

## The Effects of Electronic Monitoring in the University Workplace: Bangladeshi Academics' Perceptions of Work Performance Monitoring

**Rohaya Mohd Nor<sup>i</sup>**  
Universiti Malaysia Sarawak

**Md Shakil Mannan<sup>ii</sup>**  
Universiti Malaysia Sarawak

### Abstract

Technology applications play an important role in promoting progressive education in the higher education sector, where student-centered and holistic development approaches are essential. In this context, electronic monitoring can meet the needs of education authorities, institutions, and university administrators while also aiding academics and students. This study explores the consequences of electronic monitoring from the perspective of Bangladeshi academics working in private universities. It investigates the extent to which electronic monitoring is utilized to monitor job performance and academics' perceptions of using the application. Guided by the panopticon model, we designed a qualitative research approach and employed case study and interview methods to obtain data. Two private universities were involved in data collection. The results revealed that most academics saw the value of electronic monitoring as an alternative to traditional means of surveillance. Furthermore, academics' positive attitudes toward such practice were influenced by their level of awareness being electronically monitored using technological means with features that could provide them with control over work performance and the available support mechanisms. Some highlighted benefits are safety, productivity, cost-effectiveness, potentially unlawful or unethical conduct monitoring, and workplace accountability and obligation. Despite little concern about privacy issues regarding the widespread use of electronic monitoring, most academics opposed using CCTV cameras in classroom teaching. The study revealed that academics' thoughts on electronic monitoring, which are linked to specific government directives, can be heavily influenced by external forces, and how flexible the monitoring environment can play a role in minimizing resistance and improving policy adherence. This study has important practical implications for education authorities, academic administrators, and educators.

**Keywords:** Electronic Monitoring, Academics, Panopticon, Bangladesh, Education

**DOI:** 10.29329/ijpe.2024. 646.3

**Submitted:** 10/07/2023

**Accepted:** 05/01/2024

**Published:** 01/02/2024

---

<sup>i</sup> **Rohaya Mohd Nor**, Assoc. Prof. Dr., Faculty of Economics and Business, Universiti Malaysia Sarawak

**Correspondence:** mnrohaya@unimas.my

<sup>ii</sup> **Md Shakil Mannan**, Research Assist, Faculty of Economics and Business, Universiti Malaysia Sarawak

## INTRODUCTION

Since the COVID-19 pandemic was declared in 2020, there has been a dramatic increase in global adoption trends for surveillance and monitoring technologies. When millions globally must work remotely, organizations have extensively employed technologies to monitor and track employees and their work activities electronically. Like other economic sectors, the pandemic severely affected higher education. Since then, surveillance and monitoring practices have intensified in universities worldwide (Beetham et al., 2022). These practices using technological devices, systems and platforms contribute to the increasing datafication activities at the workplace (Ball, 2021) and around academic practices (Wintrup, 2017; Beetham et al., 2022; Gourlay, 2022). “Without intervention, the overall impact of these practices in higher education will mirror those in the wider society: the rise of cultures of policing and carceral technologies, attacks on the dignity of human beings, and the algorithmic embedding and enhancement of biases that reinforce racism, sexism, and structural inequality” (Beetham et al., 2022: p.18). Efforts for progressive education that stresses crucial features involving student-centered and holistic development approaches in academic practices may be hampered if surveillance and monitoring practices and their impact are not clearly understood.

Since the 1980s, the dominant neoliberalism ideology has shaped higher education policy in many countries (Saunders, 2010; Kabir, 2013; Kenny, 2017; Lee et al., 2017; St John, 2023). Numerous business ecosystem pressures and the education policies molded by this ideology rapidly transform higher education. This doctrine gives birth to administrative practices that foster a culture of performativity as competition for a university's funding intensifies (Kenny, 2017). Performativity culture in education embeds quantitative and qualitative performance measurements, indicators, audit reporting, statistics for evaluation and comparison, and quality assurance practices (Jauhiainen et al., 2015; Tandilashvili & Tandilashvili, 2022). Information communication technologies (ICTs) and systems have been deployed to electronically monitor academic and non-academic personnel and students in various contexts and feed data and information to suit the needs of various levels of education authorities, institutions, and university administrators, including performance monitoring.

Electronic monitoring is defined as the use of electronic devices, systems, and technologies to automatically collect, store, analyze, report, and communicate data and information about employees and their activities, allowing an employer or authority to monitor and make judgments about employee work performance. The COVID-19 pandemic, according to Beetham et al. (2022), has hastened the use of this application for academic surveillance practices within the university setting. Furthermore, as the neoliberal view of university management gains traction in the minds of academic leaders and education authorities, all dimensions of academic practices are increasingly being electronically monitored; additionally, digital footprints of important stakeholders in academic work processes - educators and students - are increasingly serving datafication activities of higher education, sometimes without them even realizing it (Gourlay, 2022).

While many of the consequences of electronic monitoring have been reported in the literature, McParland and Connolly (2020) discovered through a systematic review of the existing literature that workplace surveillance and monitoring in relation to the effects on employee performance and productivity is still an under-researched area. Experts have urged for greater research outside of the laboratory type of studies to understand the application's effects better as electronic monitoring permeates organizations exponentially and affects an increasing number of employees (Siegel, König & Lazar, 2022). In addition, this topic of inquiry is significantly underexplored from the perspective of developing countries. Hence, our research aims to fill these gaps.

This study explores the implications of electronic monitoring from the perspective of academics from a developing nation. It investigates the academics' perceptions of electronic monitoring at their universities. In addition, it determines whether it affects the work performance of academics. Therefore, we outline two research questions: (1) how widespread electronic monitoring is in their university; (2) how the academics view electronic monitoring to keep track of their performance at work. To answer these questions, we draw on the panopticon concept developed by

philosopher Michel Foucault and others from Jeremy Bentham's previous works. Much work in surveillance studies has used the panopticon model to analyze the increased capabilities of modern surveillance mechanisms, including ICTs that function as 'watchers' that are typically deployed by the state and business organizations to have more power over the 'watched', whomever the individuals target for the surveillance activities (Manokha, 2018). Panopticon effects are defined in this study as the extent to which employees assume control or are controlled by using workplace surveillance and monitoring instruments (Botan & Vorvoreanu, 2005), such as electronic monitoring. The effects are predicted to occur in the panopticon setup, i.e., when employees are aware of the monitoring activities and the technology in practice contains features that generate data and information for authorities, which are governed by certain policies and procedures, to use for employee monitoring.

Using Bangladeshi academics' context, our findings contribute to a better understanding of the consequences of electronic monitoring and have substantial practical implications for education authorities and university administrators. The findings of this study suggest that: (1) in higher education institutions, external influences can play a significant role in influencing academics' perceptions of electronic monitoring, sometimes more than internal influences; (2) academics' awareness that they are being monitored electronically and the accessible support mechanisms, particularly the level of ICT team proficiency and organizational managerial practices, can affect their trust and confidence in the technology; and (3) academics will have a favorable opinion of the use of electronic monitoring if the technology features are designed to provide them more control. Our research raises awareness about the importance of increasing efforts at all levels of authorities and university administrators to strike a balance between using electronic monitoring and ensuring the technology's ethical usage for surveillance and monitoring purposes.

The structure of this paper is as follows. The section that follows provides a summary of the selected literature. Following this, an explanation of how the qualitative research guided by the panopticon model was planned and executed to collect data is provided. The thematic Analysis (TA) technique was engaged to perform data analysis. The research outcomes are then presented and discussed further. This paper emphasizes the practical implications of the research in its conclusion.

## **LITERATURE REVIEW**

### **Some Trends and Effects of Workplace Surveillance and Employee Monitoring**

Workplace surveillance and employee monitoring practices are becoming more common around the world. ExpressVPN examined 2000 employers and 2000 employees in a hybrid work environment in 2021 and discovered that 78% of organizations utilize monitoring tools to monitor their employees (ExpressVPN, 2021). According to the report, 74% of employers felt a lack of control over their organization in a hybrid work environment; 69% were concerned about remote work because they could not supervise employees in person. Because most employers in the poll required in-person and electronic supervision before they could trust their employees to work, it is expected that the majority will continue to use technology for workplace surveillance and employee monitoring. ExpressVPN (2021) survey results also found that 59% of employees reported feeling stress and/or anxiety about the surveillance practices of their employer monitoring their online activity.

Ball (2021) identified four new advancements in workplace surveillance by examining 398 articles about using surveillance and monitoring technologies in the workplace. The first trend is using a greater range of technology for workplace surveillance that can go beyond performance management and into an employee's movement and location, as well as their behaviours, sentiments, and thoughts. Because of remote working, the second trend is an increased deployment of tools such as email and desktop monitoring, keystroke, and webcam surveillance throughout Europe, the United Kingdom, and the United States. The third trend identified by Ball (2021) is growing concern about the influence of surveillance and monitoring technologies on employees' well-being and social interactions. Finally, there are growing concerns regarding the platform's technological elements of employee surveillance that employ algorithms and their psychological effects on employees. Several organizations have

currently exploited and experimented with advanced technology and devices to generate detailed employee data that can link productivity, location, health, and mood, such as using wearable fitness devices, wearable location and conversation monitors, GPS tracking tools, Radio Frequency Identification (RFID) and implantable microchip devices, and people analytics software with algorithmic profiling (Swartz, 2021).

Siegel, König, and Lazar (2022) reviewed and described details from previous studies and their findings on electronic monitoring and its effects on employees, such as job satisfaction, perceived stress, privacy violation, performance, perceived autonomy, trust, social support, counterproductive work behavior (CWB), and citizenship behavior. They updated existing meta-analysis approaches and examined how further moderators influenced the effect of electronic monitoring on job satisfaction, stress, performance, and CWB while taking monitoring purpose, performance targets, study setting, kind of performance, and monitoring feedback into account. Based on the analysis of the laboratory types of study samples, they remarked that such studies appear to underestimate the relationship between monitoring and job satisfaction, stress, and performance due to the absence of a meaningful working context and the inability to investigate the dynamics of social relationships at work in depth.

### **Monitoring and Surveillance at the University Workplace**

Academics' professional obligations in a university setting include more than just teaching, research, and administration. Many have expressed concern that such a broad range of responsibilities will increase academics' workload and negatively impact their productivity and performance, particularly in providing excellent teaching services, generating new knowledge through impactful research, and making significant societal contributions (Pace et al., 2019; Yang et al., 2021; Beatson et al., 2021).

Tandilashvili and Tandilashvili (2022) reported their findings on the experiences and perspectives of French academics of the performance-oriented culture formed to transform French higher education and how it impacts their academic identity. The study shed new light on academics dealing with value conflict and academic identity transition. They identified three major transitions in the academic profession: (1) the transition of university governance from a democratic approach to a more top-down structure with centralized power; (2) increased autonomy power with the implementation of new, output-oriented management practices that introduced new, market-oriented logic into the profession; and (3) academics perceived their profession as becoming more competitive and performance-driven as a result of these transitions.

Education authorities, university management, and academic administrators increasingly rely on various electronic surveillance platforms to monitor university personnel and students. In addition, universities are gradually building data infrastructures to capture students' life data, communications, and profiles to better match their educational goals (Jones et al., 2020). Many educational institutions are intensifying student datafication for big data applications and learning analytics, allowing for the creation of revelatory and analyzable data trails (Jones et al., 2020).

Wintrup (2017) researched learning analytics and highlighted reservations about its policy-level application for education surveillance and monitoring by various stakeholders. Learning analytics is simply the use of digital technologies to collect, measure, analyze, and report data about students as learners, as well as to assist educators in meeting students' needs within their learning environment in order to maximize engagement and learning outcomes (Wintrup, 2017; Khalil et al., 2023). It has gained popularity among educators and authorities to improve teaching and learning quality and increase student engagement. According to Wintrup (2017), learning analytics and its context of use for education quality surveillance and monitoring may have unanticipated repercussions. Influencing students' learning behavior to fit the parameters of academic surveillance practices, lowering their desire to study, and changing their learning engagement are among the potential risks (Wintrup, 2017). She highlighted Massive Open Online Courses (MOOCs) as an

example of how digital learning platforms for MOOCs are used by educators and policymakers for interventions and quality improvement.

Another notable change brought about by the COVID-19 pandemic is that educational institutions must now evaluate both the online learning environment and the face-to-face learning experience provided by attending physical classroom teaching. This transformation in higher education has piqued the interest of many stakeholders, not just researchers, concerned about potential challenges caused by insufficient physical and virtual T&L infrastructures. The well-being of educators and students is one source of worry. Recently published research by Sultana et al. (2022) reported that online educational experiences had caused tension and anxiety among Bangladeshi academics and students. Most academics in their study expressed anxiety about losing their employment. They linked these negative feelings to the university administration's constant surveillance and monitoring of them, particularly through various communication platforms (Sultana et al., 2022). Their study used a focus group approach and examined the well-being of Bangladeshi private university academics and students during the COVID-19 epidemic.

In their study on the readiness of Turkish educators for Society 5.0, Yaraş and Ozturk (2022) investigated the perceived effects on educators when advanced technology applications, especially those embedded with artificial intelligence (AI), will be substantially integrated into human social life and activities. Using semi-structured interviews with fifty potential Turkish educators, the study's findings disclosed a variety of perceived consequences for future educators in the Society 5.0 era. Positive implications discovered in the study included the possibility of flexible working and the savings of time and resources spent commuting to work. The reported negative effects include the inability to concentrate, decreased motivation, and merging work and home environments. They urged education leaders and administrators to be proactive and enhance their skills in preparation for the era. Several emerging ethical dilemmas and security challenges associated with large AI-embedded applications will necessitate a reevaluation of existing privacy and security safeguards for organizations and industry practices, including education (Taj & Zaman, 2022).

### **The Panopticon Model for Surveillance and Control**

The Panopticon concept is a metaphor and thinking tool that was further expanded by Foucault in the 1970s, from the earlier works of Jeremy Bentham on prison building design in the 18th century. The basic principle of Bentham's prison building design was to establish a constant surveillance mechanism to create a self-regulating system where the prisoners, as the 'watched', could police themselves (Manokha, 2018). Two essential dimensions concerning past works introduced by Bentham and Foucault, which is self-restraint and self-discipline, were further explored by Manokha (2018) to raise arguments about the importance of being aware of any forms that modern surveillance mechanisms, particularly technologies, could be used as control and manipulation tool, and can have an impact on individual privacy and freedom.

In Jeremy Bentham's panopticon prison project, the three fundamental assumptions that applied are: "first, the omnipresence of the inspector, ensured by his total invisibility; second, universal visibility of objects of surveillance; and third, the assumption of constant observation by the watched" (Manokha, 2018, p. 222). From Bentham's point of view, the 'watcher' acquires the power to monitor prisoners, and to punish and discipline the disobedience and behaviour that violates the rules. The 'watched', i.e., the prisoners, on the other hand, acquire the power to exercise self-restraint and self-discipline under the belief that they are being constantly watched. Such a panopticon setting designed by Bentham permits observation of maximum numbers of prisoners using the fewest possible prison guards, ultimately optimizing the associated operating costs of managing a prison building (Manokha, 2018). In his subsequent works, Foucault proposed that the panopticon is a model of surveillance for various panopticon settings because it is not only limited to the physical structure but also serves as a metaphor for the ways power is exercised for control and discipline in the context of modern society surveillance (Manokha, 2018; Wood, 2007).

Furthermore, a panopticon system can exist in modern ways of deploying various electronic means of surveillance when employees act and do their work as if they are being continuously monitored (Botan & Vorvoreanu, 2005; Manokha, 2020). An ideal electronic panopticon setting is possible when the panopticon is designed to allow constant supervision to exist even when a supervisor is not physically present due to technologies that track, record, and analyze employees' work activities, operations, and movements (Manokha, 2020). Botan and Vorvoreanu (2005) utilized the 'electronic panopticon' concept to describe how modern surveillance technologies could be created as an extension of efforts to gain more power and control in the workplace. Technology's transformative capacity can produce a comprehensive electronic panopticon setting and enormous possibilities for employers to gain authority and exercise control over employees (Botan & Vorvoreanu, 2005; Manokha, 2020). Due to the perception of constant monitoring at the workplace, social, behavioral, and psychological implications associated with panopticon effects might be noticed in the electronic panopticon setting (Botan & Vorvoreanu, 2005; Manokha, 2020).

## **RESEARCH FRAMEWORK AND METHODOLOGIES**

### **The Panopticon Model as A Conceptual Tool**

The panopticon model is used as a conceptual tool to investigate the consequences of electronic monitoring at the university workplace. The four elements developed by Botan and Vorvoreanu (2005) are being applied in the study to determine the effects of electronic monitoring within an electronic panopticon configuration. According to Botan and Vorvoreanu (2005: p.133), these four elements must exist and interact in the workplace to have noticeable panopticon effects: (1) employee awareness of being watched; (2) surveillance capability of technology; (3) management policy; and (4) maturation. The first element, employee awareness of being monitored, must exist to observe panopticon effects. The second element concerning the panopticon potential of technology will be determined by the extent of its technological capabilities making employees visible, keeping the surveillant authority invisible, generating details data and records, and performing details analysis automatically. The third element is the management policy with surveillance and monitoring technology being integrated. The last element, maturation, defines the point at which workplace surveillance activities and processes related to the other elements have been integrated with management policy and are being implemented. According to Botan and Vorvoreanu (2005), the dynamic interplay between these four elements will have panopticon effects observable in an electronic panopticon context.

### **Qualitative Research Approaches**

This study is a subset of a larger study in which case studies and interviews were employed as primary qualitative data collection methods. Additional information about the research methodology and approaches can be accessed in Mannan and Rohaya (2023, 2024). A case study is a detailed examination of a single entity, such as an organization, a group of people, or even a single person (Merriam & Tisdell, 2015). Multiple case studies allow researchers to investigate the phenomenon of interest both within and outside the real-life setting, allowing them to compare and overcome biases that may arise when using a single case study to draw meaningful research conclusions (Yin, 2003; Baxter & Jack, 2008). Purposive sampling was used in this study to evaluate universities that would be deemed case studies for the research and to recruit research participants. Purposive sampling is one of the non-probability sampling approaches that is highly suggested for efficiently recruiting research participants who can help to achieve the study's research objectives and questions (Showkat & Parveen, 2017). Furthermore, as Patton and Cochran (2002) highlighted, purposive sampling is an appropriate method in the case study selection process, allowing the utilization of the most readily available resources for qualitative research. Because of the COVID-19 pandemic's lockdown, this study used a series of online interviews with research subjects who agreed to engage in the study. In addition, secondary data was obtained from publicly available publications, websites, social media, prospectuses, brochures, annual reports, and university newspapers.

### Data Collection Methods

Data collection for the research started from August 2020 until May 2021. Using purposive sampling, this study carefully evaluated a list of institutions in Bangladesh. Two private universities that fit the criteria of having been in operation for more than 15 years and being on the university rankings list in Bangladesh in 2019 were chosen. Official approval was obtained from these universities' top management for the research. Table 1 provides a brief profile about these institutions. The identifier PUA for Private University A and PUB for Private University B was assigned to maintain the anonymity and confidentiality of these universities.

**Table 1. Brief Profile of Case Studies**

Case Study	Year of Operation	Ranking in Bangladesh	Active Students	Academic Staff
Private University A (PUA)	>18 years	Listed in the top 20 in the ranking for private universities in 2019.	>3200	>150
Private University B (PUB)	> 26 years	Listed among the top 5 in the ranking for private universities in 2019.	>7500	>400

Source: UGC (2020) & Various Accessible Online Resources about PUA and PUB

PUA is a private university in the emerging university group founded in 2003 in Bangladesh under the Private University Act of 1992 and is now governed by the Private University Act of 2010. The university was founded by professionals who worked together through a nonprofit group. The university aspires to achieve a global reputation and become a high-quality education and research provider. The university had graduated over 9000 students by 2018.

PUB was founded in 1995 by a non-profit organization in Bangladesh, under the Private University Act of 1992, and is classified within the pioneer group of private universities. The vision of PUB is to pursue excellence in science, engineering, technology, and business through knowledge production and transfer to improve the quality of life in Bangladesh and abroad. Its mission is to produce high-quality graduates capable of significantly improving society and the nation.

Between March and April 2021, fourteen in-depth, semi-structured interviews were conducted. The longest interview lasts 54.41 minutes, while the shortest lasts 18.43 minutes. The interviews were all audio recorded and transcribed. Each participant is given a unique identification to maintain their confidentiality and anonymity. Table 2 provides some background information on the research participants.

**Table 2. Brief Profiles about the Research Participants**

	Total	Gender	Designation	Identifiers
PUA	8	5 males 3 females	4 academicians; 2 academicians cum management (Director); 2 non-academicians (Registrar & Head of IT Department)	<i>R1-PUA; R2-PUA; R3-PUA; R4-PUA; R5-PUA; R6-PUA; R7-PUA; R8-PUA</i>
PUB	6	3 males 3 females	5 academicians; 1 academician cum management (Director of ICT Centre)	<i>R1-PUB; R2-PUB; R3-PUB; R4-PUB; R5-PUB; R6-PUB</i>

### Data Analysis and Interpretation Using Thematic Analysis

Thematic Analysis (TA) is a popular technique for analyzing qualitative data. TA is a systematic technique for identifying, analyzing, and interpreting patterns that emerge as themes or meaning from qualitative data (Braun & Clarke, 2006). The analysis method is adaptable and useful for dealing with the complexities and subtleties of qualitative research data (Braun & Clarke, 2006). “Thematic analysis can be an essentialist or realist method, which reports experiences, meanings and the reality of participants, or it can be a constructionist method, which examines the ways in which events, realities, meanings, experiences and so on are the effects of a range of discourses operating within society” (Braun & Clarke, 2006: p. 81). Braun and Clarke (2006) state that a theme is derived as meaning from within a data set relating to the research questions when utilizing TA for a qualitative

data set. To perform data analysis and interpretation for the study, this study applied the six phases of TA outlined by Braun and Clarke (2006). These phases are: Phase 1 – Familiarizing yourself with your data; Phase 2 – Generating Initial Codes; Phase 3 – Searching for themes; Phase 4 – Reviewing themes; Phase 5 – Defining and naming themes; and finally, Phase 6 – Producing the report (Braun & Clarke, 2006: p. 87).

The study uncovered four major themes: Technology, Employee, Management, and Organizational Practices and Norms. Using the panopticon model as a tool for sense-making and interpretation, we further mapped the panopticon effects associated with these themes and sub-themes discovered in the research.

## FINDINGS AND DISCUSSION

The first research question relates to the first theme, *Technology*, and its sub-themes (*Familiarity, Participation Roles, Trust & Rapport, Technical Support*); the second question relates to the second theme, *Employee*, and its sub-themes (*Triggered Concerns, Impacts on Performance*). The third theme, *Management*, and its associated subthemes (*Management Style, Communication Approach, Organizational Needs*), as well as the fourth theme, *Organizational Practices and Norms*, and its associated subthemes (*Implementation, Intervention, Policies & Procedures*), provide deeper insights that influence academics' perspectives on the use of electronic monitoring while working at PUA and PUB.

### The Widespread Use of Electronic Monitoring in PUA and PUB

Based on the research findings, three technological tools - a biometric attendance system, closed-circuit television (CCTV) cameras, and a Learning Management System/Integrated University Management System - were implemented at PUA and PUB to monitor academics electronically. Following the electronic panopticon metaphor (Botan & Vorvoreanu, 2005; Manokha, 2018, 2020), these technological platforms are a visible surveillance tool for the invisible 'watcher' to monitor, referring to the university management and authorities, and the 'watched,' i.e., academics for work performance monitoring where the technological features embedded in these technologies put in place the elements for control and discipline in the workplace.

The two lessons we draw from the findings in relation to this are as follows. First, the academics had a positive opinion of these applications because they were familiar with the technological aspects of the platforms used for electronic monitoring at their university. Second, the level of ICT team proficiency, management approaches for performance monitoring, awareness that they are being observed electronically, and readily available support systems can all have an impact on academics' attitudes toward electronic monitoring.

Based on the analysis, most academics in the study saw the value of electronic monitoring as an alternative to conventional forms of surveillance. Some have cited the advantages of the application, including better safety, greater productivity, the opportunity to monitor potentially unlawful or unethical actions, and the enforcement of accountability and duty in the workplace. Data and information storage, analysis, and dissemination were all thought to be improved by switching to electronic monitoring. The application was viewed to save time and be cost-effective when dealing with unfavorable or criminal situations.

*“Managing these activities [monitor and surveillance] manually and extensively are tiresome and, to some extent, maybe not possible as well. At the same time, there are issues of biased and partiality when we do things manually. As everything is getting modernized & computerized using technologies ...it is more effective... Electronic monitoring is less biased, more effective, easier to calculate, and easy to handle.” (R5-PUA)*



*“This practice is common everywhere. It does not bother me; rather, I think the practices can assist me ... if any incident happens, I can find the video recording ... A biometric attendance system is also necessary for record and accountability purposes.” (R9-PUB)*

R1-PUA, who has worked for PUA for over 14 years, has mentioned that he is aware of the deployment of systems to *“record staff attendance and other activities, and evaluate work performance annually or periodically.”* Some academics were also well-versed in the capabilities of various monitoring devices.

*“It is not 100 per cent accurate. It can only show the data but cannot show the reason behind the data. There is a significant gap in qualitative judgment, but quantitative judgment is accurate. The system can calculate the data accurately, but the subjective part is missing.” (R5-PUA)*

*“It is done frequently ...an ongoing process. They {operators of CCTV security cameras} recorded every day. If needed, then they {technology operators} watch it otherwise not.” (R6-PUA)*

*“We have a system called Integrated University Management System (IUMS), where at the end of the semester, a teacher needs to submit their grade sheet, which is also a monitoring part for checking whether the faculty member evaluates the answer script timely or not.” (R6-PUB)*

Most participants were favorable to the university’s needs regarding the widespread installation of CCTV camera surveillance on campus, which is considered important and justified for campus safety and security. Surveillance and monitoring activities utilizing CCTV cameras are standard procedures in various public and private organizations in Bangladesh. Several local studies highlighted increased surveillance and monitoring in the education sector in the past few years (Sultana et al., 2022; Sifat et al., 2022). For example, the 2019 event in which a second-year university student was beaten to death on campus prompted BUET university management to place the campus under severe supervision utilizing advanced surveillance and monitoring tools (Jasim, 2021). As a result of the incident, advanced CCTV cameras and a unified ID card system would be widely placed to track the movement of teachers, students, and others throughout the university (Jasim, 2021).

In addition, most participants reported positive feedback regarding the technical support they received and were satisfied with the function and role of their university's ICT Department/Centre. According to R1-PUA, their *“...IT department team is fully equipped with skills, well experienced, and knowledgeable. About their performance, they are very quick...they are very helpful ...”*. R3-PUB commented that *“...so far, our ICT department provides good services ... no complaint arises regarding the bias in my university.”* R4-PUB stated that their *“ICT department comprises highly qualified personnel.”* R5-PUB praised their university team and commented that their *“...top administrators are very good ... many are technically knowledgeable person...can rely on them”*. The ICT Department at PUB has a data centre that handles 12 portals simultaneously. All the participants applauded the department’s efficiency in delivering support services at their universities.

In the case of PUB, this study discovered that the university's management approach to using electronic monitoring to monitor academic staff was not overly stringent, and there were policies and guidelines to which the employees could refer. According to R6-PUB, this is likely why most academics and non-academics viewed the application positively and as having the potential to boost their work efficiency.

*“I found mixed feelings among my colleagues ... some appreciate this system, and some are not welcoming this approach. Even the administrator group also has a mixed opinion. But my university has no strict monitoring system ... possibly the faculty members are productive.” (R6-PUB)*

R5-PUB, an assistant professor with over ten years of experience at the institution, even advised upgrading the existing CCTV cameras and network infrastructure to include more modern functions.

*“If you just have some system that is monitoring a person or staff just for the purpose of video recording for security, checking their record from the video, it is a very hassle work, I think. But if your system is integrated with smart video enhance technology, then it can be very valuable.” (R5- PUB)*

In the context of PUA, R8-PUA, the Head of the IT Department, stated that senior faculty members were more resistant to the use of electronic monitoring systems to monitor work performance than junior faculty members.

*“In every organization, there can be several types of users. Some negativity is also there ... especially the senior faculty members like professors who are not used to technological things. They sometimes claim some problems. Nevertheless, it is not a big issue. On the other hand, the junior has not had many issues with the system. Some problems related to the system may happen, but we can solve them easily.” (R8-PUA)*

### **Academics’ Perceptions of Using a Biometric Attendance System**

Using a biometric attendance system in compliance with university regulations, the electronic panopticon has made it easier for management and authorities to keep tabs on staff showing up for work. This has clear panopticon effects on the employee working behavior, such as increased awareness of and dedication to meeting the attendance requirement. Another important lesson that we draw from the research findings is that in highly regulated environments such as higher education in Bangladesh, the opinions of academics about electronic monitoring can be heavily influenced by external influences like government authorities.

This study found that although PUA and PUB are private institutions, their top university management has chosen to adhere to the attendance policies established by the Bangladesh Ministry of Higher Education.

*“Employees, too, will have to work 35 hours each week, which means each employee will have to work seven hours as direct working hours a day...According to the policy, every department will have to evaluate teachers' performance and send the evaluation to the university authorities. Universities will also be required to submit the performance reports to the UGC every six months. The UGC will evaluate the performance of the teachers and employees, and fix the amount of manpower required for each university. No additional manpower will be recruited without the UGC's permission” (Jasim, 2022).*

Most academic staff, however, criticized the attendance policy as being unjust to them. The nature of academic employment, in which it is usual for an academician to spend time at work and home to complete specific sorts of work, such as grading, class preparation, and research activities, was highlighted as the primary reason such policy should be reconsidered. Some have expressed concern that the hours they spend at home working effectively on work-related tasks will not be counted under this policy, which will utilize a biometric attendance system to track their attendance at work. Several academics also stated that such a strategy would have little effect on their research productivity.

*“Following regulations, we must stay in our office 5/7 hours ... some people follow the rules and do nothing productive. Sometimes, I do not feel like working and cannot concentrate on my work ... but as there is a regulation to stay at the office for some specific hours, I must stay and do nothing productive.” (R4-PUA)*

*“...it impacts my performance negatively ... like when I must stay 35 hours a week at my office, but I must do research work or answer script checking at home because these activities need a quiet environment ...office environment is not suitable for that kind of tasks for me. So, my point is that, after working or staying a long time at the office, I must work again at home, which is frustrating. Sometimes, I feel this monitoring attendance activity is also insulting for me ...” (R3-PUB)*

A study conducted by Hossain (2016), involving 250 university academics from fifteen private universities revealed that in addition to teaching responsibility, the excessive administrative workload with no compensation had increased dissatisfaction and severely affected staff career development to advance in other important professional competency areas such as research and training. Hence, observing such responses from the research participants from these universities regarding the latest attendance policy is not surprising.

### **Academics' Perceptions of Using Learning Management System**

To monitor productivity and manage academics' work performance connected to T&L, both universities, like other academic institutions, use a learning management system (LMS). PUB's Integrated University Management System has LMS functionality. Another important takeaway from the findings is that academics will support the use of electronic monitoring if the technological components are tailored to provide them with more control.

For example, the availability of student feedback tools within the LMS application has tremendously aided the academics at both universities in improving instruction delivery and student learning quality. The academics' enthusiasm for and satisfaction with the supportive panopticon environment gave them the confidence to make positive changes in their classroom practices. This panopticon effect, feeling empowered, is because of the higher visibility of information provided by the technology in use that can permit academics to work more efficiently and effectively. Also, their visibility in the organization allows them to exercise process and outcome control much better (Elmes, Strong & Volkoff, 2005).

R1-PUB, for example, stated, “I take it positively because of students' feedback. I come to know what my strength is and in which part I need to improve more. This system has a positive impact on my performance.” R2-PUB, on the other hand, raised reservations about depending on IUMS to assess the quality of teaching and learning processes. She commented: “...a biometric attendance system is accurate. But for the student's evaluation process, sometimes this feature can be manipulated ... as the evaluation is coming from the students, there is ambiguity in the process ... so, it is not 100 % accurate ...”

R6-PUB justified the decision from the authority standpoint as follows:

*“For two reasons, we need this system [IUMS], first to motivate the employee and second for improvement. When any faculty member gets good student comments, it automatically motivates him, and he can become more confident, especially for young and new faculty members. Secondly, they can find the area where they need to work to improve; they can understand the psychology of students, which is very crucial in a teaching job.” (R6-PUB)*

R5-PUA, a senior academician with over ten years of experience, voiced his desire for the university management to consider upgrading their university's existing LMS to incorporate more smart features to facilitate them in T&L.

*“If we can take this system to that level, where the system can personally monitor my data, then it can provide effectiveness as outcomes to my organization...if you develop a learning management system, a fully consolidated learning system will be more beneficial. In that*

*system, we can monitor their quiz, grade, how many exams or quiz will complete in a month...everything can be monitored by this system.” (R5-PUA)*

### **Academic Staff’s Concerns on Ethical Use of Electronic Monitoring**

In the research, surprisingly, we discovered that most academics had little concern about the widespread installation of CCTV cameras and the usage of other means of electronic monitoring at their universities, and whether such activities raise issues about invading employee privacy. We speculated that factors such as employment uncertainty due to the perceived long-term economic impact of the COVID-19 epidemic and Bangladeshi workplace culture contributed to our participants' having little concern about privacy matters among our participants, as revealed by the research findings.

Academics in private universities prioritized job security and connected it to job satisfaction because of Bangladesh's persistently rising unemployment rate (Masum, Azad & Beh, 2015). Bangladesh's unemployment rate increased from 4.4% in 2019 to 5.2% in 2020 and marginally fell to 5.1% in 2021 (Trading Economics, n.d.). In their study, Sultana et al. (2022) found that academics at private universities had some negative feelings due to job loss anxiety and financial difficulty during the COVID-19 pandemic lockdown in Bangladesh. Regarding privacy issues, the majority of academics in the research only voiced privacy policy violations if the university administration increased their stringent monitoring and movement tracking using multiple communication platforms outside of regular working hours.

In the past, it was asserted that private university administration tended to lay minimal attention on workplace conditions and facilities, academic staff compensation packages, and career progression due to the profit-oriented nature of business (Masum, Azad & Beh, 2015). Additionally, Bangladeshi workplace culture has a reputation for being hierarchical, with a strong respect for authority and a focus on collective rather than individual identity. From this vantage point, we think that the perception of the hardship of losing a job during the pandemic lockdown situation in Bangladesh is more significant than the attitude toward individual privacy. To support our observations, more investigation is required.

In the findings, some participants highlighted the need for their performance records to reflect the quantity and quality delivered. Accordingly, quantitative and qualitative data and information should come from various sources rather than relying solely on one platform, such as a specific technological means to monitor their work performance electronically.

*“I do not find anything wrong with that ... I do not feel any harm, but the system should be improved or customized. The whole dependency on electronic monitoring is impossible because subjective evaluation is missing. For education, the monitoring system should be there for the disciplinary and compliance of working hours at office ... there is nothing wrong with the use ... but that should not be the only input in the consideration for staff performance in the higher education sector.” (R5-PUA)*

The interviewees were also asked how they would feel if a CCTV camera was set in the classroom to monitor student behavior and lecturers' teaching performance during T&L activities. The majority of academics were opposed to such measures. It is also worth noting that this subject quickly produced irritation and wariness among them during the interview session.

## **CONCLUSION**

This study contributes to a deeper knowledge of the effects of electronic monitoring by capturing important insights from the viewpoints of Bangladeshi academics. The study has expanded the implementation of Botan and Vorvoreanu's (2005) electronic panopticon model by demonstrating how external influences can shape panopticon effects, sometimes more than internal influences. In the

case of private universities in Bangladesh, government involvement in the higher education sector through directives and policies can considerably impact university administrators' decisions and actions to use electronic surveillance. This will directly impact academics and how they carry out their professional responsibilities. According to Kabir (2013), the Private University Act 1992, the 20-year Strategic Plan for Higher Education 2006-2026, and the 5-year Higher Education Quality Enhancement Project in 2009 were Neoliberal reforms implemented by the Bangladesh government starting 1990s. The Private University Act empowers philanthropic organizations, associations, and individuals to establish private universities with government approval (Kabir, 2013). The Act was revised in 1998 and repealed in 2010, with the new Private University Act 2010 bringing major changes to strengthen regulations of private universities (Kabir, 2013). Yasmin (2018) deliberated on some internal governance issues confronting private universities that necessitate government participation to control academic quality.

Furthermore, as the study demonstrated, electronic monitoring can be used to monitor academic performance and work performance effectively. However, it is critical for education authorities at all levels to completely comprehend the technological consequences of monitoring and surveillance techniques, especially unanticipated ones, and to thoroughly examine them in the risk assessment activity. Psychological and emotional concerns must be carefully assessed in the context of the growing use of technology for employee monitoring in the workplace.

Additionally, this study has shown that effective implementation of an electronic panopticon can create favorable consequences only if academics believe the technology is being used to benefit them and the authorities. Technology's technological features for T&L, such as its ability to collect and share data and information automatically with academics, are critical for developing trust and empowering them. However, educational institutions must have a clear policy regarding the uses and purposes of electronic monitoring, as well as how monitoring data and information will be used. With increased artificial intelligence functionality embedded in the development and implementation of electronic monitoring, it is more important than ever for organizations, including universities, to establish accountability and governance framework and guidelines to ensure that employees' rights are protected in accordance with the organization's policy.

This research has certain limitations. Due to time constraints and the difficulties involved with the COVID-19 pandemic lockdown, data gathering was limited to only two private universities, limiting the findings' generalizability. Future studies should include multiple case studies, including public universities, to advance work in this area of research.

## ACKNOWLEDGEMENT

This research is partially funded under Grant No: 321489 EU FP7-SCIENCE IN SOCIETY-2012 Global Model and Observatory for International Responsible Research and Innovation Coordination and is supported by Universiti Malaysia Sarawak.

**Conflicts of Interest:** We declare that no potential conflict of interest is associated with the article's content and the research.

**Funding Details:** This research is partially funded under Grant No: 321489 EU FP7-SCIENCE IN SOCIETY-2012 Global Model and Observatory for International Responsible Research and Innovation Coordination and is supported by Universiti Malaysia Sarawak.

**CRedit Author Statement:** Author 1 developed the theoretical model, undertook the in-depth analysis of data and extensively involved writing-original draft manuscript preparation for the journal including visualization of data and findings, and supervising the whole completion of the research project.

Author 2 contributed to obtaining data for the research, undertook the preliminary data analysis and interpretation, and conducted some related literature review and provided summary of the review.

**Ethical Statement:** This study was approved by the Faculty of Economics and Business, Universiti Malaysia Sarawak following the regulation and guidelines provided by Universiti Malaysia Sarawak regarding ethics in research. This guideline can be accessed at [https://www.riec.unimas.my/images/forms/buku\\_dasar\\_penyelidikan\\_inovasi\\_enterprise\\_unimas\\_v4.pdf](https://www.riec.unimas.my/images/forms/buku_dasar_penyelidikan_inovasi_enterprise_unimas_v4.pdf).

## REFERENCES

- Ball, K. (2021). *Electronic Monitoring and Surveillance in the Workplace. Literature review and policy recommendations*, Publications Office of the European Union, Luxembourg, ISBN 978-92-76-43340-8, doi:10.2760/5137, JRC125716.
- Baxter, P., & Jack, S. (2008). Qualitative Case Study Methodology Study Design and Implementation for Novice Researchers. *The Qualitative Report*, 13(4), 544-559.
- Beetham, H., Collier, A., Czerniewicz, L., Lamb, B., Li, Y., Ross, J., Scott, A.-M., and Wilson, A. (2022) Surveillance practices, risks and responses in the post pandemic university. *Digital Culture and Education*, 14(1):16-37. <https://www.digitalcultureandeducation.com/volume-14-1>
- Beatson, N. J., Tharapos, M., O'Connell, B. T., de Lange, P., Carr, S., & Copeland, S. (2021). The gradual retreat from academic citizenship. *Higher Education Quarterly*, 76(4): 715–725. <https://doi.org/10.1111/hequ.12341>
- Botan, C., & Vorvoreanu, M. (2005). What do employees think about electronic surveillance at work? In John Weckert (ed.). *Electronic monitoring in the workplace: Controversies and Solutions* (pp. 123-145). IGI Global.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101, DOI: 10.1191/1478088706qp063oa
- Elmes, MB., Strong, D.M. & Volkoff, O. (2005). Panoptic empowerment and reflective conformity in enterprise systems-enabled organizations. *Information and Organization* 15(1): 1–37. <https://doi.org/10.1016/j.infoandorg.2004.12.001>
- ExpressVPN. (2021, May 20). *ExpressVPN survey reveals the extent of surveillance on the remote workforce*. <https://www.expressvpn.com/blog/expressvpn-survey-surveillance-on-the-remote-workforce/#ethics>
- Gourlay, L. (2022, October 27). *Surveillance and Datafication in Higher Education: Documentation of the Human*. Postdigital Science and Education. <https://doi.org/10.1007/s42438-022-00352-x>
- Hossain, M.S. (2016). Teaching Workload and Performance: An Empirical Analysis on Some Selected Private Universities of Bangladesh. *International Journal of English and Education*. 5(3):1-11. <http://dx.doi.org/10.2139/ssrn.2810640>
- Jasim, M Mir. (2021, Dec 18). *Buet campus to come under strict surveillance*. The Business Standard. <https://www.tbsnews.net/bangladesh/education/buet-campus-come-under-strict-surveillance-345184>

- Jasim, M.M. (2022, Aug 02). *40hrs a week active teaching for public uni teachers*. The Business Standard. <https://www.tbsnews.net/bangladesh/education/40hrs-week-active-teaching-public-uni-teachers-470090>
- Jauhiainen, A., Jauhiainen, A., Laiho, A., & Lehto, R. (2015). Fabrications, Time-Consuming Bureaucracy and Moral Dilemmas — Finnish University Employees' Experiences on the Governance of University Work. *Higher Education Policy*, 28(3), 393–410. <https://doi.org/10.1057/hep.2014.18>
- Jones, K. M. L., Asher, A., Goben, A., Perry, M. R., Salo, D., Briney, K. A., & Robertshaw, M. B. (2020). “We’re being tracked at all times”: Student perspectives of their privacy in relation to learning analytics in higher education. *Journal of the Association for Information Science and Technology*, 71(9), 1044–1059. <https://doi.org/10.1002/asi.24358>
- Kabir, A. H. (2013). Neoliberalism, policy reforms and higher education in Bangladesh. *Policy Futures in Education*, 11(2), 154-166.
- Khalil, M., Slade, S., & Prinsloo, P. (2023). Learning analytics in support of inclusiveness and disabled students: a systematic review. *J Comput High Educ* <https://doi.org/10.1007/s12528-023-09363-4>
- Kenny, J. (2018). Re-empowering academics in a corporate culture: An exploration of workload and performativity in a university. *Higher Education*. 75(2): 365-380. <https://doi.org/10.1007/s10734-017-0143-z>
- Lee, M., Wan, C. D., & Sirat, M. (2017, October 3). Hybrid Universities in Malaysia. *Studies in Higher Education*, 42(10): 1870–1886. <https://doi.org/10.1080/03075079.2017.1376871>
- Mahamudul, H., & Salahudin, YS (2019). Marketing of Security and Surveillance Products. *Advances In Management*. 12 (3): 36-42. <https://www.proquest.com/scholarly-journals/case-study-marketing-security-surveillance/docview/2281972292/se-2>.
- Mannan, M.S. & Rohaya, MNor. (2023). A Case Study of Private University in Bangladesh Using Electronic Monitoring: Some Practical Implications. *International Journal of Academic Research in Progressive Education and Development*, 12(4):209–224. DOI: 10.6007/IJARPED/v12-i4/19575
- Mannan, M. S., & Rohaya, MNor (2024). An Empirical Study into the Effects of Electronic Monitoring on Employees in Bangladesh. *International Journal of Academic Research in Business and Social Sciences*, 14(1), 731–756. DOI: 10.6007/IJARBSS/v14-i1/20007
- Manokha, I. (2018). Surveillance, Panopticism, and Self-Discipline in the Digital Age. *Surveillance & Society*, 16(2): 219-237. <https://doi.org/10.24908/ss.v16i2.8346>
- Manokha, I. (2020). The Implications of Digital Employee Monitoring and People Analytics for Power Relations in the Workplace. *Surveillance & Society*: 18(4), 540-554. <https://doi.org/10.24908/ss.v18i4.13776>
- Masum AKM, Azad MAK, Beh L-S (2015). Determinants of Academics' Job Satisfaction: Empirical Evidence from Private Universities in Bangladesh. *PLoS ONE* 10(2): e0117834. doi:10.1371/journal.pone.0117834
- McParland, C., & Connolly, R. (2020, March 1). Dataveillance in the Workplace: Managing the Impact of Innovation. *Business Systems Research Journal*, 11(1): 106–124. <https://doi.org/10.2478/bsrj-2020-0008>

- Merriam, S. B., & Tisdell, E. J. (2015). *Qualitative research: A guide to design and implementation*. John Wiley & Sons.
- Pace, F., D'Urso, G., Zappulla, C., & Pace, U. (2019). The relation between workload and personal well-being among university professors. *Current Psychology*, 40(7), 3417–3424. <https://doi.org/10.1007/s12144-019-00294-x>
- Patton, M. and Cocharn, M. (2002) *A Guide to Using Qualitative Research Methodology*. Médecins Sans Frontières, Paris.
- Saunders, D. B. (2010). Neoliberal ideology and public higher education in the United States. *Journal for Critical Education Policy Studies*, 8(1), 41-77.
- Showkat, N., & Parveen, H. (2017). *Non-Probability and Probability Sampling*. e-PG Pathshala.
- Siegel, R., König, C. J., & Lazar, V. (2022). The impact of electronic monitoring on employees' job satisfaction, stress, performance, and counterproductive work behavior: A meta-analysis. *Computers in Human Behavior Reports*, 8: 100227. <https://doi.org/10.1016/j.chbr.2022.100227>
- Sifat, R. I., Ruponty, M. M., Shuvo, M. K. R., Chowdhury, M., & Suha, S. M. (2022). Impact of COVID-19 pandemic on the mental health of school-going adolescents: insights from Dhaka city, Bangladesh. *Heliyon*, 8(4): e09223. <https://doi.org/10.1016/j.heliyon.2022.e09223>
- St John, E.P. (2023) Higher education in post-neoliberal times: Building human capabilities in the emergent period of uncertainty. *Education Sciences*. 13 (5):500. <https://doi.org/10.3390/educsci13050500>
- Sultana, S., Roshid, M. M., Haider, M. Z., Khan, R., Kabir, M. M. N., & Jahan, A. (2022). University Students' and Teachers' Wellbeing During COVID-19 in Bangladesh: A Qualitative Enquiry. *The Qualitative Report*, 27(6):1635-1655. <https://doi.org/10.46743/2160-3715/2022.5265>
- Swartz, M. (2021, Dec 10). *Five Trends In Monitoring And Tracking Employees*. <https://www.monster.ca/career-advice/article/trends-in-monitoring-and-tracking-employees>
- Taj, I., & Zaman, N. (2022). Towards industrial revolution 5.0 and explainable artificial intelligence: Challenges and opportunities. *International Journal of Computing and Digital Systems*, 12(1), 295-320. <https://dx.doi.org/10.12785/ijcds/120124>
- Tandilashvili, N., & Tandilashvili, A. (2022). Academics' perception of identity (re)construction: a value conflict created by performance orientation. *J Manag Gov* 26, 389–416. <https://doi.org/10.1007/s10997-022-09627-8>
- Trading Economics. (n.d). Bangladesh Indicators. Retrieved June 15, 2023 from <https://tradingeconomics.com/bangladesh/indicators>
- UGC. (2020). *47th Annual Report. University Grants Commission of Bangladesh (UGC)*.
- Wintrup, J. (2017). Higher Education's Panopticon? Learning Analytics, Ethics and Student Engagement. *High Educ Policy* 30, 87–103. <https://doi.org/10.1057/s41307-016-0030-8>
- Wood, D. M. (2007). Beyond the panopticon? Foucault and surveillance studies. In Jeremy W.C. and Stuart. E (ed.). *Space, Knowledge and Power* (pp. 257-276). Ashgate.



- Yaraş, Z., & Öztürk, F. K. (2022). Society 5.0 in Human Technology Integration: Digital Transformation in Educational Organizations. *International Journal of Progressive Education*, 18(1), 458-474. DOI: 10.29329/ijpe.2022.426.26
- Yasmin, N. (2018). The governance of higher education of Bangladesh through the lens of new public management. *International E-Journal of Advances in Education*, 4(10), 109-117.
- Yin, R. K. (2003). *Case Study Research Design and Methods* (3rd ed). Thousand Oaks.