and openable roof do not keep the audience as passive viewers; rather, they turn them into participatory viewers who become part of multi-dimensional experience.

In the perspective of Habermas (1989) Public Sphere theory, Punjab Naatshala provides a platform where discussion on social, cultural and political issues become possible. Plays based on issues such as dowry, female foeticide, unemployment, poverty, exploitation of women and children, caste discrimination and economic inequality not only inform the audience but also inspire them toward social awareness and participation (Habermas 27). Thus, the Naatshala functions as a living public sphere where audience and artist co-create social message through collective dialogues.

According to Paulo Freire's (1970) concept of participatory communication, communication becomes effective when message-receiver do not remain passive but become co-creators of dialogue at emotional and ideological levels. The close audience entry points, the moveable trolley and sensory experiences in Punjab Naatshala make the audience active participants in the dialogue. This interactive model deepens the viewer's involvement and enhances message effectiveness. (Freire 72)

Technological innovations and media integrations further strengthen this communication. Visual presentation through the projector and cyclorama along with LED lights, add emotional depth. The fragrance device and rain effects enrich the sensory experience. In this way, the Naatshala presents an example of multimodal communication where visual, auditory and olfactory experiences reach the audience simultaneously (Tribune India, "Digital Platform")

Internationally and culturally the significance of the Naatshala is noteworthy. Performances by artists from Pakistan and other countries, digital coverage and more than 1500 shows indicate that this stage is not only local but also a medium of cultural exchange at a global level.

Thus, Punjab Naatshala is an institution that applies theatre and Mass communication theories through technological awareness and interactive experience. Here, the audience is not merely a viewer but also a co-creator of messages and an active participant in social dialogue, which is extremely important in the context of modern Mass communication

## 5.0 FINDINGS

- **Technological innovation and visual communication:** The revolving stage, cyclorama, projector and LED lights make the audience experience multidimensional.
- **Participatory audience experience:** Close proximity to the stage, rooftop and basement entry for actors and sensory devices make the audience active participants.
- **Social and cultural dialogue:** Plays make the audience aware of social inequalities and evils.
- **Global impact:** International artists and performances make the stage a medium of global cultural exchange.

## 6.0 DISCUSSION

Punjab Naatshala presents a practical example of modern theatre and Mass communication theories. The audience is not a passive observer but an active participant in the dialogue. Technological innovation, multimodal communication and participation deepens the viewers experience and enhance message effectiveness. The social and global impact of Naatshala makes it a powerful communication platform from local to international levels.

## 7.0 CONCLUSION

Punjab Naatshala establishes is a multi-dimensional dialogue between the audience and the artist. This stage is not only a theatrical performance space but also a strong Mass communication platform. It's social, cultural and global impact makes it a practical example of modern theatre and participatory communication theories.

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